THE WALL STREET JOURNAL.

DOW JONES | News Corp ★★★★★ WEDNESDAY, JUNE 20, 2018 ~ VOL. CCLXXI NO. 143 WSJ.com ★★★★ $4.00

DJIA 24700.21 ▼ 287.26 1.1% NASDAQ 7725.59 ▼ 0.3% STOXX 600 383.21 ▼ 0.7% 10-YR. TREAS. ▲ 9/32, yield 2.893% OIL $65.07 ▼ $0.78 GOLD $1,275.60 ▼ $0.60 EURO $1.1589 YEN 110.06

What's News

Business & Finance

Verizon, AT&T and Sprint pledged to stop selling the locations of customers to two firms amid accusations that one mishandled data. A1

◆ **AT&T is in talks** to acquire advertising technology firm AppNexus, a deal that would give the telecom giant a foothold in digital ad sales. B1

◆ **Global stocks**, commodities and bond yields tumbled on trade-war fears. The Dow fell 287.26 points, or 1.1%, to 24700.21. B1, B13

◆ **GE will drop out** of the Dow, a milestone in the firm's decline. Drugstore retailer Walgreens will replace it. B1

◆ **A McKinsey fund** held investments that gave it a financial interest in six bankruptcy cases in which the firm was an adviser. B1

◆ **Ford and VW** are exploring a strategic alliance that could include jointly developing commercial vehicles. B3

◆ **Audi's CEO** stepped aside following his arrest in connection with an emissions-cheating probe. B3

◆ **U.S. housing starts** rebounded in May to the highest level since 2007. A3

◆ **Starbucks plans** to close more stores in the increasingly crowded U.S. market. B3

◆ **Carl Icahn won** a majority of seats on SandRidge Energy's board. B3

◆ **KKR is exploring** the sale of European telecom operator United Group. B12

World-Wide

◆ **Trump urged** House Republicans at a Tuesday meeting to pass broad immigration legislation, but stopped short of telling them he would immediately reverse a family-separation policy. A1, A4

◆ **The president's escalation** of trade threats against China reflects his belief that the U.S. has the upper hand, administration officials said. A1

◆ **The latest tariffs** proposed on Chinese imports, if enacted, would likely hit major categories of consumer goods. A6

◆ **The U.S. said** it is withdrawing from the U.N. Human Rights Council, delivering on a long-running Trump administration threat. A2

◆ **Russian trolls** have remained active on Twitter well into 2018, trying to rile up the American electorate, a Journal analysis found. A3

◆ **Millions of** small businesses and self-employed people will be able to buy health plans exempt from many ACA protections under a new rule. A3

◆ **Merkel bowed** to Macron's demands to join him in pressing for creation of a eurozone budget as part of a package of EU overhaul measures. A9

◆ **Mulvaney could remain** acting head of the CFPB for a while, despite the administration's move to nominate a permanent chief. A2

◆ **North Korean leader Kim** traveled to China, a visit expected to focus on economic relief for his country. A8

JOURNAL REPORT

Steps to build a better 401(k)

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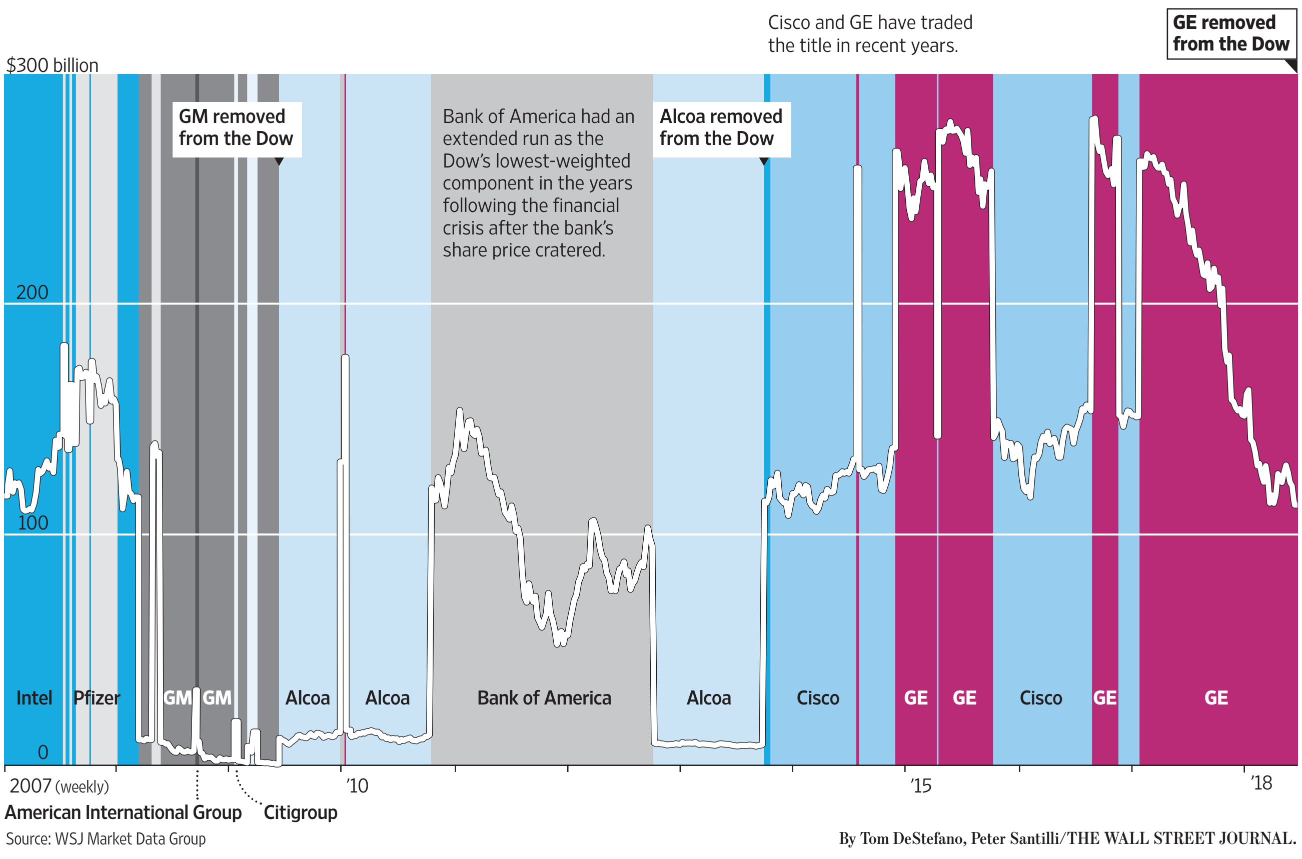
After More Than a Century, GE Is Dropped From the Dow Industrials

General Electric, one of the original 12 Dow components, will be replaced next week by Walgreens Boots Alliance. The colored bands represent the lowest-weighted Dow stock. The fever line shows its market capitalization. B1



Source: WSJ Market Data Group

By Tom DeStefano, Peter Santilli/THE WALL STREET JOURNAL.

Trump Pushes GOP on Migrants

In private meeting, president stops short of agreeing to end separation of families

By Siobhan Hughes And Louise Radnofsky

WASHINGTON—President Donald Trump urged House Republicans to pass broad immigration legislation in a Tuesday evening meeting, but stopped short of telling them he would immediately reverse a widely condemned policy that has separated thousands of migrant children from their parents.

In the private meeting, Mr. Trump discussed taxes, tariffs and the Russia probe before endorsing two different Republican immigration bills, according to lawmakers in the room. On the controversy over immigrant families, Mr. Trump said: "We have to take care of separation," according to one of the lawmakers. "It's too nasty, it's too nasty."

Mr. Trump took no questions and engaged in no discussion on a day when family separations engulfed nearly every other issue. Many Republicans had come to the meeting prepared to press Mr. Trump to halt his administration's "zero-tolerance" policy of detaining adult immigrants at the southern border, which has split more than 2,000 children from their parents in less than two months.

A decades-old court settlement bars the jailing of migrant children. Past adminis-

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◆ Migrants undeterred by risks at southern border A4

White House Sees Edge in China Talks

By Bob Davis And Lingling Wei

President Donald Trump's escalation of trade threats against China reflects his belief increasingly that Washington increasingly has the upper hand in the dispute, administration officials said, adding he is prepared to withstand pressure from U.S. businesses that might suffer from the conflict.

Mr. Trump caught Chinese officials off guard with his announcement Monday evening about potential new tariffs. Should China retaliate against U.S. trade policies, the White House said, the U.S. would apply tariffs of 10% on as much as $400 billion in Chinese imports.

China had earlier threatened to retaliate against the U.S.'s initial round of 25% tariffs on $50 billion in imports announced last week. The bulk of those tariffs go into effect July 6.

News of the new tariffs and the prospect of a trade war roiled global markets Tuesday. The Dow Jones Industrial Average fell 1.1% and the Shanghai Composite Index dropped 3.8% to its lowest level since mid-2016. Indexes in major exporters Germany and France slid more than 1%. Commodities

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◆ Trade tensions shake up global markets B1

◆ Latest tariffs likely to hit consumers directly A6

ALEX BRANDON/ASSOCIATED PRESS

Behind President Trump's tariffs threats is a belief the U.S. has the upper hand in the trade dispute, administration officials say.

Saudi Employers Pursue Elusive Prey—Saudi Workers

Tough new rules say hire locally; for some firms that is a tall order

By Margherita Stancati and Donna Abdulaziz

RIYADH, Saudi Arabia—At a soon-to-open Nobu hotel in the Saudi capital, the sushi chef is on standby and a waterfall made of sand is nearly ready. One problem remains to be tackled at the Japanese-theme hotel and restaurant. There aren't enough Saudis to work in the kitchen.

Ahead of its planned opening this fall, Nobu needs to assemble a staff of around 300 people, and under the law around 40% must be Saudi. Some jobs, such as at the front desk, will be easy to fill. Others, such as cooks, waiters and bellboys, will not.

"It's incredibly difficult," said Simon Fricker, the hotel's general manager. "The mindset is: 'I'm too good for that.' "

Nobu's challenge points to one of the biggest obstacles to Saudi Arabia's grand economic makeover: How to put Saudis to work.

The architect of Saudi Arabia's economic overhaul, Crown Prince Mohammed bin Salman, wants to rev up growth and create more opportunities for citizens. Companies, however, are struggling to meet the government's demands to employ them.

For decades, expatriate workers from countries such as India and the Philippines helped sustain Saudi Arabia's high living standards by doing jobs Saudis wouldn't do in kitchens, at construction sites and behind store counters. The oil-rich monarchy endowed citizens with what were essentially jobs for life in the public sector, which

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Phone Giants Cut Off Two Location Services

By Drew FitzGerald And Sarah Krouse

Verizon Communications Inc., AT&T Inc. and Sprint Corp. pledged to stop selling the locations of individual customers to two middlemen amid accusations that one of the firms mishandled the information.

The carriers said they will wind down data-sharing agreements with LocationSmart and Zumigo Inc., which buy access to the real-time locations of users from major U.S. carriers and allow other businesses to tap into it. The data are used for everything from marketing nearby shops to preventing credit-card fraud.

"We will not enter into new location aggregation arrangements unless and until we are comfortable that we can adequately protect our customers' location data," Verizon privacy chief Karen Zacharia wrote in a June 15 letter to Sen. Ron Wyden (D., Ore.), who wrote all four national wireless operators last month asking them about their privacy practices.

The inquiry followed revelations that one of the companies with access to LocationSmart's system, a prison phone provider, created a website that let law-enforcement agencies find the location of any cellphone user without obtaining a court order.

In a statement, AT&T said it "will be ending our work with aggregators for these services

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◆ AT&T is in talks to acquire ad-tech firm AppNexus........ B1

INSIDE

BLING THAT SPARKLES FOR MILLENNIALS

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CAR-RENTAL UPSTARTS TAKE THE WHEEL

BUSINESS & FINANCE, B1

Surfing vs. Skateboarding: A Fight for the Soul of California

* * *

Battle over the ultimate emblem of state's lifestyle moves to legislature

By Alejandro Lazo And Matthew Gutierrez

Things got pretty gnarly last month when a group of wetsuit-loving California lawmakers voted on a bill in the state assembly to make surfing the official state sport.

State Assemblyman Al Muratsuchi, a coastal Democrat from Los Angeles County, and a "proud member of the assembly surf caucus," said he was "stoked" he had introduced the measure.

"Nothing represents the California dream better than surfing: catching the golden waves of opportunity, and harmony with our environment," said Mr. Muratsuchi, sporting an Aloha shirt.

Some Californians are riding for a different sport as the ultimate emblem of the California lifestyle: skateboarding.

"I think skateboarding is the sport of California," said former pro skateboarder Cindy Whitehead, a top-ranked vert skater in the 1970s, who was inducted into Skateboarding Hall of Fame in Simi Valley, Calif., in 2016. "It's all over California, not just on the water's edge."

Surf's up, Sacramento

In choosing one, California

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U.S. NEWS

U.S. Quits U.N. Human Rights Council

By Jessica Donati

WASHINGTON—The U.S. said Tuesday it was withdrawing from the United Nations Human Rights Council, delivering on a long-running Trump administration threat to leave the panel unless it adopted major changes.

Secretary of State Mike Pompeo and U.S. Ambassador to the United Nations Nikki Haley announced the U.S. withdrawal in an appearance at the State Department. Mr. Pompeo said the Council had a poor record of defending human rights and criticized it for allowing some of the world's worst offenders, including Iran and Venezuela, to remain as members.

"The Council has failed in its stated objective," Mr. Pompeo said, calling it an "exercise in shameless hypocrisy."

The announcement came a day after the U.N. human rights chief called the U.S. border migration policy that separated children from their parents "unconscionable."

On Tuesday, Mr. Pompeo used the same terms to criticize the U.N. body. "The Council's continued and well-documented bias against Israel is unconscionable," he said. Mr. Pompeo and Ms. Haley took no questions about their announcement.

Ms. Haley said the U.S. had warned the Human Rights Council that it would leave unless it adopted "essential reforms," such as public voting and removing a requirement to debate the human-rights situation in Palestinian areas.

Ambassador Nikki Haley called the U.N. panel 'hypocritical and self-serving.'

Ms. Haley called it a "hypocritical and self-serving" organization that protects rights abusers, and a "cesspool of political bias."

The U.N. didn't comment on the allegations, but said in a statement that it would have preferred for the U.S. to remain in the Council.

"The U.N.'s Human Rights architecture plays a very important role in the promotion and protection of human rights worldwide," said the spokesman for the secretary-general, Stéphane Dujarric, in the statement.

Ms. Haley has spoken out frequently against the U.N. Human Rights Council and on Tuesday denounced what she called its "chronic bias against Israel." Ms. Haley complained that the Council has issued more resolutions condemning Israel than North Korea, Iran and Syria combined.

The Council has issued some 70 resolutions targeting Israel, according to the State Department.

Ms. Haley said the Council record had grown worse since last year, citing the addition of the Democratic Republic of Congo as "mass graves" were being found in the African nation, and its failure to hold a meeting on the human-rights situation in Venezuela, which is a member.

The U.S. move reverses the Obama administration's decision to join the body in 2009, made under then-Secretary of State Hillary Clinton. The current U.S. term was set to expire in 2019.

The Council was created in 2006 after its predecessor, the U.N.'s Human Rights Commission, was dissolved for failing to deliver on its mandate to protect rights and for allowing countries with abysmal human-rights records to become members.

At the time, President George W. Bush refused to join for three years, over concerns that the new body wasn't much of an improvement.

At Children's Fire Camp, It's Stop, Drop and Roll...and Roll...and Roll...and Roll

BRUCE NEWMAN/THE OXFORD EAGLE/ASSOCIATED PRESS

STATION MANAGEMENT: Participants rolled up hoses Tuesday during the Oxford, Miss., Fire Department's annual camp teaching children about fire safety techniques.

Mulvaney Likely to Stay at Consumer Bureau

By Yuka Hayashi
And Michael C. Bender

WASHINGTON—Mick Mulvaney could be around for a while as the acting chief of the Consumer Financial Protection Bureau, despite the Trump administration's move to nominate a permanent successor.

The White House formally said Monday it would nominate Kathy Kraninger to run the 1,700-person agency created after the financial crisis. Ms. Kraninger quickly ran into opposition from the left and right, with many critics saying she wasn't qualified for the job. She currently works as an associate director at the Office of Management and Budget for Mr. Mulvaney, who also serves as White House budget chief.

Some experts said it appeared President Donald Trump's administration was intentionally putting up a nominee who might not be confirmed by the Senate, allowing Mr. Mulvaney to stay at the CFPB for as long as two more years. Ms. Kraninger's nomination allows him to stay until at least the end of 2018 while her confirmation is pending in the Senate, and industry analysts said the law allows him to stay until 2020 if the confirmation runs into trouble and spills over into 2019.

"The administration's strategy appears to be to keep Mulvaney in office as acting director as long as he is able to do it," said Alan Kaplinsky, a financial-industry lawyer who has closely watched CFPB personnel issues. "I don't think anybody is going to push for the nomination to be heard anytime soon."

A White House official dismissed the notion that the president tapped Ms. Kraninger as part of a strategy to keep Mr. Mulvaney in place. "She's confirmable," a senior administration official said. "Vigorous independence, sharp-as-a-tack intelligence, and simple, old-fashioned, Midwestern humility makes her the ultimate public servant."

Inside the White House, Ms. Kraninger is viewed as a strong manager who would smoothly take over the reins from Mr. Mulvaney, whom she already works with closely. The White House official said she has a working relationship with Larry Kudlow, the president's top economic adviser, and Sen. Richard Shelby (R., Ala.), a senior lawmaker on the Senate Banking Committee, which will consider her nomination.

Mr. Mulvaney, a longtime CFPB critic, has shifted the agency's direction, pleasing many Republicans and financial firms that thought it was too aggressive under the Democratic administration of former President Barack Obama. Since taking over in November 2017, he has dropped enforcement cases, sought to reduce the agency's budget, put in place more business-friendly policies and delayed regulations.

'The administration's strategy appears to be to keep Mulvaney in office.'

Mr. Mulvaney praised Ms. Kraninger in a statement Tuesday. "The bureau will be in good hands throughout her term," he said. "Vigorous independence, sharp-as-a-tack intelligence, and simple, old-fashioned, Midwestern humility makes her the ultimate public servant."

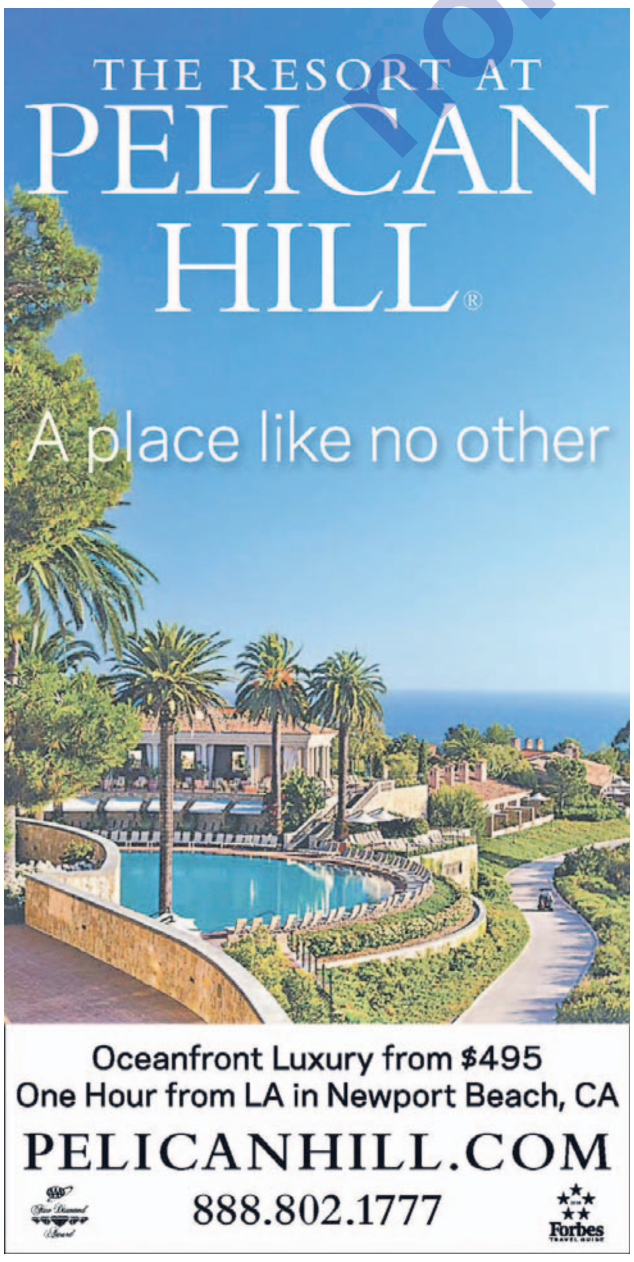
Ms. Kraninger couldn't be reached for comment.

Senate Majority Leader Mitch McConnell (R., Ky.) canceled most of the Senate's August recess, saying the chamber needed to stay in session to confirm nominees and complete spending bills before November's midterm elections when Republicans are defending their slim majority. That creates a possible opening for the CFPB nomination later this year.

A Senate Banking spokeswoman declined to discuss how the nomination might be handled. Republicans hold 51 seats in the 100-member Senate, leaving almost no wiggle room should any GOP lawmakers and all Democrats decide to oppose her. Analysts said Senate Republicans would likely be reluctant to put up a fight over consumer policy ahead of the 2018 midterm elections.

Sen. Sherrod Brown (D., Ohio), the senior Democrat on the panel, pressed his colleagues on Monday to reject her. "The White House should pick an experienced, serious independent leader," Mr. Brown said.

On Tuesday, Mr. Brown and Sen. Elizabeth Warren (D., Mass.) in an opening salvo against the nomination asked Ms. Kraninger to address whether she in her job at OMB had a role in an administration policy to separate some families who try to enter the U.S. at the southern border. Her current job includes budget and policy oversight for the Justice Department, Department of Homeland Security and other federal agencies.



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CORRECTIONS & AMPLIFICATIONS

Munich prosecutors in September arrested Wolfgang Hatz, **Volkswagen** AG's former engine chief. A Page One article Tuesday about the arrest of Audi's chief executive incorrectly said Mr. Hatz was charged by New York prosecutors in September.

Readers can alert The Wall Street Journal to any errors in news articles by emailing **wsjcontact@wsj.com** or by calling 888-410-2667.

U.S. WATCH

WASHINGTON, D.C.

Voters Back a Raise For Tipped Workers

Voters in Washington, D.C., cleared the way for the city to more than quadruple the minimum wage for tipped workers.

Under Initiative 77, endorsed by 55.1% of voters with nearly 90% of precincts reporting Tuesday night, the minimum wage for waiters, bartenders and other tipped workers is set to reach $15 an hour by 2025. Currently, tipped workers make a minimum of $3.33 an hour, while non-tipped workers make a minimum of $12.50.

The overall minimum wage in Washington is already set to rise to $15 an hour by 2020; employers are expected to make up the difference if tipped workers' gratuities don't push them to the current hourly minimum wage for non-tipped workers.

Mayor Muriel Bowser, who won Tuesday's Democratic primary, and several City Council members have spoken out against the initiative. They could end up having the final say on the matter because the council has the ability to overturn ballot initiatives.

—Rachel Feintzeig

FBI

Strzok Escorted Out Of Agency Building

Peter Strzok, the FBI agent at the center of the controversy over anti-Trump texts he sent during an investigation into Hillary Clinton's use of a private email server, was escorted from his FBI building Friday as part of the bureau's internal disciplinary process, his lawyer said Tuesday.

Aitan Goelman, the attorney, said Mr. Strzok remained employed at the Federal Bureau of Investigation and "has steadfastly played by the rules" despite the "highly questionable" nature of the internal investigation.

A spokeswoman for the FBI, agent Jacqueline Maguire, didn't immediately respond to emails seeking comment on Mr. Strzok's status.

The precise nature of Mr. Strzok's employment status wasn't clear, but a person close to the agent said he has essentially been suspended with pay.

—Del Quentin Wilber

MICHIGAN STATE

Abuse Victims Seek School Chief's Ouster

A letter signed by at least 130 sexual-abuse victims of former sports doctor Larry Nassar urged Michigan State University's governing board to oust interim President John Engler, saying he has reinforced a "culture of abuse" at the school.

Mr. Engler, who served as the state's Republican governor from 1991 through 2002, has resisted pressure to step down. He took over on an interim basis in February after previous President Lou Anna Simon resigned amid fallout from the Nassar scandal. Media outlets last week reported that he sent emails to another university official in April criticizing lawyers for Nassar's sexual-assault victims and suggesting the first woman to go public with her accusations was probably getting a "kickback" from her attorney.

Among the 138 victims who signed the letter are Olympic gymnastics gold medalist Aly Raisman and Rachael Denhollander, a former gymnast who has been one of the most vocal critics of Mr. Engler. Michigan State spokeswoman Emily Guerrant declined to comment.

—Associated Press

Russia Trolls Still Aiming At U.S. Voters

Politically divisive tweets on range of topics detected as recently as last month

With U.S. midterm elections approaching, Russian trolls found ways to remain active on Twitter well into 2018, trying to rile up the American electorate with tweets on everything from Roseanne Barr's firing to Donald Trump Jr.'s divorce, a Wall Street Journal analysis found.

By Georgia Wells, Rob Barry and Shelby Holliday

Newly identified Russian trolls posted politically divisive messages on Twitter as recently as last month, hitting on a wide array of hot-button issues, according to a Journal analysis of recently revealed investigative documents and Twitter data.

The new tranche of about 1,100 account names, released Monday by Democrats on the House Intelligence Committee, brings the total number of publicly known Russian troll-farm-operated accounts to more than 3,800. Last month, the Journal reported that the identities of many of the Russian accounts hadn't been publicly revealed.

The newly identified users posted more than 2.9 million tweets and retweets, bringing the total amount of Russian troll farm content on the platform to more than 8 million tweets and retweets, the Journal's analysis found.

"By releasing this Twitter data, we hope that researchers will continue their important work exposing any additional Russian operators who used similar tactics and themes," Rep. Adam Schiff (D., Calif.) said in a statement.

Republican Sen. James Lankford of Oklahoma, a member of the Senate Intelligence Committee, said Russia interferes in elections and spreads propaganda internationally "to create instability and doubt in governments, because they believe they benefit from the chaos and the loss of confidence in U.S. institutions."

At least 17 of the Twitter accounts revealed by investigators were active this year, the Journal found. Several targeted politically and racially charged issues consistent with the way other trolls also attempted to stoke division inside the U.S.

For instance, KaniJJackson, which featured #Impeach45, #Resist and #GunReformNow in its profile, and had more than 33,000 followers, posted several messages about Roseanne Barr, whose ABC sitcom was canceled last month after the star sent a racist tweet about an aide of former President Barack Obama. "Has Trump congratulated Roseanne on her tweets yet ?" the account wrote on May 29. Minutes later, it wrote: "I wonder if Trump now plans to nominate Roseanne Barr fo Fed chair."

The account wokeluisa, which had more than 55,000 followers, repeatedly tweeted about the controversy over certain NFL players kneeling during the national anthem. Last September it wrote: "Trying to figure out how #TakeAKnee is un-American but letting people die because of lack of health insurance is patriotic." That message was retweeted more than 29,000 times.

Foreign interference on social-media platforms has been a flashpoint since the 2016 election. The Kremlin-aligned Internet Research Agency ran a propaganda campaign in an attempt to sow discord in the U.S. before and after Election Day, prosecutors say. While many of the posts favored Republican candidate Donald Trump and targeted his opponent, Democrat Hillary Clinton, they covered the political spectrum, and intelligence officials believe the larger goal was to stoke division within the U.S. and weaken the country's institutions.

People connected to the IRA have previously denied ties to election interference efforts. An entity accused of funding the organization, Concord Management, pleaded not guilty in May. Moscow has denied any government effort to influence the 2016 election.

Twitter and other tech companies, like **Facebook** Inc., and **Alphabet** Inc.'s YouTube, have said they are cooperating with federal probes and taking steps to combat foreign interference campaigns.

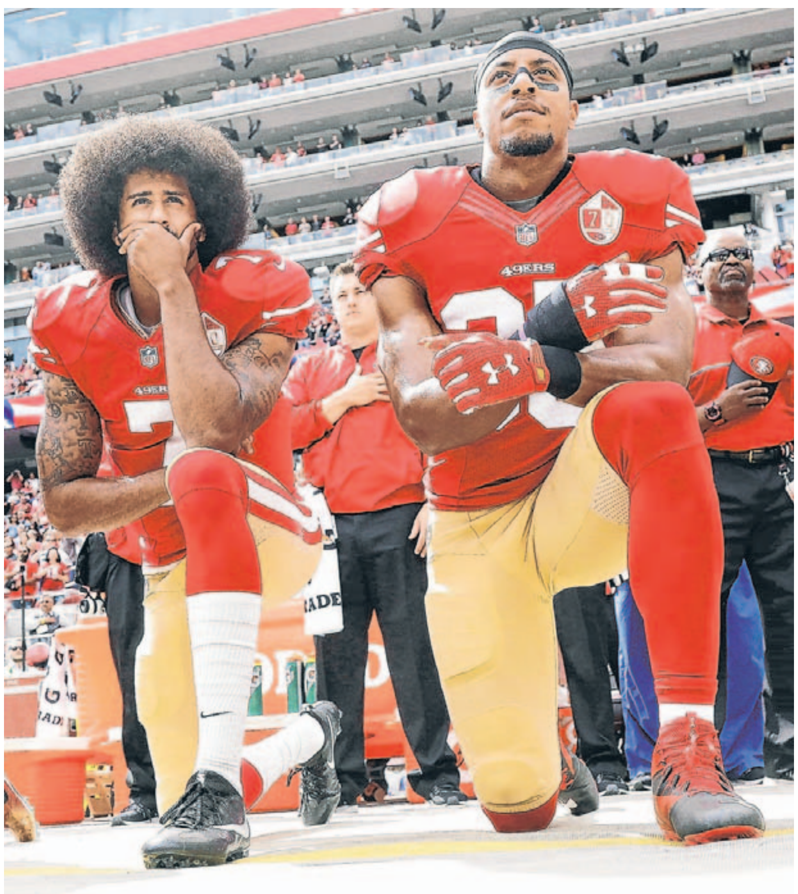
The efforts are ongoing. Twitter has continued to find and suspend IRA accounts in recent months, including 41 since January, according to a person familiar with the matter.

The platform has now suspended all of the IRA-linked handles that were released this week for violating its rules against spam. It declined to comment on when those accounts were suspended.

"Twitter has long said we would welcome committees releasing the information we have shared with them," a spokeswoman for Twitter said. The company didn't release the information earlier, she said, because the tweets were part of an investigation.

Kanisha J @KaniJJackson · May 29, 2018

I wonder if Trump now plans to nominate Roseanne Barr fo Fed chair



FROM LEFT: KATHY HUTCHINS/ZUMA PRESS; MARCIO JOSE SANCHEZ/ASSOCIATED PRESS

wokeluisa @wokeluisa · Sept. 23, 2017

Trying to figure out how #TakeAKnee is un-American but letting people die because of lack of health insurance is patriotic

Housing Starts Reach Their Highest Level Since 2007

By Laura Kusisto

U.S. housing starts rebounded last month to the highest level since 2007, driven by a construction rebound in parts of the country that have lagged behind for much of the economic recovery as well as a lingering apartment boom.

Housing starts rose 5% in May from the prior month to a seasonally adjusted annual rate of 1.35 million, the Commerce Department said Tuesday. Compared with a year earlier, starts were up 20.3%.

The strong improvement was spread fairly evenly between single-family and multifamily, despite expectations that builders would pull back on new apartment construction because of a flood of new units already hitting the market. Single-family construction increased 3.9% in May, compared with a month earlier, while multifamily building increased 11.3%, according to the Commerce Department.

Midwestern builders also significantly ramped up construction, welcome news for a region that had lagged behind compared with the South and the West through much of the economic recovery.

Wells Fargo & Co. Senior Economist Mark Vitner said part of the bump in the Midwest may be attributable to an improving manufacturing sector. "The economic recovery has broadened and it's reached parts of the country that hadn't seen improvement until recently," he said.

Housing-starts data are volatile from month to month and can be subject to large revisions. May's 5% jump for starts came with a margin of error of plus or minus 10.2 percentage points.

Building permits, which tend to be a more reliable indicator and signal how much construction is in the pipeline, declined 4.6% to an annual pace of 1.301 million last month. Permit declines in the South and West drove May's permits figure lower. Permits last month fell for both single-family and multifamily housing.

Nonetheless, housing construction appears on track to have a slightly better year than many economists had predicted, in part, because of surprisingly strong multifamily growth.

Overall starts grew by 11% in the first five months of 2018, compared with the same period a year earlier. Multifamily starts rose 13.3% during that period; single-family starts rose 9.8%.

Still, builders face headwinds in the coming months. Rising lumber prices have added nearly $9,000 to the cost of a new home since January 2017, according to the National Association of Home Builders, which reported on Monday that builder confidence ticked down slightly in June.

Mr. Vitner said larger home builders have more power to negotiate deals on material and labor prices, but smaller builders are struggling. "A lot of smaller builders are having to postpone projects...and say let's just sit this out and see if prices come down," he said.

Rule Expands Plans Skirting Health Law

By Stephanie Armour

Millions of small businesses and self-employed people will be able to buy health-insurance plans exempt from many Affordable Care Act consumer protections under a much-debated rule released Tuesday by the Trump administration.

The rule is a far-reaching step by the administration to wield its regulatory powers to chisel away at the Obama-era health law. It was undertaken at the behest of President Donald Trump, who last year called for the change in an executive order.

The rule makes it far easier for small businesses and self-employed individuals to band together and obtain "association health plans" for themselves and their employees. Many of the plans will be subject to the same rules as larger employers, which means they won't have to provide comprehensive benefits mandated under the ACA.

That is expected to lead to lower prices for people who enroll. "You may be able to buy a policy that's several thousand dollars cheaper," said Sen. Lamar Alexander (R., Tenn.), said in an interview before the rule's release. "This is the most promising proposal for quality insurance for self-employed people who might make $60,000 to $70,000 but get no subsidies."

Business groups such as the U.S. Chamber of Commerce and the National Restaurant Association praised the move, saying it will give small employers the flexibility to cover workers at a lower cost. Democrats said it would drive up costs for people with pre-existing conditions and people who buy their own coverage on the individual market.

"Let's be clear—this policy has nothing to do with patients and everything to do with appealing to extreme Republican donors and special interests," said Sen. Patty Murray (D., Wash.).

While premiums for association plans will probably be significantly cheaper, costs for consumers who buy their coverage on the individual market are likely to rise, analysts say. Those higher premiums are expected to increase the number of Americans without coverage.

An additional four million Americans are expected to enroll in these less-comprehensive plans by 2023, according to a senior Labor Department official who cited a recent federal analysis. Among the enrollees will be about 400,000 people who are currently uninsured.

Democrats say a proliferation of the association plans would imperil the individual insurance market by attracting healthy people, which could raise costs for sicker and older consumers, and leave people with inadequate insurance. They also say these plans have been prone to fraud and scams.

The proposal has been championed by Republicans who say it will provide coverage to individuals who can't afford insurance on the ACA's individual market. Current ACA requirements on small businesses, such as array of mandatory benefits many must provide, drive up costs, they say.

Premiums could be $9,700 a year less for association plans compared with those on the individual market, according to a February report on the proposed rule by the health-consulting firm Avalere. Their premiums would be about $2,900 a year less than those for plans in the small-group market, which includes employers with less than 50 employees.

ANDREW HARRER/BLOOMBERG NEWS

Many of the association plans won't have to provide comprehensive benefits mandated under the ACA.

Cohen Changes Lawyers, Wants Trump to Pay Fees

By Rebecca Ballhaus And Rebecca Davis O'Brien

Michael Cohen has hired New York lawyer Guy Petrillo to represent him in a federal investigation into his business dealings, and has told associates he wants President Donald Trump, his former boss, to pay his legal fees, according to people familiar with the matter.

Mr. Cohen has frequently told associates in recent months he is frustrated that the president hasn't offered to pay his legal fees, which he has said are "bankrupting" him, according to one of the people. He has said he feels that Mr. Trump owes him after his years of loyalty to the former real-estate developer.

The White House didn't respond to a request for comment, and there has been no indication Mr. Trump is planning to pay for his former longtime lawyer's legal fees.

The Trump campaign had been footing the bill for some of Mr. Cohen's legal expenses, paying nearly $230,000 to McDermott, Will & Emery LLP between October 2017 and January 2018, according to Federal Election Commission records and a person familiar with the matter. But those payments helped cover Mr. Cohen's legal representation in the separate Russia investigation, not in the probe of his business dealings.

The Trump family had financed a portion of Mr. Cohen's legal bills in the latter probe, paying for the review of documents seized by prosecutors in an April raid of his properties, but hadn't agreed or offered to cover his full fees, according to people familiar with the matter.

Mr. Trump told reporters on Friday that Mr. Cohen was no longer his lawyer. "I always liked Michael Cohen," he said. "I haven't spoken to Michael in a long time."

Some allies of Mr. Trump have expressed concerns that Mr. Cohen would cooperate with investigators, a decision a person close to Mr. Cohen said he has yet to make. Discussing the probe with one associate in recent months, Mr. Cohen said he would rather "eat a bullet" than help investigators work against the Trump family, according to a person familiar with the conversation.

Mr. Petrillo a decade ago served as chief of the criminal division for the Manhattan U.S. attorney's office. Mr. Petrillo, whose hiring was first reported by Vanity Fair, didn't respond to a request for comment. Mr. Cohen also didn't respond to a request for comment.

Michael Cohen, Donald Trump's former lawyer, is being investigated by the Manhattan U.S. attorney.

Migrants Undeterred by the Risks

Families with few options keep crossing border despite threat of being separated

Families are continuing to try to make their way across the southern U.S. border, undeterred by the Trump administration's "zero tolerance" policy toward illegal immigration and the risk of being separated from family members.

By ***Alicia A. Caldwell*** *in El Paso, Texas, and* ***Juan Montes*** *in Reynosa, Mexico*

"Of course I'm afraid they take my children away from me. But need is greater. We don't have any other option," says Piedad Mejías, a 31-year-old Honduran at a migrant shelter Tuesday in Reynosa, Mexico, across the border from McAllen, Texas, with her husband and four sons, the youngest 3 years old.

The images of children separated from their parents have shocked Central American migrants in this shelter in the violent Mexican border city just a few steps from the Rio Grande.

Despite the risks of separation and possibly jail, most migrants here say they are determined to enter the U.S., legally or illegally.

Thousands of illegal border crossers have been charged with a crime and more than 2,000 children have been taken from their parents since early May when the Trump administration enacted a "zero tolerance" policy that requires border agents to refer every adult border crosser to federal prosecutors. It is at this point that parents could be separated from their children.

Nearly 800 miles to the northwest, in El Paso, dozens of migrants, some with children in tow, arrive daily at migrant hospitality centers organized by Annunciation House, an agency that runs a migrant shelter in the sprawling border city.

Ruben Garcia, director of Annunciation House, said many have heard about what is happening along the border but they are still committed to reaching the U.S.

"They're hoping that they will be one of the lucky families," Mr. Garcia said. "Last week we had 360 people, we may bump up against 400 this week."

Between Oct. 1 and June 17, the U.S. Border Patrol arrested 272,591 people, a 17% increase over the same period a year ago, according to government data obtained by The Wall Street Journal. Between May 5 and June 9, 2,342 children were separated from 2,206 adults who were detained, administration officials said Tuesday.

Some migrant children are currently being housed at a makeshift tent facility outside of El Paso in the small farming community of Tornillo.

Not all of the migrants coming to the U.S. have crossed the border illegally, as some have come here seeking asylum via a port of entry like the one in El Paso. That spares them misdemeanor charges that arise from unlawfully entering the U.S.

For weeks the Trump administration has been sending a message to those considering crossing the border illegally: Don't do it. The administration warned that nearly every adult will face prosecution for a federal misdemeanor and anyone bringing their children will likely be separated, with the youngsters sent to one of 100 child migrant shelters in 17 states.

"I don't know that it's resonating with the migrant population," said Allegra Love, an immigration lawyer who works with the nonprofit Santa Fe Dreamers Project in Santa Fe, N.M., referring to the Trump policy.

She said a single report of a family either making it into the U.S. unscathed or being reunited after being arrested seems to have more influence than reports of prosecution and separation.

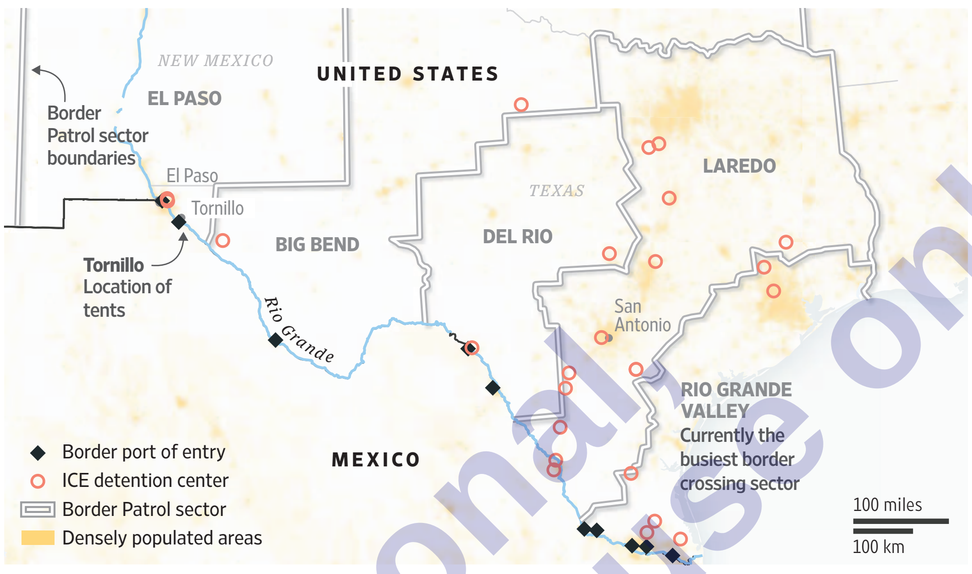
"The hopeful news travel fast," Ms. Love said.

JOE RAEDLE/GETTY IMAGES

People protest the separation of children from their parents in front of an immigration detention facility near the border in El Paso, Texas.

At the Border

Locations of ICE detention centers and select U.S. ports of entry along Texas's border with Mexico.



Sources: Customs and Border Protection (sectors, ports of entry); Immigration and Customs Enforcement; Oak Ridge National Laboratory's LandScan population data (population density)

THE WALL STREET JOURNAL.

Gag Order On Trump Sought by Ex-Staffer

By Byron Tau

WASHINGTON—Attorneys for a former Senate staff member accused of lying to federal investigators said President Donald Trump's remarks on the case were "highly prejudicial," and asked a judge to order him and other executive branch officials to keep quiet about the case in public.

In federal district court here Tuesday, lawyers for James A. Wolfe argued that statements from Mr. Trump and other officials had adversely affected their client's right to a fair trail.

On June 8, the day after Mr. Wolfe's arrest, Mr. Trump described Mr. Wolfe as "a very important leaker" and said his arrest "could be a terrific thing." That remark to reporters, Mr. Wolfe's attorneys argued, implied falsely that Mr. Wolfe had been accused of leaking classified information.

"The Indictment does not actually charge Mr. Wolfe with leaking anything, and contains no allegation that he disclosed or mishandled classified information in any way," Mr. Wolfe's attorneys wrote. Mr. Wolfe has pleaded not guilty.

Judge Ketanji Brown Jackson, a Democratic appointee, ordered prosecutors and Mr. Wolfe's defense team to agree upon a date to argue the motion for a gag order.

Spokeswomen for the White House and the Justice Department didn't respond to requests to comment.

Mr. Wolfe, who was head of security for the Senate Intelligence Committee, was arrested June 7 on "charges of making false statements to special agents of the FBI during the course of an investigation into the unlawful disclosure of classified information to reporters," the complaint said.

The indictment lays out a pattern of contact with reporters, including a New York Times reporter with whom he had a romantic relationship.

Mr. Trump has urged his attorney general to prosecute leakers, arguing that the disclosure of classified information is a national security threat. The Justice Department said in August that it had more than tripled the number of active leak investigations from the number pending at the end of the Obama administration, which brought more leak cases than all prior administrations combined.

Statements by a president regarding ongoing criminal cases are highly unusual. Typically, the White House avoids interfering in criminal justice matters to ensure that such cases aren't politicized.

Broad Bill Is Pursued By Trump

Continued from Page One

trations had opted to let families be released while their cases were pursued.

"We certainly want to support our president, but most of us have to support our district first," said Rep. Mark Meadows (R., N.C.), who is close to the president, as he headed into the meeting. "It has not only got my attention but requires action," Mr. Meadows said about the issue, which he said has sparked more constituent mail than any in recent memory.

The meeting set the stage for House Republican leaders to begin lining up votes for a compromise bill that is seen as having the best chance of passing later this week. But the president's performance did little to give momentum to bills that are tentatively set for votes on Thursday, because he didn't line up behind one and sell it. As a whole, Republicans remain divided over how to treat young immigrants brought to the U.S. illegally as children.

"His message to us was we've got to pass something," said Rep. Warren Davidson (R., Ohio). "If he spends the week very publicly embracing the compromise bill...I think that will generate a lot more support than this meeting just generated."

The session at the Capitol had originally been envisioned as a chance for the president to rally Republicans around immigration legislation and for lawmakers to air their concerns about family separations.

But earlier Tuesday, Mr. Trump had defended his policy. In remarks at a National Federation of Independent Business meeting, Mr. Trump said he considered there to be only two options: "totally open borders or criminal prosecution for lawbreaking." He said he wanted to see Congress "give us a third option," describing it as the legal authority to detain and remove families "together as a unit."

Also earlier on Tuesday, Senate Majority Leader Mitch McConnell (R., Ky.) said that Republicans would quickly craft legislation that aims to address family separations. Sen. John Cornyn (R., Texas) said he hopes to introduce a bill this week that would place detained families into a "humane" and "safe" facility together while they wait for their cases to be processed.

The administration's new policy of detaining adults attempting to cross into the U.S. at the southern border, which has resulted in separating children from parents or other adults, has sparked explosive debate in recent days.

As Democrats and some Republicans have called for an end to the policy, Mr. Trump and his administration officials have dug in and sought to blame Congress for not having passed a broader immigration overhaul that might have ameliorated the problem.

The House is poised to consider two broader GOP immigration measures this week that would address issues including border security, funding for a border wall and a way to protect so-called Dreamers, who were brought to the U.S. illegally as children.

But neither broad GOP bill is seen as likely to pass amid intraparty divisions, and House Republican leaders haven't said whether they would allow a vote on a standalone bill related to family separations if the two separate immigration bills fail to pass.

Mr. Trump also leveled another attack at Democrats Tuesday, alleging in a tweet that they "don't care about crime and want illegal immigrants, no matter how bad they may be, to pour into and infest our Country," saying they view such immigrants "as potential voters!"

Democrats argue that because Mr. Trump started the family-separation policy he should be the one to stop it, and not tie it to broader legislation.

"Infest? We're not talking about insects, these are children!" tweeted Sen. Bob Casey (D., Pa.). "You are talking about kids who are scared, alone and being held in cages. You have the power to stop it, do it."

The entire 49-member Senate Democratic caucus has signed on to legislation, from California Sen. Dianne Feinstein, that prohibits using separation of parents and children as a deterrent to crossing the border into the U.S.

Meanwhile, the Department of Homeland Security said Tuesday that it had registered 2,342 children as unaccompanied minors between May 5 and June 9, after detaining 2,206 adults.

Other Republicans sought to get ahead of potential political fallout by pushing the Trump administration to put on hold the policies.

Sen. Orrin Hatch (R., Utah) circulated a letter among senators that asks the Justice Department to pause its zero tolerance policy resulting in separating families at the border until Congress passes legislation. Sen. Lamar Alexander (R., Tenn.) added his name to the list of concerned Republicans, saying that Mr. Trump should reverse the policy.

"The White House could change it in five minutes, and they should," he told reporters. "It's a mistake. It's a change in policy by this administration."

—Viviam Salama and Natalie Andrews contributed to this article.

JOSHUA ROBERTS/REUTERS

Majority Leader Mitch McConnell says the Senate GOP is working to end migrant family separations.

Mexico Urges End To Child Separation

MEXICO CITY—Mexico criticized U.S. immigration policies that it said violate children's human rights by separating them from their undocumented migrant parents.

"We strongly urge the U.S. government to reconsider this policy," Mexican Foreign Minister Luis Videgaray said Tuesday, urging federal authorities to implement measures to alleviate the traumatic conditions of some 2,000 children held in U.S. facilities without their parents. He called the Trump administration policies "cruel and inhumane."

The U.S. didn't respond to Mexico's criticism.

Mr. Videgaray said he had "respectful" telephone conversations with Secretary of State Mike Pompeo and Department of Homeland Security Secretary Kirstjen Nielsen but the two sides hadn't "necessarily coincided."

Mr. Videgaray said the Mexican government identified 21 Mexican children separated from their migrant parents in recent weeks. Most have been repatriated or have been reunited with relatives living in the U.S., but seven remain separated.

Among them, "there's one particular heartbreaking case," Mr. Videgaray said, referring to a 10-year-old girl with Down syndrome who was recently separated from her mother as they attempted to enter the U.S. The girl was sent to a facility in McAllen, Texas, while her mother was sent to Brownsville.

"We are working to release the girl, so she can reunite with her father," who is a legal U.S. resident, Mr. Videgaray added.

Mexico's Foreign Ministry also delivered a formal complaint to the U.S. government and urged federal agencies to "comply with specific recommendations" to correct problems that worsen the trauma and condition of separated children.

—José de Córdoba

White House Deputy Chief Of Staff Will Retire

By Vivian Salama

WASHINGTON — Deputy White House Chief of Staff Joseph Hagin will retire and return to the private sector, the White House said Tuesday.

Mr. Hagin previously served in the administrations of Presidents Ronald Reagan, George H.W. Bush and George W. Bush. President Donald Trump on Tuesday described him as "a huge asset" to his administration.

The White House said Mr. Hagin had committed to stay in the role for a year but ultimately served an additional six months.

Mr. Hagin, 62 years old, generally maintained a low profile during his work in the Trump White House. His portfolio has included oversight of scheduling and advance staffs, as well as the military office and plans to upgrade Air Force One and Marine One, the president's helicopter.

White House Chief of Staff John Kelly commended Mr. Hagin for his "selfless devotion to this nation and the institution of the presidency."

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Alphabet Inc C	GOOG	11.55%
Alphabet Inc A	GOOGL	11.46%
NetFlix	NFLX	4.66%
Charter Communications A	CHTR	4.58%
Activision Blizzard	ATVI	4.51%
Time Warner	TWX	4.50%
Walt Disney	DIS	4.43%
Comcast A	CMCSA	4.37%
Verizon Communications	VZ	4.15%
AT&T	T	4.09%
Electronic Arts	EA	3.80%
Twenty-First Century Fox A	FOXA	3.40%
Twitter	TWTR	2.58%
CBS B	CBS	1.64%
CenturyLink	CTL	1.52%
Omnicom Group	OMC	1.47%
Twenty-First Century Fox B	FOX	1.41%
Take-Two Interactive Software	TTWO	1.18%
Viacom B	VIAB	0.90%
Interpublic Group	IPG	0.78%
Discovery C	DISCK	0.74%
DISH Network A	DISH	0.67%
TripAdvisor A	TRIP	0.54%
News Corp A	NWSA	0.53%
Discovery A	DISCA	0.36%
News Corp B	NWS	0.17%

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STATE STREET GLOBAL ADVISORS

WORLD NEWS

Trade Fight Softens China Debt Control

Dispute with U.S. tests campaign to rein in business lending as wider economy slows

By Lingling Wei

BEIJING—A bruising trade fight with the U.S. comes at a difficult time for China as its economy faces headwinds that limit President Xi Jinping's options.

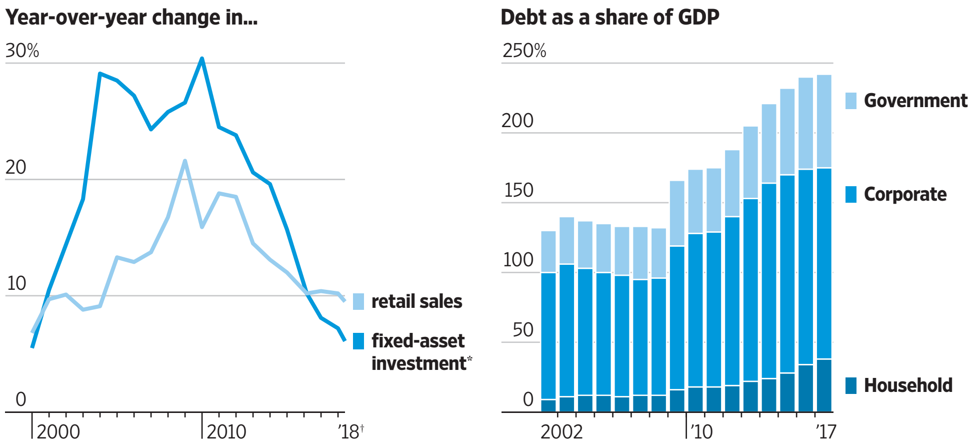
While Chinese officials have been bracing for a trade war for months—promising to match the Trump administration measure for measure—there are signs China's recent economic expansion is slowing, from weakening investment and household consumption to rising corporate defaults, in part due to a key Xi initiative to contain debt and fend off financial risks.

The slowdown is triggering mounting calls from some corners of the government for Beijing to reopen the credit spigot and ease off on Mr. Xi's program before the trade conflict further dents growth.

"It's a testing moment for Beijing," said Larry Hu, China economist at Macquarie Group, a Sydney-based investment bank.

Headwinds

China's economy is losing momentum as its debt grows.



*Outside rural households; †2018 data is year to date
Sources: National Bureau of Statistics via Wind Information; Macquarie Group
THE WALL STREET JOURNAL.

Soaring levels of corporate and local-government debt are seen by economists as potentially dragging down the world's second-largest economy. Getting a handle on debt has been a Xi priority.

The Trump administration's simultaneous fights with the European Union, Canada, Mexico, Japan and others on trade do give Beijing some breathing room, making it less likely that those U.S. allies will mount a broad front against Chinese trade practices widely seen as unfair. They also give the Chinese leadership a chance to pick up potential partners against Washington.

The latest volley from President Donald Trump, who said Monday that he had directed aides to identify $200 billion of Chinese goods for 10% tariffs, caught Beijing off guard. Officials scrambled to put together a strongly worded response, pledging to fight back forcefully without providing details.

By escalating the tariff threats to potentially $200 billion of Chinese goods, the Trump administration is, in effect, driving Beijing to look for penalties other than tariffs; the U.S. exports about $150 billion in goods to China.

Beijing could restrict access to China's market by American companies, tie up firms already there in antitrust and other regulatory red tape, and try to steer business to other foreign firms. The Trump administration already accuses Beijing of unfair practices, so targeting American business would reinforce that perception, likely hardening the response.

Early Tuesday, hours after the Trump announcement on additional tariffs, the People's Bank of China pumped 200 billion yuan, or $31 billion, of one-year funds into the nation's banks.

Advisers to the central bank said the move didn't mean the bank was loosening its conservative monetary stance, but was aimed at calming jittery investors and containing any financial fallout from the trade fight.

Still, the unusually large liquidity injection surprised market participants, helping drive down the yuan's value against the dollar to its weakest level in five months, at 6.4743. The benchmark Shanghai Composite stock index plunged 3.8% Tuesday, falling below 3000, a psychologically important level for investors and hitting its lowest mark in two years.

To fend off an economic slowdown, some officials in the State Council, China's cabinet, are urging more aggressive loosening measures to boost lending and spur growth, such as reducing the portion of deposits banks are required to hold in reserve.

Others, notably those at the central bank and other financial regulators, want to stay the course of debt control.

"Financial deleveraging is now trickling down to the real economy," said Sheng Songcheng, a senior adviser at China's central bank. "All those efforts would go to waste if monetary policy gets loosened now."

How China adjusts its economic policy, officials and economists said, will depend on how much worse the trade fight with the U.S. becomes.

Recent snapshots of economic activity show that investments in Chinese factories and other fixed assets have slowed to the lowest level in 18 years and China's household consumption, which has been steady in recent years, is starting to decelerate sharply.

With exports likely to take a hit too, policy makers have put in place tax cuts and other measures aimed at boosting consumption. Deutsche Bank AG estimates that an escalation of the conflict to include $200 billion of Chinese exports would shave between 0.2 and 0.3 percentage point from China's annual gross-domestic-product growth.

—Chao Deng contributed to this article.

Trump's Latest Tariffs Likely to Hit Consumers Directly

By Josh Zumbrun And Khadeeja Safdar

President's Donald Trump's trade battles with China and the rest of the world have barely touched U.S. consumers so far, but that could soon change.

The White House proposal to apply tariffs to an additional $200 billion in Chinese imports—and possibly as much as $400 billion if China retaliates—would certainly hit many consumer products, from appliances to clothing to electronics, if enacted.

When the Trump administration picked its initial target lists for tariffs against China, it was able to largely steer clear of consumer goods by focusing on products like semiconductors, plastics, machinery and other intermediate and capital goods—purchased by businesses but not directly by shoppers.

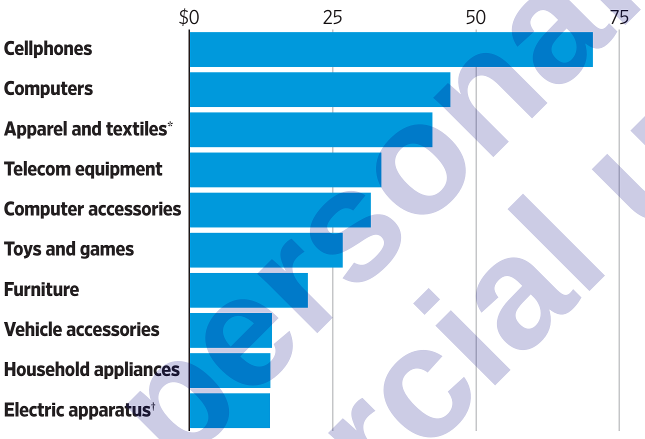
Because so many products the U.S. imports from China are consumer goods, it is likely impossible to construct a list of $200 billion in extra items for tariffs without hitting major categories of consumer goods.

The nation's leading import from China is cellphones. In 2017 Americans bought $70.4 billion worth of them from the world's second-largest economy. Also among top U.S. imports from China are computers, at $45.5 billion, various kinds of apparel, totaling $36.4 billion, toys and sporting goods, at $26.8 billion, and furniture at $20.7 billion. Shoes and televisions are also high on the list.

If the U.S. hits Chinese products with tariffs, they could filter through the system in different ways. Chinese suppliers or U.S. retailers could absorb some of the cost, insulating consumers but hitting their own profits, or they could pass the cost on to consumers in the form of higher prices.

Overseas Shopping

Top U.S. imports from China, 2017, in billions



*Includes wool, cotton and other materials †Includes fuses, circuit breakers and certain types of batteries
Source: Commerce Department
THE WALL STREET JOURNAL.

The U.S. Trade Representative will work in coming weeks to identify the list of goods targeted for tariffs. The Trump administration applied 25% tariffs on the first round of targeted goods and has threatened 10% tariffs on the next. That means somebody could be paying an extra $100 for a $1,000 computer, couch or television.

"Everyone is trying to sort out what is going to be on this list and how they are going to be impacted," said Hun Quach, vice president of international trade for the Retail Industry Leaders Association. The type of products earmarked and the high dollar amount are "of course going to hit the products that you bring into your home every day," she said.

Only about 1% of the first round of tariffs—which was detailed on June 15—included consumer goods, compared with about 52% for capital goods such as industrial machinery and 43% for intermediate goods like semiconductor components, according to calculations from Chad Bown, Euijin Jung and Zhiyao Lu at the Peterson Institute for International Economics.

Other tariffs from the Trump administration have largely avoided directly hitting consumers as well. The White House has imposed 25% tariffs on steel and 10% tariffs on aluminum. Steel and aluminum prices have surged since the tariffs went into effect, but the price increases have hit businesses that use the metal in their own production.

One consumer product was hit directly by tariffs in January: washing machines. Since then, their prices have soared, rising 17% over the past three months, by far the biggest three-month price increase in data going back 12 years. But most consumers don't buy washing machines with frequency. Before the tariffs, their prices had been going down.

Overall U.S. inflation has been modest for years, but it has been rising in recent months, in part because the economy is stronger. The Federal Reserve targets overall 2% inflation and that is about where it stands now.

"It's not tangible yet, it hasn't passed through," said Scott Miller, a senior adviser at the Center for Strategic and International Studies and a former director of global trade policy at Procter & Gamble Co. "In the long run, it always does. Consumers always pay tariffs in the long run."

President Emboldened On China

Continued from Page One

prices also took a hit, with soybean prices dropping 2.2% to their lowest level in more than two years.

The White House's tough stance represents the ascendancy, for now, of trade hawks in the administration, particularly White House senior trade adviser Peter Navarro and U.S. trade representative Robert Lighthizer. Both officials argue China represents a fundamental threat to the U.S. that needs to be countered, even at the cost of pain to the U.S. economy.

"It's clear that China has much more to lose" than the U.S. from a trade fight, said Mr. Navarro.

Mr. Lighthizer said additional tariffs wouldn't be imposed until the U.S. picked the products, and received industry comment, a process that will take months and leaves open the possibility of additional negotiations. But so far there is no indication that such talks are on the horizon, and the administration is signaling it is increasingly confident of achieving goals through a dramatically more confrontational approach to China.

Although Chinese government officials pledged to fight back forcefully, they didn't give any details of what they might do, as they have in the past. Beijing has threatened to match the initial U.S. tariffs dollar-for-dollar and impose them on the same day as the U.S. acts.

Next up from the administration is a plan to halt Chinese investment in U.S. technology, due to be released by the Treasury Department by June 30. Under

AGENCE FRANCE-PRESSE/GETTY IMAGES

Workers moved soybeans at a port in China's eastern Jiangsu province. Soybean prices took a hit on Tuesday.

the plan, which is still being developed, the U.S. would use a law designed to address national emergencies to block Beijing from acquiring what the White House calls "industrially significant technology." Export controls on such technologies would also be tightened, say administration officials.

Mr. Trump has backed away from threats before, and sided with advisers who take a less confrontational attitude toward China, including Treasury Secretary Steven Mnuchin. In April, Mr. Trump threatened a dramatic increase in tariffs on Chinese goods, but didn't follow through. Instead, he approved Mr. Mnuchin led to get China to buy more U.S. goods and make changes to its tariffs and other trade barriers. That led to a temporary reprieve in the tensions as the two sides sought to negotiate a truce.

The White House has since judged those efforts a failure, especially after Mr. Mnuchin and Mr. Trump were criticized by cable TV hosts and some lawmakers of being weak on China. During a June trade mission to China by Commerce Secretary Wilbur Ross, Beijing offered to buy nearly $70 billion in U.S. farm, manufacturing and energy products if the Trump administration abandoned tariff threats. Mr. Trump rejected that offer as another empty promise.

"The other side may have underestimated" if they thought the White House could be swayed by pledges of purchases, said Mr. Navarro. "That was a miscalculation."

The hard-liners in the Trump administration increasingly believe Beijing is vulnerable on trade because China exports far more merchandise to the U.S.—the U.S. sends to China. In 2017, the U.S. sends to China. In 2017, the U.S. exported goods worth $129.9 billion to China. Mr. Navarro said the U.S. goal is "enforceable, accountable, systematic change" in Chinese economic and trading practices.

Although global trade now accounts for less than one-third of China's gross domestic product, compared with nearly two-thirds in 2006, strong exports were a big reason why China's growth exceeded the government's target last year. A sharp slump in exports in the coming months, economists say, could threaten growth just as investments in Chinese factories and other fixed assets are slowing to multiyear lows, while Chinese household consumption is starting to weaken.

U.S. officials also note another vulnerability of their Chinese counterparts: While China imports less than the U.S., its economic growth is more dependent on what it does import, especially on the machinery and technology.

China has plenty of weapons it can employ to respond to the confrontational U.S. trade policies, including stepped-up regulations of American companies operating in China and stirred-up nationalist resentment.

Using Tariffs as a Line of Defense For Tech Companies

The White House says tariffs will protect U.S. technology from Chinese predation. Beijing obtains U.S. technology by stealing it, the White House alleges, and by forcing U.S. companies in China to transfer technology to Chinese firms.

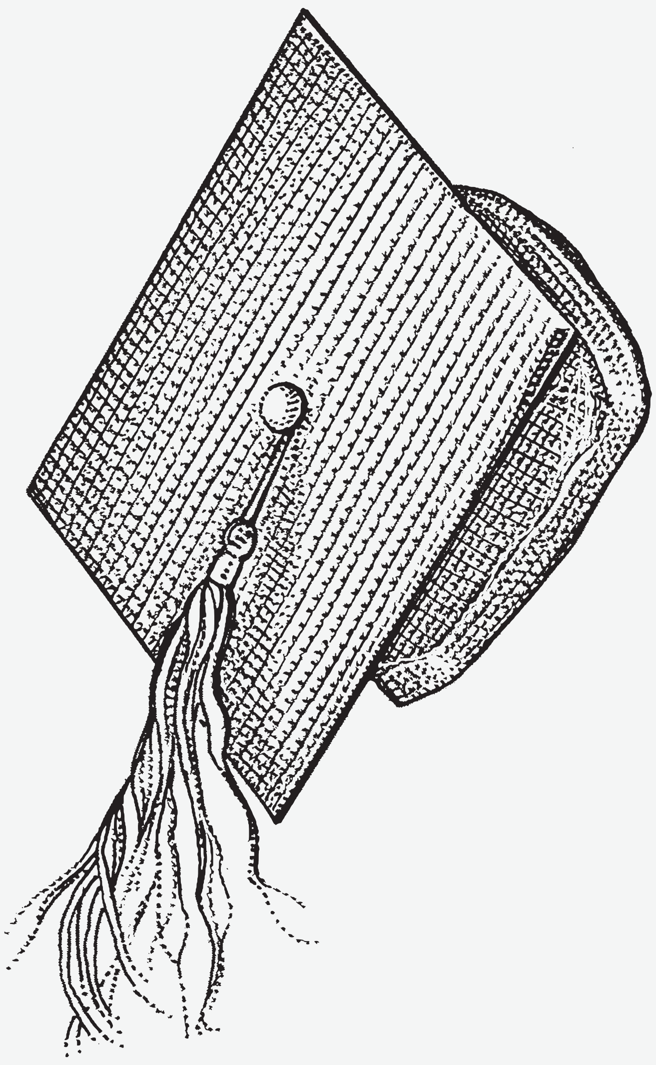
Administration officials say tariffs will change incentives for foreign firms and prompt them to move manufacturing operations from China. Even if they relocate elsewhere in Asia rather than the U.S., that, the officials argue, will hinder China's ability to acquire advanced technology.

Josh Kallmer, senior vice president at the Information Technology Industry Council, a trade association, says the administration's plans would hurt U.S. companies by driving up costs and making them uncompetitive.

The threatened tariffs "are not just counterproductive, they are irresponsible," he said. "You can't just pick up a factory and move it to Vietnam. It takes years to move physical operations. It takes months to renegotiate contracts. It's not a practical solution."

Administration officials counter that U.S. firms adapt more quickly than they acknowledge. They argue that reducing Chinese influence over U.S. companies is worth the short-term pain. If U.S. companies are eventually able to operate in China without fear of government pressure, "this economy will be stronger, the global economy will be stronger," said White House senior trade adviser Peter Navarro.

—Bob Davis



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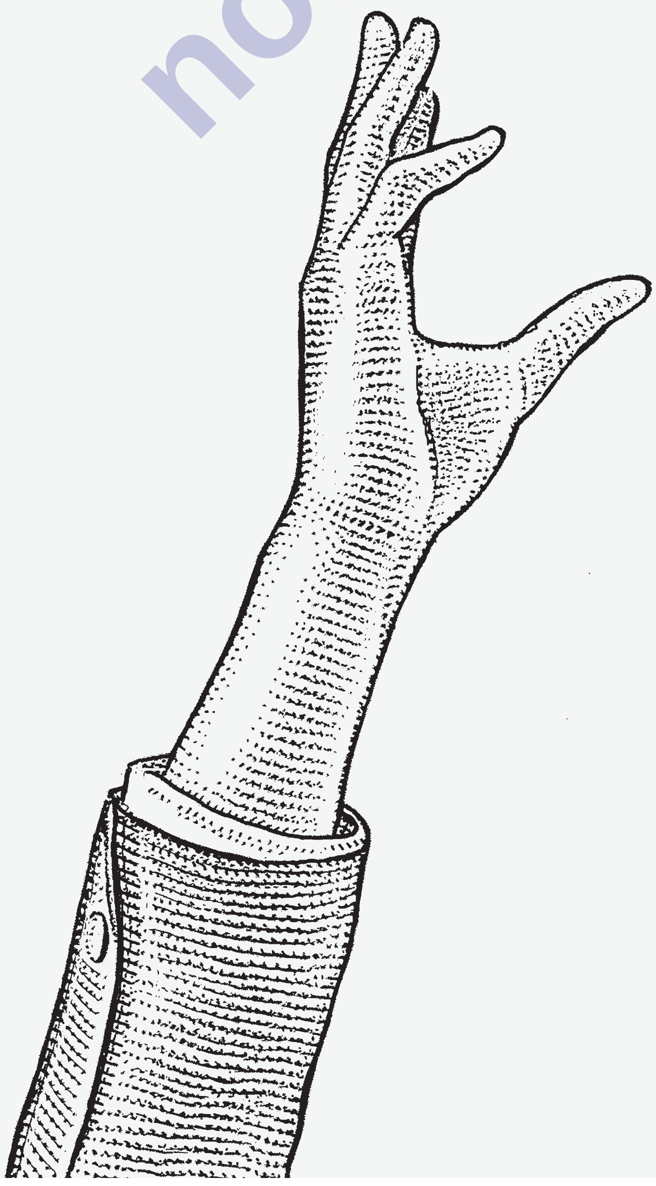

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Read ambitiously

Kim Visits Xi With Eye on Economy

By Jeremy Page
And Chun Han Wong

ANDY WONG/ASSOCIATED PRESS

A television screen in Beijing on Tuesday broadcast the meeting of North Korean leader Kim Jong Un and Chinese President Xi Jinping.

BEIJING—A week after meeting President Donald Trump, North Korean leader Kim Jong Un embarked on a trip to key ally China for a visit analysts expect to focus on economic relief for his sanctions-hit country.

Mr. Kim's visit on Tuesday and Wednesday is his third to China in as many months. It comes as the U.S. renews pressure on Beijing to enforce United Nations sanctions on Pyongyang to ensure that it dismantles its nuclear weapons program.

Mr. Kim's trip comes at a time of accelerating diplomacy around North Korea and its nuclear and missile programs. While the visit wasn't previously announced, foreign diplomats had said they expected Mr. Kim to visit China to brief Chinese President Xi Jinping on his June 12 meeting with Mr. Trump in Singapore and discuss economic cooperation and other issues.

Mr. Xi greeted Mr. Kim with a welcoming ceremony including a military honor guard and a crowd of cheering children at the Great Hall of the People overlooking Beijing's Tiananmen Square, according to state broadcaster China Central Television.

Mr. Xi said China hoped North Korea and the U.S. "will implement the results of the summit and that relevant parties will join forces to advance the peace process on the peninsula," the television report said.

"China will, as always, play a constructive role," it quoted Mr. Xi as saying. He also pledged to support North Korea's economic development.

Mr. Kim described China as "our great and friendly neighbor" and Mr. Xi as "a great leader we respect and trust," according to the report.

The North Korean leader said he hoped to work with China and other parties on the establishment of a long-lasting peace mechanism on the Korean Peninsula, the report said.

Mr. Xi and other Chinese leaders had been expected to push for a direct, active role in negotiations over the Korean Peninsula's future, including participation in talks with Washington, Seoul and Pyongyang over a peace treaty, according to foreign diplomats.

Mr. Kim, meanwhile, is expected to urge Mr. Xi to ease the sanctions that have hurt the North Korean economy in the past year—and which U.S. officials have said helped compel Mr. Kim to engage in talks.

During his China visit, Mr. Kim would "make more clear his requirement for Chinese economic help," and Mr. Xi is likely to agree to help, said Shi Yinhong, an international relations professor at Beijing's Renmin University. "There could be some space to provide economic help not covered by sanctions."

U.N. sanctions have crippled North Korean exports, especially to China, in the past year. Bans on North Korea's coal, seafood and garment exports severely reduced its foreign-currency earning, while U.N. restrictions on North Korean imports of fuel and consumer goods pushed up prices in many of the country's markets, according to visitors. Some economists project that Pyongyang could soon run out of the foreign currency it needs to buy essential imports such as fertilizer and spare parts for machinery.

Washington wants to see the economic pressure on Mr. Kim sustained. U.S. Secretary of State Mike Pompeo urged Beijing to maintain United Nations sanctions on Pyongyang during meetings with Mr. Xi and senior Chinese officials last week to brief them on the outcome of the Trump-Kim summit.

Mr. Pompeo told a joint news conference with his Chinese counterpart, Wang Yi, on Thursday that China had committed to maintaining the U.N. sanctions until the denuclearization process was complete.

Mr. Wang, however, didn't mention sanctions, instead reaffirming China's support for denuclearization of the Korean Peninsula and calling for security guarantees to address North Korea's "legitimate" concerns.

The Chinese foreign minister also gave a noncommittal response when asked if China would support Mr. Pompeo's plan, outlined on a visit to Seoul last week, to try to achieve "major disarmament" of North Korea's nuclear weapons within 2½ years.

Chinese Foreign Ministry spokesman Geng Shuang on Tuesday reiterated that China opposes sanctions outside the U.N. Security Council framework and said the U.N. sanctions are "not a goal in themselves."

North Koreans Schooled in Business Basics

By Jonathan Cheng

CHOSON EXCHANGE

Choson Exchange conducted a workshop in Pyongyang in May.

SINGAPORE—What might a more economically open North Korea look like? For some Pyongyang elites, Singapore—the city that hosted the U.S.-North Korea summit—is helping to provide an answer.

Over the past decade, Singapore-based nonprofit Choson Exchange has trained some 2,000 North Koreans in entrepreneurship and business skills in dozens of courses in Pyongyang. It has brought more than 100 of those elites to Singapore, giving them a look at how authoritarianism and capitalism go hand-in-hand in this prosperous city-state.

"We think that Singapore can provide a good reference for the North Koreans," said Calvin Chua, a 33-year-old architect who has traveled to Pyongyang seven times with Choson Exchange to teach lessons about urban planning, special economic zones, public-private partnerships and real estate.

Economic development is a stated goal of North Korea's leader, who said in April that, with the country's nuclear program complete, he was ready to devote all of his attention to improving the economy. In talks with North Korean delegates and in public statements, U.S. officials have dangled economic assistance as an incentive for nuclear disarmament.

Choson Exchange was founded by Geoffrey See, a Singaporean entrepreneur who got the idea of teaching business-school basics to North Koreans during a trip to Pyongyang in 2007.

Mr. See's Singaporean roots were an asset. Singapore has had diplomatic relations with Pyongyang since 1975, and its neutrality in international affairs was one reason why it was chosen as the venue for the summit between President Donald Trump and North Korean leader Kim Jong Un.

The city's status as a place where private enterprise flourishes alongside limits on political dissent makes it a potentially appealing model—at least in part—for North Korea, one of the most controlled societies in the world.

"They look up to Singapore as a reference for best practices," Mr. Chua said of the North Koreans. "They view Singapore as a very precise clockwork where everything works well, but they do feel that they cannot replicate Singapore's model wholesale."

Like North Korea, Singapore has been dominated by one political party and is governed by an heir of the nation's inaugural leader. Singapore's disciplined, technocratic and largely apolitical approach could make it an attractive reference point for Pyongyang's leaders. China and Vietnam's development trajectories have also been cited as models for North Korea.

Mr. Kim gushed about what he saw in Singapore and learned a great deal about its economic development, according to an account of his visit in Pyongyang's state media.

Ahead of his meeting with Mr. Trump, the North Korean leader toured the city's Marina Bay Sands development—a $5.5 billion casino resort—and visited the port, where he was "briefed on the future urban development plan of Singapore."

"Singapore is clean and beautiful and every building is stylish," the report quoted Mr. Kim as saying.

Mr. Kim's itinerary followed the same path that Choson Exchange takes its North Korean visitors on, Mr. See said.

U.S. Secretary of State Mike Pompeo told Mr. Kim during two meetings in Pyongyang before the summit that private U.S. enterprises were ready to pour investment into North Korea, should the two sides improve their relations.

Since 2011, Choson Exchange has brought nine North Korean delegations to Singapore to visit startup incubators, meet with government agencies and undertake mini-M.B.A. programs. The students, Mr. Chua said, are mostly North Korean technocrats—government planners and managers of subsidiaries of state-owned enterprises—with many working in the services sector.

Kashmir Coalition Collapses After India's Ruling Party Pulls Out

By Krishna Pokharel

YAWAR NAZIR KABLI/REUTERS

Mehbooba Mufti resigned as chief minister of Jammu and Kashmir state on Tuesday.

NEW DELHI—A fragile coalition in Jammu and Kashmir collapsed, putting the troubled northern Indian state on a path toward central-government rule.

The state's chief minister, Mehbooba Mufti, resigned on Tuesday after Prime Minister Narendra Modi's Bharatiya Janata Party said it was withdrawing from the alliance it formed with Ms. Mufti's Peoples Democratic Party in 2015.

It was the first time BJP, a party with Hindu nationalist roots, had been in a leadership position in the country's only Muslim-majority state, which has struggled with an Islamist separatist movement and a massive military presence there that has stoked long-smoldering public anger.

Clashes regularly break out between law enforcement and stone-throwing demonstrators calling for freedom from Indian rule in the state.

Ram Madhav, national general secretary for the BJP, said at a press conference that the worsening security situation made it untenable for his party to stay in the coalition government. "Today, violence and terrorism have increased in the state in a big way," he said. "Radicalization is growing at a great speed."

The state, which shares a disputed border with Pakistan, has a long history of unrest and insurgency. India and Pakistan administer different parts of Jammu and Kashmir, but both claim it in full.

India blames Pakistan for sponsoring terrorism in the state, which Pakistan denies. The neighbors have fought two major wars over the region, in 1947 and 1965, both of which ended in cease-fires.

India has deployed what human-rights activists say is hundreds of thousands of security forces there. The fight between armed insurgents and the military, which began in the late 1980s, has caused tens of thousands of deaths of civilians, security forces and militants.

Mr. Modi has pledged to find a solution, but his party's decision to abandon the coalition may signal a tougher stance ahead of national elections in early 2019.

"Security forces are being directed to take all necessary actions as earlier to prevent terrorists from launching attacks and indulging in violence and killings," the Indian government said on Sunday in announcing the resumption of operations against terrorists.

In a separate press conference in Srinagar, the summer capital of Jammu and Kashmir, Ms. Mufti said her party had joined with the BJP with the belief that Mr. Modi—who had come to power with a strong national mandate—could foster reconciliation.

She said the central government was now trying to reimpose a "muscular policy" in the state by discontinuing the "unilateral cease-fire" that her government had persuaded India to set in motion at the start of the recently ended Muslim holy month of Ramadan.

Mr. Madhav said his party wants the state to be under the rule of the central government so "attempts [can] be made to improve the situation."

WORLD WATCH

FRANCE

Le Pen Is Ordered To Repay Public Funds

The European Union's second-highest court ordered Marine Le Pen to repay nearly €300,000 ($346,000) of public money, upholding a decision by the European Parliament that said the far-right politician misspent the funds while she was an EU lawmaker.

Judges at the Luxembourg-based court rejected an appeal by Ms. Le Pen against the Parliament's 2016 ruling, which said she used EU money to pay a staff member who was effectively working for her French political party, National Front, since renamed National Rally.

EU rules require European Parliament assistants to work at one of the body's offices in Brussels, Strasbourg, France, or Luxembourg and to reside near their workplace.

Ms. Le Pen, a former French presidential candidate, said on Twitter that she provided 655 pieces of evidence to the court showing that her assistant did work at the Parliament.

"I'm appealing, of course," she said in a tweet.

—Matthew Dalton

UNITED NATIONS

Refugee Numbers Hit Another Record

The United Nations refugee agency reported that nearly 69 million people who have fled war, violence and persecution were forcibly displaced last year, a record for the fifth straight year.

The U.N. High Commissioner for Refugees said the continued crises in places like South Sudan and Congo, as well as the exodus of Muslim Rohingya from Myanmar that started last year, raised the overall figure of forced displacements in 2017 to 68.5 million.

Of that total, 16.2 million were newly displaced last year—an average of more than 44,000 people a day. Most have been displaced for longer than that, some forced to flee multiple times.

For the fourth straight year, Turkey was the country with the largest number of refugees—mostly Syrians—with 3.5 million at the end of 2017. The U.S. received the most new individual applications for asylum last year, at nearly 332,000. Germany was second, with more than 198,000.

But the UNHCR said the figures debunked the perception among some that a refugee crisis has affected more-developed countries, saying 85% of refugees are in developing countries, many of them "desperately poor."

—Associated Press

EUROPEAN CENTRAL BANK

End to Bond-Buying Could Be Delayed

European Central Bank President Mario Draghi signaled that the bank could delay plans announced last week to end its giant bond-buying program, underlining policy makers' caution in phasing out easy money as the region's economy faces new risks.

Mr. Draghi's comments highlight a growing policy gap between the world's top two central banks: The Federal Reserve last week raised short-term interest rates and signaled two more rate increases this year to stop the U.S. economy from overheating, even as the ECB signaled it wouldn't raise rates before September.

Last week, the ECB said it plans to phase out its €30 billion ($34.5 billion) a month bond-buying program by the end of the year."

—Tom Fairless

Merkel, Macron Seek a Eurozone Budget

German, French leaders to press EU nations to agree to proposal at summit next week

BY WILLIAM HOROBIN AND ANDREA THOMAS

LUDOVIC MARIN/AGENCE FRANCE-PRESSE/GETTY IMAGES

The French and German leaders, sharing a coffee during talks in Berlin on Tuesday, will face EU's leaders with a common line next week.

MESEBERG, Germany—Angela Merkel bowed to French President Emmanuel Macron's demands to join him in pressing for the creation of a eurozone budget as part of a package of measures to overhaul the European Union, which the two will put to their neighbors in a bid to overcome the continent's deepening divisions.

While the size of the proposed budget has yet to be determined, the German leader's concession means Berlin and Paris—the eurozone's two largest economies—will face the bloc's other member states with a joint line when they meet in Brussels to discuss the changes next week.

"We have found a good solution," Ms. Merkel said, adding she was convinced that lawmakers from her coalition government would back the idea of a budget designed to spur investments and narrow economic differences among the 19 EU member states who share the euro as their currency.

The agreement came as EU unity faces challenges on several fronts. President Donald Trump's open hostility to the EU and punitive trade measures has raised the urgency of a French-German agreement, as the two countries seek to find common ground on reforms before they try to present a united front toward the U.S. in a growing series of disputes.

On the continent, recent elections have emboldened anti-European parties opposed to Mr. Macron's call for greater integration. Tensions flared between European capitals last week when Italy's new antiestablishment government refused to take in a boat of migrants stranded in the Mediterranean.

Ms. Merkel's green light to Mr. Macron came after several hours of talks at a government guesthouse north of Berlin, during which the leaders sought to bridge their remaining differences on foreign and economic policies. Close aides to the leaders had paved the way over several days and nights of preparatory meetings in recent weeks.

"This summit comes at a moment of truth for Europe, in each state and for the continent," Mr. Macron said.

In a win for Ms. Merkel, whose liberal stance on refugees is under mounting pressure at home, Mr. Macron pledged to support her call for an EU-wide plan to manage migration, and said France would do its part to help the German chancellor by taking back refugees that first registered in France but later sought asylum in Germany.

Horst Seehofer, Ms. Merkel's interior minister and coalition partner, said on Monday he would unilaterally instruct border police to start turning back more migrants at Germany's borders, a measure Ms. Merkel opposes, if she hadn't struck similar agreements with neighboring countries within two weeks.

Mr. Macron backed Ms. Merkel's push for a European resolution to the migration challenge.

"Unilateral, uncoordinated action will split Europe," the two leaders said in a joint statement.

In their statement, the leaders said they would establish a eurozone budget starting in 2021 to promote "competitiveness, convergence and stabilization." They also said they would transform the eurozone's €500 billion ($580 billion) rescue fund—the European Stability Mechanism known as ESM—into a permanent fund that could offer long-term loans to financially stressed governments as well as short-term credit lines.

Mr. Macron had argued that the eurozone couldn't survive without greater sharing of resources and burdens, while Ms. Merkel's government had long been skeptical of committing taxpayer money to propping up its neighbors.

The resources of the budget would come annually from contributions from member states, allocating tax resources—possibly including a European financial transaction tax—and other European resources. But the details were left deliberately vague, Mr. Macron said, to allow the 19 eurozone members to define the budget together.

"Today France and Germany are clearly saying we want a eurozone budget, while before there was nothing," Mr. Macron said.

Even as France and Germany agreed on the principle of a budget, they may struggle to convince the 17 other countries in the eurozone.

"Nobody has been able to tell me which problem can be solved with this," Dutch Finance Minister Wopke Hoekstra said in an interview Tuesday with German daily Frankfurter Allgemeine Zeitung.

An Accord Months In the Making

Emmanuel Macron and Angela Merkel had set Tuesday's meeting as a deadline to seal an agreement on demands Mr. Macron set out nearly nine months ago for EU changes and a pooling of resources among the 19 countries in the eurozone.

Political instability since Germany's September elections has delayed and complicated the negotiations between Berlin and Paris, leaving them only a few days to rally other European nations behind their plans before an EU summit next week.

Ms. Merkel's difficulties might have played into the French president's hands by increasing Ms. Merkel's interest in a positive outcome.

Ms. Merkel and Mr. Macron struck a compromise over the French leader's proposed overhauls for a meatier backstop for the banking system and a joint budget for the currency bloc.

URBI ET ORBI | By Francis X. Rocca

Culture Clashes Hurt Pope's Hopes for Christian Unity

VATICAN CITY—No modern pontiff has more zealously pursued unity with non-Catholic Christians than the man who currently holds the office.

Pope Francis made an ecumenical breakthrough in 2016 by holding the first meeting in history between a pope and a Russian Orthodox patriarch. He has apologized to Italian Pentecostals for their mistreatment by Catholics under the fascist regime. Last year, the Vatican even issued a commemorative postage stamp honoring Martin Luther, father of the Protestant Reformation.

On Thursday, Pope Francis will travel to Geneva to address the World Council of Churches, which includes representatives of 350 Protestant and Orthodox Christian churches, marking the organization's 70th anniversary.

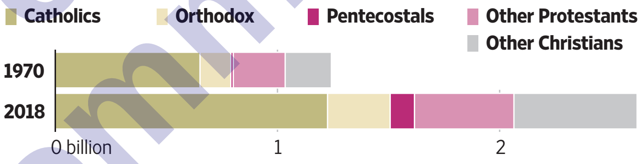
The pope's efforts reflect his avowed agenda of building bridges, not only with other religious communities but with those who have felt marginalized in society, including refugees and the poor, and in the church, such as gay people and divorced Catholics in second marriages.

Yet Thursday's WCC event will unfold against a background of diminished expectations. Ecumenical enthusiasm, which peaked in the 1960s, has succumbed to realism about the theological barriers separating Christian denominations. At the same time, the culture wars and the growth of newer Christian churches have made the ecumenical movement's oft-stated goal of "full, visible unity" an even more distant prospect.

"The reason why we engage in ecumenical relations is the fact that we Christians in the world are not living up to what Jesus wanted," specifically his mandate at the Last Supper that "all of them may be one," said Bishop Brian Farrell of the Vatican's Pontifical Council for Promoting Christian Unity.

Leap of Faith

There are about 2.5 billion Christians world-wide, and newer Christian groups have seen dramatic growth in recent decades, particularly Pentecostal denominations.



Note: Some Christians are affiliated with more than one category.
Source: Center for the Study of Global Christianity

THE WALL STREET JOURNAL.

The Catholic Church viewed the ecumenical movement with suspicion until the Second Vatican Council (1962-65), which, alongside other dramatic changes, taught that all Christian churches are "used by God for good and for the sanctification of their members," Bishop Farrell said.

The participation of the world's largest church then ushered in a heyday of ecumenism.

"There was great enthusiasm and perhaps even the illusion that unity would be achievable within a reasonable time," the bishop said. "With the passage of time, and with the engagement in the theological discussions, we realize that the differences, the difficulties, the divergences are not easy to overcome."

The papacy's traditional claim to leadership of all Christians is a major point of contention.

Adding to these theological obstacles, the past half-century has witnessed sociological and cultural trends unfavorable to the ecumenical movement.

Pentecostal Christian denominations have grown to 113 million adherents in 2018 from 14.5 million in 1970, according to researchers at the Center for the Study of Global Christianity at Gordon-Conwell Theological Seminary in South Hamilton, Mass.

Although they share many of the beliefs and practices of Charismatics within the Catholic, Orthodox and other Protestant churches, Pentecostal denominations have generally been wary of the ecumenical movement. The bylaws of the Assemblies of God, the world's largest Pentecostal denomination, urge its members to "avoid entanglement" with ecumenical or interdenominational organizations, except to "support biblical values in the culture or provide opportunity to bear witness to our evangelical and Pentecostal faith and experience."

The rise of Pentecostalism has coincided with a period of momentous cultural change in the West, as more liberal churches have accepted abortion, euthanasia and homosexuality.

Next month, in the southern Italian city of Bari, Pope Francis will join leaders of Christian churches from across the Middle East to pray together for peace in the region. On that occasion, the pope is likely to speak again about what he has often called the "ecumenism of blood."

"In some countries they kill Christians for wearing a cross or having a Bible, and before they kill them they do not ask them whether they are Anglican, Lutheran, Catholic or Orthodox," the pope has said. "We are united in blood."

FROM PAGE ONE

Location Services Cut Off

Continued from Page One

as soon as practical in a way that preserves important, potential lifesaving services like emergency roadside assistance."

Sprint "suspended all services with LocationSmart" last month and "is beginning the process of terminating its current contracts with data aggregators to whom we provide location data." A spokeswoman said that effort "will take some time in order to unwind services to consumers, such as roadside assistance and fraud prevention services."

The U.S. phone carriers are the latest corporate giants promising to improve their privacy standards after embarrassing revelations about their handling of customer data. Facebook Inc. continues to face questions from government authorities in several countries after the social network revealed that data firm Cambridge Analytica obtained data on as many as 87 million of its users without the company's permission.

LocationSmart and Zumigo have contracts with the four U.S. wireless companies that allow them to pull cellphone users' locations in real time and share them with other businesses. For example, the carriers say truck-rental firms use the data to better assist customers on the road and banks use the data to determine proximity to a caller's home to help confirm their identity.

All four carriers said their agreements with the data aggregators required them to get users' consent to use their location information. Some users consent to sharing their cellphone-location information when they do business with financial institutions or other companies from which they are buying services. Those firms often include that request for permission in lengthy terms and conditions policies.

It is unclear whether consumers will notice a change after the partnerships end. It wouldn't affect location data that customers agree to share with applications such as Uber Technologies Inc. and Google Maps through their cellphone's operating system. Software on Apple Inc.'s iPhones and Google's Android smartphones help those mobile apps identify users' locations. Wireless carriers also sell anonymized location data to marketers.

Chirag Bakshi, Zumigo's founder and chief executive, said Verizon told his company it has until November to agree on a solution that more tightly controls customer data. Mr. Bakshi said the San Jose, Calif., company handles fewer than 100,000 location requests a day, mostly on behalf of financial institutions seeking to root out fraud and of shipping companies tracking truck movements.

"We're very careful in who we select as customers and we only do this for companies who are very well known," Mr. Bakshi said in an interview. "This is to protect consumers."

JAE C. HONG/ASSOCIATED PRESS

Phone carriers are the latest firms promising to improve privacy.

More than 100 companies ranging from truck-fleet operators to online lotteries draw on location data that ultimately flows from LocationSmart, Mario Proietti, the company's chief executive, said in a May interview. He said LocationSmart logs each location request made through its system. "All our location is on request," except for developers testing the system, he said. "There's not tracking going on."

The wireless providers took action after the New York Times reported that a prison telephone company called Securus Technologies had expanded a service designed to monitor inmate calls with a website that let sheriffs and corrections officers find any cellphone user's location without a court order.

The carriers said that service was unauthorized and had gotten access to the information through another third-party, 3cinteractive Corp., which in turn obtained the data from LocationSmart. Representatives from 3cinteractive didn't respond to requests to comment.

Securus spokesman Mark Southland said in a statement that the company adheres to its contract, and that cutting off law-enforcement access to location tools "will hurt public safety and put Americans at risk."

Sen. Wyden first questioned carriers' location-sharing practices in a May 8 letter that accused Securus of skirting requirements for law-enforcement records requests. Verizon said in its June 15 response that Securus or its partner 3cinteractive "impermissibly permitted law enforcement agencies to request location information through LocationSmart for investigative purposes," adding that was "not an approved use case in our agreement with LocationSmart."

All four carriers said in separate letters to Sen. Wyden that they curtailed Securus's access to customer-location data. T-Mobile US Inc. stopped short of cutting off LocationSmart, though its chief executive said on Twitter the company "will not sell customer location data to shady middlemen."

Lawmakers Ride for Surfing

Continued from Page One

would join a proud, though not widespread, tradition of states naming official sports. Alaska has dog mushing, Colorado has pack burro racing, Maryland has jousting and Minnesota has ice hockey. Hawaii already has surfing. South Dakota, Wyoming and Texas have all made rodeo their official state sport.

Both surfing and skateboarding are sports with rebellious cultures and significant overlap that gained mainstream recognition. Surfing and skateboarding will be featured at the 2020 Olympics for the first time.

Surfing came to California in 1885, when three Hawaiian princes carved surfboards from redwood lumber in Santa Cruz, Calif., and surfed the swells offshore, according to the Santa Cruz Museum of Art and History.

The sport proliferated in the state, with California boasting world-famous surf breaks, from Malibu to Mavericks, and hosting major big-wave competitions.

California also helped propel the surf industry, which modernized surfboards and surf style. The neoprene wetsuit was invented in California. The Beach Boys, of Hawthorne, Calif., helped establish the California surf sound.

"We really have mainstreamed this sport and we have been in large part, in a large way, the economic driver of this industry," said Ian Calderon, the State Assembly's majority leader, a co-author of the bill from Southern California and another member of the informal "surf caucus."

Both Mr. Calderon and Mr. Muratsuchi argue surfing inspired skateboarding, making it the "iconic" California sport.

"Skateboarding was originally invented by a bunch of surfers who were bored when the waves were not up," said Mr. Muratsuchi, 53, who began surfing in high school while living on a U.S. Army base in Okinawa, Japan.

"I call surfing the human washing machine," he added. "It just cleanses me of the nastiness of politics."

Republican Travis Allen, an

AARON LIEBER

Ian Calderon, the Assembly majority leader, is a member of the California state legislature's informal 'surf caucus.'

assemblyman from Huntington Beach, Calif., said "it's about time we make surfing the official sport of California." He also boasted of being one of the few lawmakers in the State Assembly to be in the Guinness World Records for "the most number of surfers on the biggest surfboard ever built." (In 2015, 66 surfers successfully rode a more than 42-foot-long surfboard.)

More than party, the debate seems to have divided coastal Californians over those who live inland.

"Skateboading and surfing are big parts of the California lifestyle," said Chris Fernandez, a 29-year-old avid skateboarder in Temecula, Calif., "but skateboarding can reach farther and bring that California style all over."

Republican Assemblyman James Gallagher said baseball should be the state's official sport, given California's rich heritage on the field.

He cited the DiMaggio brothers, who were originally from the San Francisco area, Tony Gwynn of the San Diego Padres and Ted Williams of their minor league predecessors, and the San Francisco Giants, who have won the World Series three times in the last decade.

"I understand you guys surf a lot on the coast but what about for those of us inland?" he said.

While surfing is popular in California, some note that it is still an import.

"Skateboarding was born in Cali, while surfing is from Hawaii," says Glenn Sakamoto, creative director of Liquid Salt Magazine, an online-only publication covering surfing. "Skateboarding gives you the most access to feel what it's like to move and get a feeling of freedom."

"I don't know one should be picked over the other. A lot of the debate has to do with access, because not everybody can live near an ocean," said Mr. Sakamoto, who lives in Torrance, Calif. "With skateboarding, you can do it anywhere, even in Kansas."

Surf proponents note there may be an option for those who live away from the coast. World Surf League Champion Kelly Slater has built a mechanical wave machine in Lemoore, Calif., smack in the middle of agricultural country, about 30 miles south of Fresno. The site of his "surf ranch" has a man-made lake whose main feature is the ability to produce artificial waves.

Chris Miller, a professional skateboarder who also surfs and practices yoga, said that since surfing is already the official sport of Hawaii, he supports the skateboarding proposal. "I think skateboarding should be the official sport, it was generally invented in California, from my understanding of it, and surfing was not," he said.

Skateboarding emerged in the 1950s in California as youths affixed roller skate wheels to wooden boxes and short boards, according to "The Skateboard: The Good, the Rad, and the Gnarly: An Illustrated History." The late Larry Stevenson, a Venice Beach lifeguard and publisher of Surf Guide, marketed some of the first mass-produced skateboards in the early 1960s.

The measure to make surfing California's official sport passed the State Assembly last month, 62-4, and awaits debate in the State Senate.

California Gov. Jerry Brown, who must approve any bill, typically doesn't comment on pending legislation. "The governor won't be wading into those waters at this time," a spokesman said.

Jobs Exist, If Saudis Want Them

Continued from Page One

means the labor force doesn't always have the skills, and sometimes lacks the motivation, to fill private-sector jobs.

The pressure to meet the quotas has pushed companies to offer Saudis better salaries and shorter working hours. Some businesses, risking fines and visa troubles, hire Saudis who count on the registered workforce but just sit at home.

Abdulmohsen, an executive at a Saudi logistics company, estimated that half of the Saudis on his payroll are employees in name only.

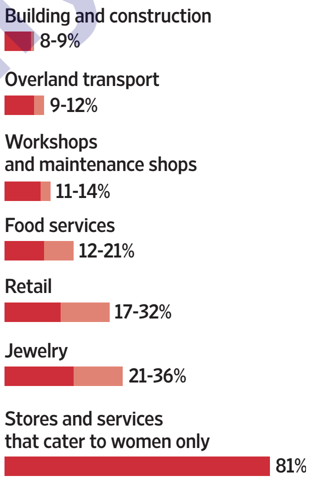
"Our company can't survive without foreign workers because there are some jobs that Saudis just won't do, like truck driving," Abdulmohsen says. "Where are the Saudi drivers?"

Successive monarchs saw replacing expat workers with Saudis as desirable but not essential. Targets for the "Saudization" of labor were only loosely enforced.

Saudi Arabian local-hiring rules mean shops selling women's underwear now are staffed by Saudi women, not by foreign men. Saudis sometimes shun service jobs but are more open to working in trendy cafés, as does 21-year-old Jidda resident Yousuf Turki, below.

Saudi Employment Targets

The percent of employees who must be Saudi varies by companies' business type and size.



Source: Saudi Ministry of Labor and Social Development.
THE WALL STREET JOURNAL.

Cutting bureaucracy

That changed under the current Saudi leadership, which has vowed to transform the sleepy petrostate into a dynamic economy, with plans that include selling a small portion of the state-owned oil giant Saudi Aramco through a public listing. For the transformation to succeed, Saudi Arabia must slash its bloated bureaucracy and find jobs for Saudis in the private sector. About two-thirds of Saudis currently working are employed by the state.

Adding to the pressure to replace foreigners with locals is the kingdom's unemployment rate of 12.8% at the end of 2017. The goal is to cut that to 7% by 2030.

'There are some jobs Saudis just won't do, like truck driving,' said one executive.

Though the workforce percentage that must be Saudi varies from sector to sector and job type to job type, the quotas generally are rising. Starting this September, all salespeople at bakeries and electronics and furniture shops will have to be Saudi.

When jewelry stores were forced to replace their foreign workers entirely with locals last year, the owners of a chain called Osool panicked. They had employed only expats and didn't know where to begin to recruit Saudis.

They laid off almost their entire staff of 100 and closed all but two of their 25 stores. After nearly half a century, the family-owned business was on the brink of collapse.

"This is gold, it can't be handled by just anyone," said Ali al-Ayed, 24, whose father started the company. "There aren't enough trained and qualified young Saudis."

The first Saudis they recruited were the founder's four sons, who quit their other jobs and started working in two of the shops to keep them open.

The family posted job notices on websites that sell gold. Many Saudis replied, but few took jobs, put off by long hours and limited vacation time. Of those the family managed to hire, many soon quit, despite relatively generous starting pay.

So far, just nine of Osool's shops have reopened. The family is hanging on to two Indian workers, ostensibly employed as cleaners, to help train Saudis.

A few blocks away, the owner of a watch store is preparing to shut down after Hajj in August, rather than having to employ only Saudi salesmen after that. "We will maybe go back to India after Hajj," said one foreign employee, Taufiq Eman Khan.

One way the government has enforced its policy is making it costlier for companies to get visas for foreign workers. It also has stepped up inspections of businesses to make sure Saudi workers are there.

The manager of a Jidda-based ad agency recalls the day last fall when inspectors showed up at the firm's head office. "Where are the Saudi employees?" they demanded, according to the manager, Abuzayed, a Palestinian with a Jordanian passport. Of the firm's 20 registered Saudi workers, only one was at his desk.

"We have their names, they are registered," Abuzayed says. "They get paid but they don't work."

Left in limbo

The ad agency was fined 65,000 riyals ($18,000) and blocked from requesting visas for foreigner workers. It has been in limbo ever since, lacking the money to pay its electricity bill, let alone the fine and rising cost of renewing overseas employees' residency permits. Abuzayed said he would be surprised if the firm survives until the end of the year.

There are some indications the government is open to hearing out the private sector's grievances on labor rules. Earlier this month, King Salman appointed as minister of labor Ahmed al-Rajhi, a businessman whose father oversees Saudi Arabia's Al Rajhi Bank.

A government spokesman didn't respond to requests for comment from Prince Mohammed on how the labor policy affects businesses.

One beneficiary of the hire-Saudi policy is Ghalia Abdullah, 32 years old. She used to find the experience of buying lingerie in Saudi Arabia unbearable because all of the salespeople were foreign men.

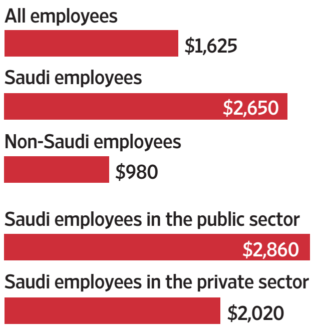
"I would wait until I traveled abroad instead of going to shops here, even if I just needed a bra, because I didn't want to deal with men," she said.

Ms. Abdullah spoke as she perused the aisles of a recently opened Victoria's Secret store in Jidda, staffed mostly by Saudi women. "Now I feel more at ease," she said.

The government has come up with some solutions for businesses that consider hiring nonworking Saudis just to meet their quotas. Under a "Parallel Nationalization Program," employers can get credit for having a Saudi employee by sending the government cash similar to what the Saudi worker would earn if there really were one. The employer, instead of hiring a fake Saudi, hires a virtual one.

Saudi Salaries

Saudi workers earn more than expats, and the best pay is in the public sector.



Note: Figures for Q4 of 2017
Source: Saudi Arabia's General Authority for Statistics THE WALL STREET JOURNAL.

Staying home

It might seem that a paycheck without having to work would be a plum job, yet not all Saudis are satisfied with that arrangement.

Three years ago, the owner of a Saudi fast-food chain offered Ahmad, a former soccer player with a high-school education, a deal meant to benefit both: Ahmad would join the workforce yet stay home, while the owner would help meet his Saudi employment quota.

Ahmad now gets a monthly salary of 2,500 riyals ($670) and shows up just a few times a month, such as when an inspection is expected.

"I hope to find a good job. And when I do I will not mind working hard," said Ahmad.

Still, he scoffs at a monthly salary of $1,000, as some low-level jobs pay. "I won't work for that amount," he said. "I will not be able to afford anything in today's economy."

There are indications attitudes toward work are starting to shift among Saudis facing a higher cost of living. The government recently reduced subsidies on water, fuel and electricity, and it has introduced a 5% value-added tax. Some Saudi men now drive for ride-hailing services such as Uber and local competitor Careem, a rare sight two years ago. Young Saudis, many of whom studied in the West on scholarships, also seem more open to part-time jobs in trendy coffee shops.

At Medd Café and Roastery near Jidda's seafront, the mostly Saudi baristas serve up cold-press coffee and quinoa-milk cappuccinos to their young customers. "I face two different kinds of people:

IMAN AL-DABBAGH FOR THE WALL STREET JOURNAL (2)

Those who respect me and those who don't," said Yousuf Turki, 21, a student of marine engineering who works at Medd. "My mom is always supportive, my father is not. He says: 'How come is my son working as a barista in a café when I gave him a high quality of life?'

"It's hard to deal with it. But the times are changing, and we have to adapt to them."

Nobu Hotel Riyadh, to find Saudi workers, initially turned to one of the kingdom's few hospitality schools. The hotel covered tuition fees and salaries for 32 students.

The majority dropped out almost immediately. Only five graduates eventually joined Nobu.

Nobu temporarily resorted to hiring idle Saudis just to meet its labor quota, a practice it has stopped.

Nobu was considering the Parallel Nationalization Program until it found an even better alternative: It signed up to a new government-backed program that allows a company to hire and pay Saudis to work for charities while keeping them on its own payroll.

'The Saudi hunter'

The hotel, a joint venture between a Saudi princess and the hospitality group of Japanese chef Nobu Matsuhisa and actor Robert De Niro, recently brought on board a new head of human resources, Hatem al-Hamdan, who has been recruiting locals for so long he is nicknamed "the Saudi hunter." In his latest coup, he recruited two Saudi female chefs for Nobu.

Mr. Hamdan is the first to admit his job isn't easy. Service work is widely seen as shameful, he says, making it all but impossible to find Saudis with the right qualifications, but he has had success by asking successful recruits to bring in friends and neighbors.

Mr. Hamdan also says companies need to show more flexibility with their Saudi employees, for instance when it comes to working hours. "Some jobs you can do in two hours, so why stay five hours?" he says. "You have to make them love their job."

GREATER NEW YORK

Migrant Children Held in State Shelters

More than 70 youths are being housed in at least 10 New York facilities, Cuomo says

By Melanie Grayce West

More than 70 children who were separated from their parents at the U.S.-Mexico border are being housed in at least 10 facilities across New York, Gov. Andrew Cuomo said Tuesday, calling the practice “inhumane” and “illegal.”

Eight of the children are at the MercyFirst facility in Syosset on Long Island, according to a person familiar with the social-services organization.

In addition to Syosset, the New York facilities are located in Dobbs Ferry, Lincolndale, Yonkers, Irvington, Kingston and the Bronx, Mr. Cuomo, a Democrat, told reporters during a conference call.

Separating children from their parents at the border is “un-American,” the governor said.

The Trump administration's new policy of prosecuting adults illegally crossing into the U.S. at the southern border, which has resulted in separating children from parents, has sparked explosive debate. GOP President Donald Trump has blamed Congress for not passing a broader immigration overhaul that might have ameliorated the problem.

Mr. Cuomo said the federal government has “essentially gagged the facilities” operating in New York and prohibited the state from providing additional medical or mental-health services for the children. “Why the federal government would want to be in a position of stopping a state from offering mental-health services, support services for young children suffering trauma, just adds further insult to further injury,” the governor said.

Separately, Kelly Donnelly, a spokeswoman for Democratic Connecticut Gov. Dannel Malloy, said the state is aware of at least one child under the age of 10 who has been relocated to Connecticut.

Kenneth Wolfe, a spokesman for the Administration for Children and Families, declined to confirm the number of separated children in New York. “For the safety and security of minors in the unaccompanied alien children program, we do not identify shelters or children in the program,” he said.

Meanwhile, Mr. Cuomo vowed on Tuesday to file a lawsuit against the Trump administration on the grounds that parents separated from their children still have rights in New York state regarding the care and custody of a child.

New York City Mayor Bill de Blasio, a Democrat, said Tuesday that he is considering traveling with the U.S. Conference of Mayors to the border in El Paso, Texas, on Wednesday. He said the conference is going to do “everything in our power” to stop this.

“There's a tremendous sense of urgency being felt right now,” Mr. de Blasio said at an unrelated news conference.

—Katie Honan and Joseph De Avila contributed to this article.

STEVE REMICH FOR THE WALL STREET JOURNAL

A member of the Community Education Council for District 3 spoke at a meeting in May about proposals for the area's middle schools.

Plan Aims to Diversify Middle Schools

By Leslie Brody

After months of contentious debate over how to diversify middle schools on Manhattan's Upper West Side, the city is expected to release a plan Wednesday that would set aside seats in each school for struggling students.

The New York City Department of Education had proposed three options in recent months for changing admissions for middle schools in District 3 and held public meetings that sought to build community support.

Under the proposal with the most support from the influential Community Education Council for District 3, priority for 25% of seats in each middle school would be given to low-income, low-performing students who apply. These students would be selected by a mix of their course grades, state test scores and free lunch eligibility, said several members of the council.

The nation's largest school system is grappling with how to diversify its student bodies, which can be highly segregated by race and family income. How to structure admissions is divisive. Many parents worry changes may force their children to lose access to coveted slots or that good schools might weaken. Proposals to eliminate a single test as admission to the city's eight specialized public high schools, including Stuyvesant and Bronx Science, are facing opposition, too.

The Community Education Council for District 3 is a panel of parent leaders that oversees school zones and helps shape education policy. It doesn't have authority over admissions systems.

“We're working closely with the District 3 community on a plan to support diverse and inclusive middle schools,” said education department spokesman Will Mantell in an email.

Kristen Berger, chairwoman of the middle school committee of the council, said she preferred the proposal known as “Scenario C” because it best helps students who need assistance getting into selective schools. It would also expose parents districtwide to a broader range of options at a time when many focus on four high-performing schools in great demand, out of nearly 20 middle schools, she said.

“There are really valuable programs that people tend to overlook,” Ms. Berger said. “The watershed moment for District 3 can be when parents really take advantage of the full range of schools that we have.”

State Sen. Brian Benjamin, whose district includes part of District 3, said he supported the direction of the plan that he believed to be the choice, but was concerned that some low-income, high-achieving children would be disadvantaged.

Making a Match In District 3

Manhattan's District 3 runs roughly from West 59th Street to West 122nd Street.

Currently the district, which includes parts of Harlem, has a complex system of middle-school choice. The schools use varying criteria, including interviews, test scores and grades, to rank applicants. Families rank their choices, and the Department of Education makes matches. About 1,800 children applied for admission last fall.

Marijuana Policy Faces Criticism

By Katie Honan And Zolan Kanno-Youngs

New York City Mayor Bill de Blasio's new marijuana policy was met with a backlash from the Manhattan district attorney and others, who said it wouldn't do enough to diminish racial disparities among those who face punishment for the low-level crime.

Mr. de Blasio and New York Police Department officials announced Tuesday that instead of arresting people caught smoking marijuana in public, officers would issue a summons. The policy wouldn't apply to people with warrants, on parole or probation, people who have committed a violent crime within three years or those whose identity police can't verify.

The change could reduce marijuana arrests in the city by about 10,000 a year, according to the police department.

The new policy follows criticism over statistics showing 87% of people arrested in 2017 for smoking marijuana were black or Hispanic, despite studies that show all races smoke marijuana at generally the same rate. It comes a day after a study commissioned by New York Gov. Andrew Cuomo recommended the state allow adults to use marijuana legally.

Mr. de Blasio didn't discuss the racial disparity that led to the new policy, focusing instead on reducing arrests. Police Commissioner James O'Neill said the NYPD doesn't target any race or demographic when making arrests. But some said the list of exceptions could continue an enforcement imbalance.

“By excluding from its benefit racially disparate populations such as New Yorkers with prior arrests, people on probation, and parolees working to re-enter their communities, this policy could have the unintended consequence of further solidifying the racial inequities in marijuana enforcement,” Manhattan District Attorney Cyrus Vance Jr. said in a statement.

Mr. Vance said previously his office would decline to prosecute marijuana cases beginning Aug. 1, joining the Brooklyn district attorney in reducing marijuana prosecutions.

Under the new policy, officers would be given discretion to determine whether someone's smoking posed a harm to public safety, Chief of Patrol Rodney Harrison said. “If they identify an individual that seems to be problematic and falls under those carve-outs then the officers can use their discretion to place that person” under arrest, he said.

Monifa Bandele, spokeswoman for the Communities United for Police Reform, an advocacy group, said “all this plan will do is push racial disparities to the summons system.”

Since he took office in 2014, Mr. de Blasio and the NYPD have made efforts to reduce arrests for low-level crimes by switching to summonses. “This is an important step—because this comes out of four years of having a different conversation between our police and our communities,” Mr. de Blasio said.

Police union officials have said the marijuana policy change could put officers in an awkward position given smoking marijuana is still illegal.

Queens District Attorney Richard Brown called the policy “a wise middle ground.”

Michael Jackson Show Waiting in the Wings on Broadway

By Charles Passy

The life stories of such pop stars as Carole King, Gloria Estefan and Donna Summer have been transformed into Broadway musicals, replete with a generous sampling of their hit songs.

Now, it looks like it's the King of Pop's turn.

The estate of Michael Jackson and Columbia Live Stage, the theatrical division of Sony Pictures Entertainment, said Tuesday that they are developing a musical inspired by the life of the top-selling artist.

Mr. Jackson, who died in June 2009 in his Los Angeles home at age 50, built a mega career that spanned almost his entire five decades. He started as a member of the Jackson 5, the band launched with his brothers in the '60s, and ended as a solo artist who played stadiums, toured globally and sold albums in the millions.

The show will feature songs by Mr. Jackson, according to the announcement, and is expected to arrive on Broadway in 2020.

Lynn Nottage, the Pulitzer Prize-winning playwright whose “Sweat” was staged on Broadway in 2017, will write the book for the musical, the announcement said. Christopher Wheeldon, a Broadway veteran, will direct and choreograph. Mr. Wheeldon won a Tony Award in 2015 for his choreography of “An American in Paris.”

The choice of Ms. Nottage, an issue-driven writer whose work has delved deep into social and political subjects, might suggest that the musical will take a harder look at Mr. Jackson's life story. The singer denied persistent allegations of child molestation and was acquitted in a 2005 case.

A spokesman for the show declined to comment and said Ms. Nottage wouldn't answer questions.

Shows based on pop stars' lives and/or song catalogs have dominated Broadway. This past season alone saw everything from “Springsteen on Broadway,” featuring the rock veteran in a production that weds storytelling and music, to “Summer,” a bio-musical about the late disco queen Donna Summer.

And slated to open later this year: “The Cher Show,” a bio-musical about the eponymous singer and actress.

RUSTY KENNEDY/ASSOCIATED PRESS

Mr. Jackson performing at the Super Bowl in 1993. A musical inspired by his life will feature songs by the pop star, according to an announcement, and is expected to arrive on Broadway in 2020.

GO NAKAMURA FOR THE WALL STREET JOURNAL (3)

Sunbathers recently enjoying South Beach—the 2-mile stretch of Staten Island's east coast sometimes called the 'Riviera of New York City'—which is known for its expansive boardwalk and impressive views.

METRO MONEY | By Anne Kadet

The NYC Beach That Doesn't Make Waves

Last week brought one of the strangest discoveries ever in all my years of New York City adventuring: A place where nothing is happening.

I'd been meaning to visit South Beach for a while. The sandy, 2-mile stretch of Staten Island's east coast, sometimes called the "Riviera of New York City," is known for its expansive boardwalk and impressive views.

I expected the usual urban beach scene a la Coney Island or the Rockaways: Crazy crowds, blaring stereos and peddlers hawking clandestine Coronas from shopping carts.

But all I got was some lousy peace and quiet.

On a warm, sunny weekday afternoon, the long sweep of shore, with its fantastic view of the Verrazano-Narrows Bridge and full compliment of lifeguards, had few sunbathers and zero swimmers. The huge lots offering free parking were nearly empty. The lone concession stand was closed for lunch, as was the only restaurant on a spring weekday.

The 835-foot long Ocean Breeze Fishing Pier is a popular spot for catching striped bass and flounder, but even the fishing is slow this year, trawlers said.

While the boardwalk attracts joggers, cyclists and strollers, the people-watching was ridiculously mellow. The most outrageous fashions were safari hats for men and the occasional elderly woman pairing shorts with pantyhose.

"There's not really a young crowd," said Alexis Ramos, who manages the bike-rental stand. "I guess because people feel like there's nothing to do."

Locals said the area draws more traffic on weekends and for special events, such as Boardwalk Days, which feature free fireworks, concerts and other activities.

But there's nothing like the scene at rival city beaches, where it's hard to find a place to park your towel.

At Coney Island in Brooklyn, 6.7 million people hit the sand last year and another 5 million flocked to Rockaway Beach in Queens, according to the city's Department of Parks & Recreation. Even Orchard Beach in the Bronx attracted nearly 2 million visitors. South Beach: 334,000.

Oddly enough, South Beach used to be a popular resort area. Through the 1950s, the area was jammed with bungalow colonies, theaters, arcade games and rides, which have been replaced by long ribbons of townhouses.

Ron Winfield, top, prepared his rod on the Ocean Breeze Fishing Pier at South Beach. Boo the dog and his owner hit the boardwalk.

In the 1970s and '80s, when everything in New York City went to hell, South Beach did too, attracting drug dealers and arsonists, burning cars under the boardwalk.

"There was garbage, dirt, driftwood as big as people," said longtime beach goer Louis Liotta.

The city gave the beachfront a big overhaul in the mid-90s.

Now, Mr. Liotta and others say, the city keeps the beach, boardwalk and restrooms well maintained and generously staffed with lifeguards, security patrols and cleaning crews.

But that could be the story of any city beach. Coney Island and Rockaway have since come roaring back with new amusements, shops and food stands. Why not South Beach?

"What you need to understand about Staten Island is, the majority of people have pools in their backyard," Mr. Liotta said.

Others blame geology. Nancy Biscello, who was renting a bicycle with Mr. Liotta, said she takes her grandchildren to South Beach most weekends, but they stay on the boardwalk.

"It doesn't feel like sand on that beach," she said of the oddly gritty shore. "It feels like dirt. Something from a science project. What is it?"

It is sand mixed with clay. It has a reddish hue, retains heat and sticks to the skin, often leaving dark stains.

The water is no better, some say. "It's like a nasty, dark green," said Tyson Gard, who lives nearby and sticks to the boardwalk.

The beach faces New York City's Lower Bay and its waters are calm.

"It's a toilet bowl," said Arlene Lutz, sunbathing on a lawn chair with her fiancé. "It doesn't flow in and out."

The place might draw bigger crowds, of course, if there were more amusements. The Parks Department said it is open to ideas for additional concessions. "We are working to make South Beach's boardwalk a bustling destination for beachgoers and to improve commerce," a spokeswoman said.

Others contend it's beautiful and serene—so what's the problem?

Bigger attractions might bother nearby residents, said Staten Island Deputy Borough President Ed Burke.

And while the shore could be improved with white quartz sand, he said, "Staten Islanders might say no—there are many better ways to use those millions of dollars."

Perhaps the locals just want to keep the beach to themselves. And who can blame them?

"A lot of people don't know about it, it's a little jewel that's hidden," Ms. Lutz said. "A prime jewel of Staten Island."

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GREATER NEW YORK WATCH

NEW YORK

Ex-Senate Leader's Retrial to Begin

Former New York Senate leader Dean Skelos and his son returned to a Manhattan courtroom Tuesday for the start of their retrial on corruption charges.

U.S. District Judge Kimba M. Wood told prospective jurors who was seeking jurors who could be fair fact finders who would base their conclusions only on evidence they see and hear in court. She told them the trial was likely to last a month.

Potential jurors filled out questionnaires last week and lawyers had analyzed them before the formal start of jury selection Tuesday. Opening statements were likely to start Wednesday.

Mr. Skelos and his son were convicted in 2015 of extortion, conspiracy and bribery. Dean Skelos, a 70-year-old Republican, was sentenced to five years in prison. His son got 6½ years. But neither had to serve time.

The convictions and the sentences were overturned by a Manhattan federal appeals panel after U.S. Supreme Court ruling narrowing the definition of public corruption.

Prosecutors said the once-powerful politician badgered companies that needed his political sway to funnel more than $300,000 to his son through consulting work, a no-show job and a payment of $20,000.

—Associated Press

ADRIAN KRAUS/ASSOCIATED PRESS

Vice President Mike Pence toured the Nucor Steel Auburn plant in Auburn, N.Y., on Tuesday.

NEW JERSEY

Pawnshop Oversight Too Lax, Report Says

A report from a state watchdog says lax oversight has allowed New Jersey's pawnshops, scrapyards and secondhand stores to serve as "cash machines" for addicts looking to swap stolen goods for drug money.

The report released Tuesday by the State Commission of Investigation says regulations governing such businesses are "scattershot, inadequate and unevenly enforced."

The commission says the industry is being exploited by criminals and mob associates. It says existing laws are routinely flouted.

The report recommends several changes, including giving state police the authority to license secondhand stores and requiring those stores to upload details of all transactions to an online database.

Several pawnshop and scrapyard owners responded to the report, saying they were being unfairly maligned.

—Associated Press

CONNECTICUT

State Seeks to Lure Summer Lifeguards

Connecticut officials are offering a new perk to fill empty lifeguard chairs at state beaches: free training.

Even though the first day of summer is fast approaching, Tom Tyler, the state parks director, says there's still time for applicants to get certified before the summer beach season heats up.

Mr. Tyler says it has been a struggle to find qualified lifeguards. He says there are currently 70 guards on staff, but he says they need about 10 to 20 more to fill out the crews at Silver Sands State Park in Milford, Indian Well State Park in Shelton and Sherwood Island State Park in Westport.

B.J. Fisher, the American Lifeguard Association's director of health and safety, blames the lack of available guards on an aging population and a growing number of pools.

—Associated Press

LIFE & ARTS

FASHION

How to Get Millennials to Buy Jewelry

BY RAY A. SMITH

HIGH-END JEWELERS have a problem. Millennials aren't into the sparkly, special-occasion pieces that dazzled their parents and grandparents decades ago.

To catch on with twenty- and thirty-somethings, Bulgari, De Beers and others are rethinking store design, launching edgier, lower-priced collections and enlisting millennial favorites such as actress Elle Fanning and models Bella Hadid and Lily Aldridge to promote them.

Jewelers are following fashion's playbook for romancing millennials who are left cold by traditional, museum-like high-end boutiques. Brands are pulling out all the stops, designing products that customers can personalize and flaunting their ethical sourcing and sustainability. They are making online and in-store shopping distinctive and are hosting pop-up shops with limited-edition items.

It's a tough sell: Everyone needs clothes but not jewelry, especially members of the post-Casual Friday generation. To young fans of streetwear style, classic jewelry can seem old-fashioned, staid and something to be worn—or given—only on special occasions.

Millennials tend to dress up less for work and going out, so jewelers have to shift their marketing to make their products relevant. In the past, high-end jewelers often courted younger shoppers to buy jewelry for weddings and anniversaries or as gifts. Now, they're pushing the idea of buying jewelry for one's self to wear any time—and not waiting for a special occasion.

Millennials are interested in precious metals and stones, jewelers say, but turning them into customers requires modern products and marketing. The challenge is twofold: designing pieces that appeal to young shoppers and then persuading them to buy jewelry for themselves any time—and not just as the occasional milestone gift.

Many millennials reserve splurging for technology or vacations—not fancy jewelry. "To me, it's just very expensive," said Tracy Hoover, a 26-year-old engineer in Fort Campbell, Tenn. "I think that money would be better spent on other things." She and her husband spend their discretionary money "mostly on travel."

The only jewelry Ms. Hoover wears regularly are earrings made of cubic zirconia, a man-made diamond look-alike. Her engagement-ring has a cubic zirconia stone. She and her husband seldom wear their matching white-gold wedding bands, because it's impractical on their jobs. "We paid a total of $600 for all three rings," Ms. Hoover said. When the couple married four years ago, high-end jewelry wasn't a priority. "We could either buy these fancy rings or buy furniture for a house that we were just moving into," Ms. Hoover said. Among friends her age, no one wears jewelry, she added: "Everyone I know is still paying off student loans. I think a lot of my generation doesn't really prioritize jewelry."

When millennials do buy jewelry, they often seek out eclectic pieces from Gucci and other trendy brands. They also favor artisanal jewelry from small or new brands such as Anna Sheffield, Bing Bang, Catbird and ReBe, or handcrafted works sold on Etsy.

Millennials wear jewelry in more creative ways than previous generations. "It's kind of a blended approach where they mix and match expensive pieces with inexpensive pieces," said Diana Smith, associate director of retail and apparel at research firm Mintel. Millennials also like making their own jewelry or customizing pieces to express their personal style, according to Mintel's research.

Next month, jeweler David Yurman will begin offering personalization of its popular pinky rings. Visitors to the house's redesigned website will be able to customize pinky rings with monograms, motifs and symbols, said Evan Yurman, the chief creative officer.

Van Cleef & Arpels, a French house that opened its doors in 1906, is embracing "new ways of communications...which are definitely attractive for, among others, millennials," said Alain Bernard, president and chief executive. He cited moves into Instagram stories and live videos and the "whimsical" interactive 3D animations in a new campaign marking the 50th anniversary of the brand's Alhambra collection of jewelry with a four-leaf-clover motif.

Jewelers also are trying to engage the internet generation through online sales and an emphasis on sustainability. In recent months, luxury e-commerce sites Farfetch and Net-a-Porter both launched fine-jewelry sections, marketed to millennials' style. Tiffany and Swiss watchmaker and jeweler Chopard are among brands that have signed on with either Farfetch or Net-a-Porter or both.

"Millennials are a very socially conscious generation and expect transparency from brands about their products and processes," said Meredith Hirt, senior insights writer at Cassandra, a research firm specializing in young consumers.

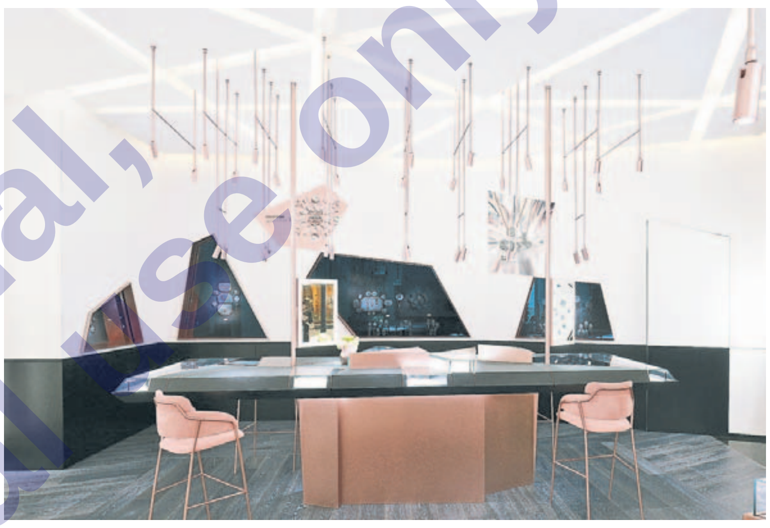
Chopard pledges that as of next month, the gold in its jewelry and watches will be 100% ethically sourced, said Caroline Scheufele, the house's co-president and creative director.

Tiffany, the 181-year-old company known for its robin's-egg blue packaging, splattered the color across the exterior of its stately flagship on New York City's Fifth Avenue, along with graffiti touting Paper Flowers, a new collection of pendants, earrings, bracelets and rings with a modern sensibility. Last year, Tiffany introduced HardWear, a line meant to resonate with millennials by embodying the energy of New York City's streets. To promote it, Tiffany tapped Ms. Fanning, as well as Lady Gaga and Zoë Kravitz.

Diamond giant De Beers added nightclub touches to its sleek new Libert'aime by Forevermark store in Shanghai. The shop, which opened last month, has a scented VIP lounge for big-ticket purchases and a "diamond bar" with jewelry meant to be worn every day. One wall features an enormous detail of a diamond, where browsers can take Instagram-friendly selfies surrounded by gleaming facets. The jewelry in the shop is "designed to appeal to the 420 million millennials in China," the company said. The retail concept also includes robust online platforms and a store on WeChat, China's most popular social-media platform. De Beers plans similarly millennial-friendly retail concepts for the U.S.

Italian house Bulgari also updated its store design and sales approach with an eye to younger shoppers. At a store the jeweler opened beside its Rome flagship, visitors can consult design books, peruse interactive displays of archival Bulgari images and buy limited-edition items sold only in the shop. While the store "was designed for all Bulgari customers, our millennial clients were especially top of mind, knowing the importance that they place on luxury that is interactive and collaborative," said CEO Jean-Christophe Babin. Bulgari recently chose Ms. Hadid and Ms. Aldridge as brand ambassadors.

To court millennials, Van Cleef & Arpels pairs jewels with whimsical images, above, and shows layered jewelry in ads, left. Bulgari lets customers mix and match with bracelets, below left, that have various color options. The Libert'aime by Forevermark store in Shanghai has a 'Millennials Zone,' below.



FROM LEFT: BULGARI; VAN CLEEF & ARPELS (2); FOREVERMARK

HEALTH

THE BRAIN, ILLUMINATED

BY DANIELA HERNANDEZ

THINKING, MOVING, seeing—it all seems so easy. But the world's smartest scientists are still grappling with basic questions about how we function.

To gain more insights, researchers and engineers are developing more powerful and easier-to-use devices to study the brain. Some allow scientists to monitor more neurons than was previously possible in a living brain. Others grant researchers access to the hard-to-reach regions of the brain. Their big advantage: The tools can record the fast patterns of electrical signals the brain uses to convey information in more detail than before. It's this neural Morse code scientists want to decipher.

"The first step in understanding anything is being able to measure it," says Loren Frank, a neuroscientist at the University of California, San Francisco, who's developing new brain probes.

In recent years, academic, government and corporate efforts to develop more powerful tools have accelerated world-wide, thanks to the miniaturization of hardware and improvements in manufacturing, neurotechnologists say. They're spending billions on this research.

Scientists hope these deeper data dives will help further the understanding of how networks of neurons work together during learning, memory, vision and movement. That could lead to better therapies for patients with brain-related diseases like dementia, epilepsy and Parkinson's disease.

"Before we understand what's going on in disease, we need to understand how the brain as a machine works," says Michael Hausser, a neuroscientist at University College London, who's studying decision-making and movement.

Already, experiments leveraging new brain probes are giving neuroscientists novel insights—and opening up fresh questions—about how the brain shuttles information from one region to the next. In one, researchers monitor the brain activity of mice while the animals navigate what looks like a maze projected in front of them. (Most studies use animals for ethical reasons.)

Scientists have traditionally thought of the brain as modular, where one region specializes in a certain function. But recent research enabled by new probes hint at a much more complex organ.

A UCSF team used implantable electrodes, which measure the brain's electrical signals, to examine how rats plan moving to different locations. This involves memory, so the researchers zeroed in on the hippocampus, which is involved in memory formation.

"We wanted to understand how the hippocampus forms and retrieves memories, which both involve linking patterns of brain activity across many regions," says Dr. Frank, who led the work.

They found that bursts of activity across the hippocampus engage neurons everywhere they looked in the brain, including areas important for learning rules, decision-making and rewards, Dr. Frank says. Scientists had previously found these "ripples" are important for strengthening memories, but

Please turn to page A12

Researchers at the Allen Institute for Brain Science are using Neuropixels probes to study the visual system. During a training session, a team sets up for an experiment.

ERIK DINNEL/ALLEN INSTITUTE

MY RIDE | By A.J. Baime

The Airport Shuttle That Became a Lost Classic

Liz Seibold, 73, an entrepreneur from Washoe Valley, Nev., on her 1939 Pontiac woodie station wagon, as told to A.J. Baime.

Two years ago, my husband, John, died. He left me with 17 airplanes and 41 cars. Of all the cars, the one pictured here is the one that will always be in our family. This story is not about how we found this car, but about how it found us.

In the 1970s, John and I became part-owners of Grand Canyon Airlines. We were passionate about preserving the aviation history of the Grand Canyon, so we bought and restored some types of airplanes that the airline used in the 1930s. We also sought out previous owners of the company, and that's how we happened upon Walter Douglas of Tucson, Ariz.

When we visited Mr. Douglas, he must have been in his 80s. He had a hangar full of airplanes and cars, including this 1939 Pontiac that was originally used as a limousine to take people from Grand Canyon hotels to an airport there and back. We wanted to buy it, but Mr. Douglas was not interested.

From 1974 to 2007, we looked for another 1939 Pontiac woodie. We wanted to fix it up and put the Grand Canyon Airlines logo on it, but we never found the right car.

Then, in 2007, a chance happening occurred. A woman struck up a conversation with a guy in a laundromat in Reno, Nev. She said her father (Walter Douglas) had left her this old Pontiac when he died. She wanted to sell it.

The man she was talking to was an employee of a friend of my husband's, so my husband got a phone call. Being a pilot, he jumped in his airplane the next day and flew from Arizona, where he was at the time, to Reno. When he saw the car, he knew it was the same one we had seen in 1974, because it had the Grand Canyon Airlines logo on it. However, the car had been sitting outside in the rain and snow for probably 20 years. One of the doors had fallen off.

We were flabbergasted. What are the chances of this happening?

John bought the car for $25,000 and had it shipped to San Diego. It went through a two-year restoration. When it was done, I thought it was the most beautiful car I had ever seen. It was meant to be. Now, I am the owner of the woodie of my dreams.

Contact A.J. Baime at Facebook.com/ajbaime.

Liz Seibold, an entrepreneur from Washoe Valley, Nev., with her 1939 Pontiac woodie station wagon, at an airport in Valle, Ariz. Ms. Seibold and her late husband, John, were once part-owners of Grand Canyon Airlines, thus the logo on the vehicle. Below, the car's rear and front. The Seibolds bought this car for $25,000, then spent two years restoring it.

STEVE CRAFT FOR THE WALL STREET JOURNAL

Quest to Decode Brain

Continued from page A11

hadn't determined whether the patterns of activity were coordinated across many regions, he says.

"It does look like a pretty brain-wide phenomenon," says Dr. Frank, whose lab developed the probes in collaboration with the Lawrence Livermore National Laboratory in Livermore, Calif. The study is under review for publication.

Other experiments are also pushing the field's understanding of how the brain works, thanks to sharper reads on neural activity.

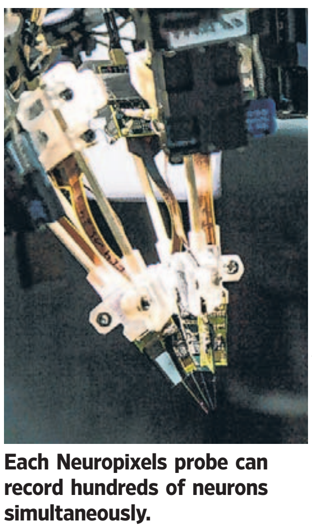
When an animal moves, for instance, the brain's motor cortex, which is responsible for generating movement, sends signals to the cerebellum, which helps with balance and coordination. Before those signals get there, they course through another region called the pons. But not all signals make it out, which surprised neuroscientist Adam Hantman. His team conducted the experiments at the Howard Hughes Medical Institute's Janelia Research Campus in Ashburn, Va.

When an animal moves, the pons seems to be "a selective relay, where it lets some bits of information through, but it's actually suppressing other bits," Dr. Hantman says. Why the brain does this remains a mystery, he says. "But the fact that it even happens? We just didn't know."

His team is using new, implantable probes called Neuropixels that allow scientists to record from hundreds of neurons in multiple brain regions at the same time. Within a year, his lab got "hundreds and hundreds" of neuron recordings in the pons. Without Neuropixels, the experiments would have been "very painful" or nearly impossible, he says. In living animals, the cortex's surface layers are typically much more accessible than deep regions like the pons.

The preliminary findings, he says, could help doctors understand the effects of cortical strokes, which affect signals sent to the cerebellum from the cortex.

Likewise, at the Allen Institute for Brain Science in Seattle, scientists using Neuropixels are finding that many neurons in the cortex have a special type of signal that travels backward along a neuron. Such signals are thought to convey to neighboring cells "a sort of acknowledgment signal that yes, the neuron just fired," says Christof Koch, the institute's president. These are "probably critical for information processing" during learning, he says.



ERIK DINNEL/ALLEN INSTITUTE

Each Neuropixels probe can record hundreds of neurons simultaneously.

Scientists have observed such signals before in slivers of brain tissue, but know much less about them in living animals, he says. With Neuropixels, scientists have realized these signals are more common in the cortex than previously thought. It's in the cortex that high-level perception and thought arise, he says.

HHMI and the Allen Institute, along with other foundations, have invested more than $12 million to develop and manufacture Neuropixels probes. There is a wait list to get them. The Neuropixels development team and Dr. Frank hope to one day test their probes in humans.

Clockwise from left: Installation view of 'Giacometti' at the Guggenheim; Giacometti's 'Suspended Ball' (1930-31); Giacometti's 'Caroline in a Red Dress' (c. 1964-65); the artist painting in his Paris studio (1958)

ART REVIEW

'Giacometti': Beyond a Retrospective

An exhibition spans his career while veering into uncharted territory

BY LANCE ESPLUND

New York

FIGURATIVE SCULPTURE does not usually fare well in the bowed shallow bays of Frank Lloyd Wright's Solomon R. Guggenheim Museum, which was conceived to showcase abstract paintings. And seeing the large exhibition of nearly 200 sculptures, paintings and drawings of Alberto Giacometti (1901-1966) along its narrow, sloping spiral has its strengths and challenges.

Born in Switzerland, Giacometti moved to Paris in 1922, where he befriended Picasso, Balthus, Francis Bacon and Jean-Paul Sartre. Discovered by André Masson, Giacometti was embraced and, later, dismissed—for working figuratively—by Surrealism's gatekeeper, André Breton.

Giacometti's plaster, bronze and wood Surrealist sculptures from the late 1920s and early 1930s—strange biomorphic hybrid essences suggesting figures, cages, animals, weapons, phalluses and totems—take their cues from Jean Arp, Constantin Brancusi, tribal art and Cycladic idols. They feel much more at home here than his mature, gangling bronze and plaster figures, whose molten, tortured surfaces—stretched to the Existential breaking point—can seem at odds with the Guggenheim's smooth, white void.

Two versions of the Surrealist "Spoon Woman," in plaster (1927) and bronze (1926/27; cast 1954), feel created for the Guggenheim. They stand side by side, like sentries or game pieces, and their baby-bump bulges appear to rise and fall within their bowled torsos and among the Guggenheim's long curves as naturally as ocean swells.

In the best Giacometti installations, viewers can mingle among his figurative sculptures, whose solitary, spindly presences—pinched, twisting, nervously agitated, their forceful eyes drilling into ours—both confront and empathize with us. The Guggenheim ramp favors a linear presentation, closer to shop windows in which the sculptures are displayed—looking out at us, and we at them.

It also offers long vistas in which Giacometti's lithe bronze figures activate Wright's architecture like drawings or musical notation. Up close, you cannot walk completely around Giacometti's masterly life-size "Man Pointing" (1947; cast by 1949)—a gracefully slender, wiry figure suggesting sideshow barker and traffic cop, and whose finger aims at your chest like a speeding arrow. Seen across the rotunda, from a distance of 75 feet, however, "Man Pointing" has the looming presence of a harbinger, a phantom wavering on the horizon.

This enormous, welcome show is the first major New York Giacometti exhibition since the Museum of Modern Art's 2001 retrospective. Organized by the Guggenheim's Megan Fontanella and the Fondation Giacometti's Catherine Grenier, it is arranged chronologically and spans Giacometti's entire career. But it is not a retrospective per se, which allows it to veer into surprising and uncharted territory.

Classic sculptures abound, such as "Reclining Woman Who Dreams" (1929), the comically erotic "Suspended Ball" (1930-31), the violent "Head on a Rod" (1947), the oddball "The Nose" (1949; cast 1964) and "Figurine Between Two Houses" (1950). Also here are "The Forest" (1950); "The Chariot" (1950); a grouping of the "Women of Venice" (1956), in which their hands and feet feel like melting anvils; the hang-eared "Dog" (1951); and the bone- and relic-like plaster appendage "The Leg" (1958).

The long legs of the striding, life-size "Walking Man I" (1960; cast 1982) are as straight as iron rods. He moves like an ancient Egyptian figure, pressing into the abyss, and his limbs corkscrew downward, as if fighting against gravity. His face fades in and out of focus and form like a mirage.

"Seated Woman" (1950; cast 1956) is as frail as a string, as regal as a queen. Seen from the front, she is perched on her throne. Seen from the side, she evolves cinematically: She appears to be seated; then suggests a standing human skeleton, and then a long-legged spider, and then a thoroughbred horse, striding triumphantly.

Among other astonishments here are numerous gorgeous plasters—penciled, incised and painted. Giacometti's signature paintings, drawings and sculptures are built out of endless addition and subtraction, infinite touches and impressions, as if he were always searching for how to articulate form, tension, space and the human predicament. His forms and internal frames materialize and dissolve, expand and contract. You sense the ever-present darting movements of Giacometti's roving eye.

In Giacometti's greatest portrait paintings—mazes that have the frontal intensity of ancient Egyptian statuary, and in which washy grays flit among smoke, liquid and stone—distant small heads yo-yo in space and race toward you like fastballs. At the Guggenheim, several sculpted portrait busts rise like mountain peaks, as if their tiny heads were forever out of reach. An arresting grouping of bronze torsos, some of them evoking Celtic crosses, transforms one broad pedestal into graveyard. And some brutally worked portrait paintings—resembling burnished or hammered metals—are so dense and cloudy that you must endlessly strain to grasp their visages in the darkness. Among them, "Head of a Man, Face On" (1956) has the bearing of a clenched fist and suggests an impact crater.

Overall, however, this exhibition has a meandering, padded feel. It might be more Giacometti than anyone can reasonably navigate. Pace yourself. The high points outreach any lows. Giacometti's willful distortions transcend eccentricity and artifice, arriving in the realm of greater naturalism—as he moves beyond mere appearances to perceive and unearth something deeper, truer, more human.

Giacometti
Solomon R. Guggenheim Museum, through Sept. 12

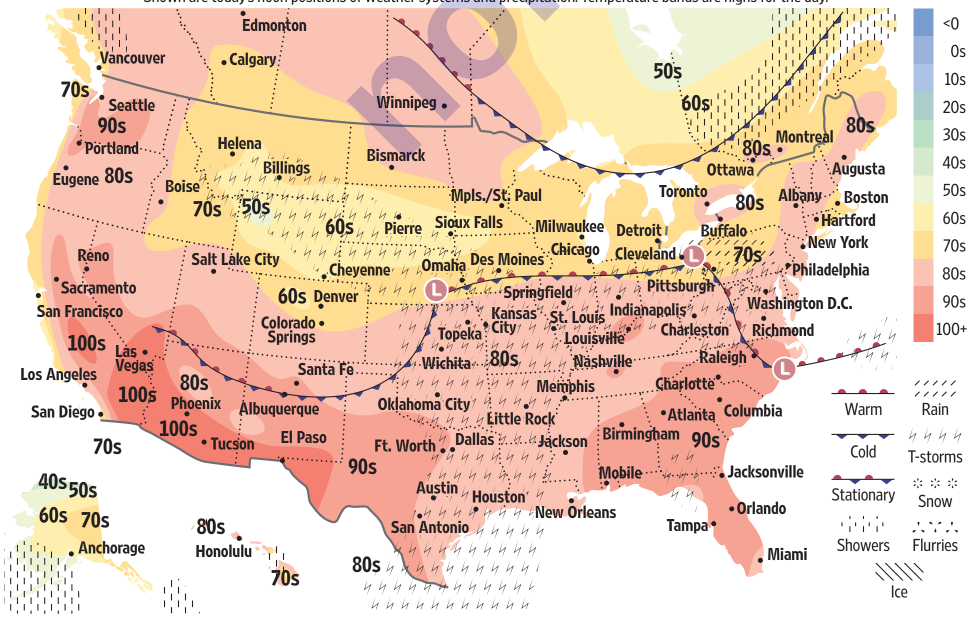
Mr. Esplund writes about art for the Journal.

CLOCKWISE FROM TOP LEFT: SOLOMON R. GUGGENHEIM FOUNDATION; ALBERTO GIACOMETTI ESTATE/VAGA AND ARS, NY/FONDATION GIACOMETTI, PARIS (2); STIFTUNG ERNST SCHEIDEGGER– ARCHIV, ZURICH/ERNST SCHEIDEGGER (PHOTO)

Weather

AccuWeather DOWNLOAD THE APP

Shown are today's noon positions of weather systems and precipitation. Temperature bands are highs for the day.



U.S. Forecasts

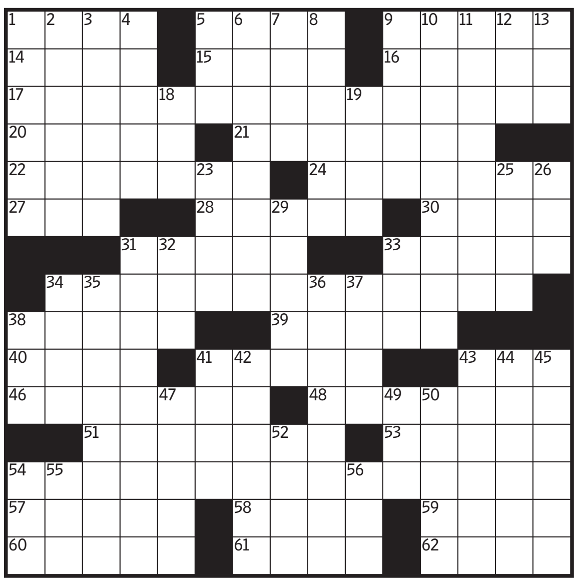
s...sunny; pc... partly cloudy; c...cloudy; sh...showers; t...t'storms; r...rain; sf...snow flurries; sn...snow; i...ice

City	Today Hi	Today Lo	Today W	Tomorrow Hi	Tomorrow Lo	Tomorrow W
Anchorage	63	52	pc	58	49	c
Atlanta	94	75	pc	91	71	t
Austin	86	73	t	93	72	t
Baltimore	82	69	t	85	64	pc
Boise	86	62	pc	87	59	pc
Boston	79	62	s	73	56	s
Burlington	83	56	s	72	50	s
Charlotte	96	73	s	92	71	t
Chicago	72	61	c	74	61	c
Cleveland	75	63	r	79	63	s
Dallas	87	74	t	90	75	t
Denver	75	50	pc	82	56	s
Detroit	78	61	pc	80	61	s
Honolulu	90	75	c	89	75	pc
Houston	82	75	t	87	73	t
Indianapolis	82	69	t	76	66	t
Kansas City	81	61	t	74	60	t
Las Vegas	107	83	s	112	83	s
Little Rock	83	68	t	83	66	t
Los Angeles	83	65	pc	82	65	pc
Miami	89	76	pc	89	76	t
Milwaukee	67	57	pc	69	56	pc
Minneapolis	79	64	pc	79	64	pc
Nashville	91	69	pc	83	68	t
New Orleans	89	74	t	89	74	t
New York City	82	66	pc	84	64	s
Oklahoma City	85	68	t	86	62	pc
Omaha	74	60	r	72	59	t
Orlando	93	75	s	93	76	t
Philadelphia	84	67	r	85	65	s
Phoenix	107	81	s	111	84	s
Pittsburgh	79	61	r	82	63	s
Portland, Maine	80	56	s	73	50	s
Portland, Ore.	94	61	pc	78	57	pc
Sacramento	90	54	s	95	57	s
St. Louis	88	72	t	83	68	t
Salt Lake City	85	61	s	94	64	s
San Francisco	67	56	pc	70	56	pc
Santa Fe	91	57	s	90	58	s
Seattle	89	60	pc	77	57	pc
Sioux Falls	68	61	r	72	60	c
Wash., D.C.	85	72	t	85	69	pc

International

City	Today Hi	Today Lo	Today W	Tomorrow Hi	Tomorrow Lo	Tomorrow W
Amsterdam	73	57	pc	61	52	pc
Athens	86	70	pc	87	69	s
Baghdad	107	80	s	105	79	s
Bangkok	89	79	t	92	79	t
Beijing	94	69	s	95	72	c
Berlin	80	64	s	76	50	pc
Brussels	78	58	pc	62	47	pc
Buenos Aires	67	53	pc	61	38	s
Dubai	108	87	s	103	88	s
Dublin	63	43	pc	60	43	pc
Edinburgh	61	43	pc	60	42	pc
Frankfurt	85	62	s	77	49	pc
Geneva	85	63	s	84	58	pc
Havana	88	73	pc	91	72	pc
Hong Kong	92	83	t	91	82	t
Istanbul	85	69	pc	85	71	pc
Jakarta	92	77	t	92	77	pc
Jerusalem	83	63	s	84	64	s
Johannesburg	70	42	s	67	40	s
London	75	53	c	68	50	pc
Madrid	92	67	pc	94	68	s
Manila	89	78	t	86	77	t
Melbourne	56	42	pc	58	42	s
Mexico City	73	55	t	70	54	t
Milan	88	69	s	92	69	c
Moscow	72	54	pc	76	60	c
Mumbai	90	79	pc	90	79	pc
Paris	82	60	s	71	48	pc
Rio de Janeiro	78	66	s	80	67	s
Riyadh	110	83	s	109	81	s
Rome	85	66	pc	84	66	pc
San Juan	88	79	sh	89	78	s
Seoul	81	63	pc	82	64	s
Shanghai	81	71	r	85	71	s
Singapore	89	80	c	88	78	t
Sydney	63	52	pc	65	49	sh
Taipei City	96	80	sh	92	79	t
Tokyo	74	68	r	77	71	r
Toronto	80	59	pc	74	55	s
Vancouver	76	58	pc	72	53	pc
Warsaw	82	60	s	88	53	t
Zurich	84	60	s	82	51	t

The WSJ Daily Crossword | Edited by Mike Shenk



ILL-ADVISED ACTIVITIES | By David Alfred Bywaters

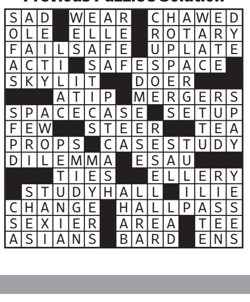
Across

1 Doesn't just sit there
5 Stylishly unkempt hairdo
9 Skinflint
14 Send off
15 Betray jitters
16 Quick-witted
17 Do a bunny imitation midflight?
20 Instrument lens
21 Money-making company?
22 1970 John Wayne film
24 Bard for the bereaved
27 K.C.-to-Chicago direction
28 Egg producer
30 Unemployed
31 Fruits with seedy cores
33 Prevent a return to warmer climes
34 Skim pancakes across a pond?
38 Hammer ends
39 Use
40 Between appointments
41 Become a contestant
43 Muesli morsel
46 Handy
48 Bookstore section
51 Salad bar option
53 Vote in
54 Do aerobic exercises in an efficient but dangerous manner?
57 Palatal projection
58 Partakes of
59 Zilch
60 E-sports participant
61 Violent protest
62 Regarded

Down

1 Like sailors on leave
2 Composer of many polonaises
3 Tread surreptitiously
4 Go bad
5 Place to bathe in mud
6 Price for partying, perhaps
7 Palm with dark purple berries
8 Pioneer in radiation detection
9 Tappable tree
10 Unsound
11 Resort locales
12 Directional suffix
13 GPS suggestion
18 38-Down's superior
19 ___-poly
23 Fail to draw an audience
25 Narrow opening
26 X, sometimes
29 Get ___ at the table
31 Fruit named for two other unrelated fruits
32 Word with black or photo
33 Bee Gees hit "___ Can't Have You"
34 Medical fluids
35 Doesn't tell
36 Against
37 Corn syrup brand since 1902
38 18-Down's subordinate
41 Tech mogul Musk
42 Fix
43 Like many urban streets
44 Give in
45 Group of four
47 Prickly plant
49 Exclamation of indifference
50 Unaccompanied
52 Like panang curry
54 Moonshine container
55 Sch. founded by Thomas Jefferson
56 The Spike S-512, under development, e.g.

Previous Puzzle's Solution



▶ Solve this puzzle online and discuss it at **WSJ.com/Puzzles.**

SPORTS

SOCCER

Iran's World Cup Obstacles

Spain, Portugal and U.S. sanctions are hurdles for manager Carlos Queiroz

ANATOLY MALTSEV/EPA/SHUTTERSTOCK

Iran's players celebrate with manager Carlos Queiroz after the team's 1-0 win over Morocco at the World Cup.

BY JOSHUA ROBINSON

Lisbon

MORE THAN A FEW of the coaches at this World Cup have to deal with small talent pools and substandard facilities back home. Carlos Queiroz also has to cope with sanctions from the U.S. government.

As the manager of Iran's national soccer team, the Mozambique-born Portuguese knows that wherever his squad goes it's often considered the enemy. His federation has a hard time scheduling friendly games, because no one wants to be seen playing Iran. His players leave the country as soon as they have the chance. And one of his main training fields is only 60 yards long.

This is more than most coaches sign up for. Yet Queiroz, 65, has stuck around for seven years, walking one the narrowest sporting and geopolitical tightropes this side of the North Korean Olympic team. Outside Iran, he faces a world where plenty of powerful people despise his country. Inside Iran, he faces a situation where plenty of powerful people occasionally despise him.

But what he has pulled off ranks among the more improbable feats in soccer over the past decade. Queiroz has led the reclusive nation to the World Cup not once, but twice. After a last-gasp victory against Morocco last week, he now has the chance to take Iran to the round of 16 if he can snatch a point from Spain on Wednesday—all while struggling to convince his own federation to invest in the program.

"This achievement is so big that even in Iran they don't really have a sense of it. Even the sports authorities," Queiroz said during an interview before the World Cup. "Iran is the last place in the world where they have a sense of what really happened with the team."

Not that many outside realize the full extent of the challenges either. Days before the World Cup, Queiroz said that Nike refused to supply his players with cleats because the American manufacturer realized that it would violate U.S. sanctions. (Nike has said that it abided by those restrictions for years.) The players were forced to scramble for boots in the buildup to the biggest tournament of their lives.

But Iran seemed doomed long before its players went shopping in Russian sporting goods stores. Seven months before the tournament kicked off, the draw landed it in the same group as 2010 world champion Spain and 2016 European champion Portugal.

"They're going to play against the best teams in the world, we need to have the best World Cup preparation in the world. It's difficult to understand for my officials what should be the level of our preparation. when we play against two candidates to win the World Cup," Queiroz said.

Because so few Iranian players operate in top leagues—roughly half don't even leave Iran—and high-level friendly matches are so hard to come by, Queiroz often has to settle for training camps to work with his team. But even those tend to be low budget. The squad struggles to make travel arrangements and even secure enough equipment.

Still, Iran didn't sneak into the World Cup. It was the first Asian country to punch its ticket for Russia last year and went undefeated in its final 10 qualifiers. On the night it clinched its berth, Queiroz paraded around the field in Tehran hoisting a mini-replica of the World Cup over his head.

It was the fourth time in his career that he had led a team to soccer's biggest stage, after guiding South Africa there in 2002, Portugal in 2010 and Iran in 2014.

"That should be the lights coming on that say, let's do something, let's invest now, let's create more facilities," Queiroz said, referring to Iran. "But it's the opposite. When you win in football, it creates this sense of comfort. And I've seen it all over the world in my career."

"When you win," he added, "it's time to change."

On several occasions, Queiroz has also threatened to resign from the Iran job in frustration with the country's sporting brass. He followed through once, before being cajoled into returning months later. That interruption aside, he arrived in Russia in the unlikely position of being the third-longest tenured manager at the tournament, behind only Joachim Löw of Germany and Oscar Tabarez of Uruguay. In fact, he is the only manager of an Asian team here who was hired before 2017.

But seven years will not become eight. Queiroz, fed up with receiving only a short-term contract offer from Iran, has already vowed to step down after the World Cup. He plans to seek out another qualifying challenge for 2022.

"The World Cup is like a hanging process for coaches," Queiroz said. "After a World Cup, 70-80% of the coaches will lose their jobs. They leave like heroes and they come back like zeros."

With a first Iranian trip to the round of 16 now a real possibility, Queiroz can still aim for the hero column. Hauling Iran out of a group with Spain and Portugal would be his greatest achievement in international soccer—it just means knocking off one of the best teams on the planet or his homeland. And for once, the always opinionated Queiroz doesn't have a preference.

"Qualifying at the cost of who?" he said. "I don't care."

GABRIEL BOUYS/AGENCE FRANCE-PRESSE/GETTY IMAGES

Roman Zobnin, left, and Artem Dzyuba celebrate Russia's 3-1 win over Egypt.

WORLD CUP

RUSSIA LOOKS LIKE IT BELONGS

BY JOSHUA ROBINSON

St. Petersburg, Russia

Two games into its home World Cup, the Russian team could be forgiven for thinking that hosting the party is always this easy. Land in an easy group, stir up a rabid fan base, and defy expectations. Then, presto, you have yourself the noisiest story in soccer.

After all, Russia started the tournament last week with only two certainties: that it was the lowest-ranked team at this World Cup and that, no matter how badly it went, the team would still play three games in front of its nothing-to-lose supporters.

On Tuesday night, Russia pretty much guaranteed there will be a fourth. The hosts all but punched their ticket to the knockout rounds here with a 3-1 victory over Egypt, following their stomping of Saudi Arabia in their opening game. Only a humiliating rout against Uruguay next Monday, combined with other unlikely results, could see the Russians miss out on the round of 16.

The last time this country advanced beyond a World Cup group stage, it still played as the Soviet Union. So at the final whistle, a kind of disbelief surged through most of the 64,000 fans inside of the Zenit Arena.

Their boys had done it. Their wildest dreams for the tournament had come true. Russia, somehow, was not terrible.

Ebullient home fans have packed the first two matches for the team, breaking into booming chants of "Ross-i-ya" as easily as a frat party slips into "U-S-A."

"We're very happy that we have two wins under our belt and that we're giving our fans so much joy," said Russian manager Stanislav Cherchesov.

On Tuesday, however, Russia's players kept them waiting a little longer. They didn't open the scoring until the 47th minute, when yet another piece of this charmed tournament broke their way: Egypt scored an own goal. Aleksandr Golovin's errant shot caromed hard off Egyptian captain Ahmed Fathi and into the net. It was the fifth own goal in 17 games at this tournament, which isn't even a week old. (The record for an entire World Cup has stood since 1998 at only six.)

Denis Cheryshev doubled Russia's lead 12 minutes later, following on from his two-goal performance in the opening game. And still the Russians weren't done. With Egypt stumbling about utterly shellshocked, Artem Dzyuba added a third to put the result beyond doubt.

"We did our homework," Cherchesov said.

Egypt, meanwhile, already knows that its first World Cup since 1990 is almost certain to end with a group-stage exit. Not even the return of Liverpool forward Mohamed Salah from a shoulder injury sustained in the Champions League final could save it. Surrounded by a late penalty kick. But that went almost unnoticed to the home fans.

TV Listings

Wednesday, June 20
(All times Eastern)
8 a.m.: Portugal vs. Morocco (FS1)
11 a.m.: Uruguay vs. Saudi Arabia (FOX)
2 p.m.: Iran vs. Spain (FOX)

MLB

BASEBALL'S MOST UNHITTABLE RELIEVER

BY JARED DIAMOND

JOSH HADER throws a fastball that travels at an average speed of 94 mph, which sounds pretty fast until you realize that about 160 major-league pitchers throw their four-seamers harder than that. He throws a slider that revolves 2,564 times per minute, which is above average, but not by much. He uses one of those two pitches almost every time he delivers to the plate.

So that's Josh Hader. In terms of raw stuff, he's a left-handed relief pitcher for the Milwaukee Brewers whose arsenal measures as good, but certainly not spectacular. But none of that matters when Hader steps onto the mound, and he magically transforms into something between Walter Johnson and a real-life Sidd Finch, the fictional hurler whose 168 mph fastball was featured in a Sports Illustrated April Fools' Day joke.

Hader, 24, entered Tuesday having struck out a ridiculous 54.2% of batters he has faced this season, resulting in a 1.16 ERA. That would set an all-time record, surpassing Aroldis Chapman from the 2014 Cincinnati Reds (52.5%) and Craig Kimbrel from the 2012 Atlanta Braves (50.2%). He has emerged as the centerpiece of one of baseball's best bullpens, putting the Brewers in position to return to the playoffs for the first time since 2011.

"When the batter steps in the box, he already knows he's going to strike out," said fellow Brewers reliever Jeremy Jeffress. "He's already won the battle."

And even that doesn't explain the extent of Hader's historic level of dominance. When Chapman struck out more than half of hitters, he threw a grand total of 54 innings, rarely recording more than three outs at a time. Hader has already worked 38 ⅔ innings and is on pace to finish the year with 87. No reliever has ever topped 183 strikeouts in a season, a mark established by Dick Radatz in 157 innings for the 1964 Boston Red Sox. Hader can challenge it, even with a smaller workload.

All this brings us to the other part of Hader's story. In the era of ultimate bullpen specialization, Hader is a throwback. He has no defined role, coming in games anywhere from the fourth inning to the eighth. Once he's in there, he stays for a while. Hader has lasted at least 1 ⅓ innings in 17 of his 24 outings and at least two innings in 12. Seven times, he has entered a game in the seventh or eighth inning and finished it.

It has put Hader and the Brewers at the forefront of what could develop into a full-blown course correction: Though relievers are handling close to 40% of the total workload in the majors this season, teams have finally stopped treating them like porcelain dolls once they get into the game.

Relief pitchers on average are recording 3.25 outs per appearance, the most since 2004. Nearly 23% of relief outings are lasting at least four outs and more than 12% are lasting at least six outs, both the highest this decade. Perhaps most important, only about a quarter of all relief outings are under than three outs, the fewest since 1990 and down from more than 30% in 2015.

"We're valuing pitchers who can get left-handed and right-handed hitters out more," Brewers general manager David Stearns said.

Hader fits that mold. A starter in the minors, Hader was traded twice as a prospect, first from the Baltimore Orioles to the Houston Astros in 2013 and then to the Brewers two years later. Chasing a playoff spot, Milwaukee promoted him last June and inserted him into the bullpen, where he posted a 2.08 ERA and struck out nearly 13 batters per nine innings.

This season, he has been even better, whiffing close to 18 batters per nine innings. He attributes his step forward in part to his decision to ditch his full windup and pitch exclusively from the stretch.

"That helped me tremendously to stay consistent and repeat my delivery as much as possible," Hader said.

Hitters who have faced Hader say his velocity and movement metrics don't explain what makes him so fearsome. Hader stands on the left side of the rubber and releases across his body from a low arm slot, hiding it from hitters. He throws from farther on the first-base side of almost any pitcher in baseball. Plus, his unusually long arms mean he releases the ball physically closer to the batter, making his 94 mph fastball feel considerably harder.

Hader says that while he can't predict how his body will respond as the months go on, he feels as strong as ever and believes he can sustain this level of production. If he does, he could propel Milwaukee straight into October.

"We've got a culture in our bullpen where guys are willing to take the ball at any point in the game to help get outs," Stearns said.

JOHN FISHER/CSM/ZUMA PRESS

Entering Tuesday, the Brewers' Josh Hader has struck out 54.2% of batters he has faced this year.

Half a Cheer for Trump Coal Order

BUSINESS WORLD
By Holman W. Jenkins, Jr.

Donald Trump doesn't qualify even as a George W. Bush substitute, much less a Cato Institute acolyte, when it comes to adhering to the principle of nonintervention in markets. This we knew going in. But his latest on behalf of coal miners at least waves a fig leaf in the direction of a genuine problem.

A presidential missive this month to the Energy Department could eventually result in grid operators, in the name of national security, being ordered to buy power from large coal and nuclear plants that otherwise would be shut down due to unprofitability.

Such an order is somewhat unprecedented, but the fainting spells of energy lobbyists are hard to take, especially from a solar-and-wind promoter at the American Council on Renewable Energy who complained of "arbitrary market interventions."

Energy decisions are already highly politicized. That's the problem, especially the mandates in many states to keep ratcheting up the share supplied by intermittent power sources.

This has been coupled in the past decade with an epochal squeezing out of coal and nuclear in favor of cheaper natural gas. How much of a problem is uncertain, but the growing interdependence of the power grid and the gas pipeline system introduces a vulnerability that regulators have hardly started to grapple with. Gas plants need just-in-time fuel delivery from a pipeline network; a coal plant can store fuel for 90 days on site; a nuclear plant needs refueling every two years.

New England is a dramatic case in point. It gets half its power from gas, up from 15% a decade ago, and is desperately short of pipeline capacity even in relatively mild winters.

All agree the problem is new and serious, including the independent Federal Energy Regulatory Commission, which rejected a Trump entreaty on behalf of coal and nuclear earlier this year as unripe. The retirement of whole categories of large power plants raises "a very important issue and a tricky one," its chairman acknowledged to Congress in April.

The old integrated utility was inefficient for many reasons, and wholesale electricity deregulation has largely paid off for consumers. But under one roof existed the incentive to make the unattractive investments, and collect from customers for them, that made sure the power stayed on 99.999% of the time.

That FirstEnergy Solutions, bankrupt owner of three nuclear plants, put the issue before the Trump administration is hardly a surprise in a political system like ours. If you think critics of what would plainly be a bailout are not self-interested too, think again.

Local utilities oppose the order because they would have to fight to get permission from anti-Trump state regulators to pass the costs along to consumers. Gas and oil interests are opposed since they would lose market share. Environmentalists are loath to risk their standing among green voters by standing up for carbon-free nuclear.

Critics have better fixes for grid stability, but try getting them past NIMBYs.

Critics say there are better solutions to the growing risk of dynamic grid instability: Invest in more pipelines. Invest in new transmission lines. Build lots of combined-cycle gas plants that can fire up quickly. Which would be neat if you could get these ideas past not-in-my-backyard activists.

In New York, Gov. Andrew Cuomo finds himself in a bidding war with his primary opponent, actress Cynthia Nixon, for green voters. He recently declared opposition to any new pipelines or power plants in his state, though New York's grid operator says both are urgently needed to support the governor's lofty wind and solar goals.

New England is in the worst shape of all, having killed multiple projects for new pipelines and even a transmission line to bring hydropower from Canada. Local electric prices are 50% higher than the national average. Every winter, thanks to an overtaxed pipeline network, the six-state region descends into a "precarious position," according to New England's grid manager.

California recently found itself paying Arizona to shut down its own solar plants to buy excess California solar power. Their common goal: to avoid costly stop-starts of their conventional power plants. This is insane.

Los Angeles simultaneously is studying how to convert to green power while spending millions to upgrade three local gas plants inconveniently sited inside the Los Angeles basin (where air quality is paramount) to guard the city against instabilities created by California's statewide renewables mandate. This also is insane.

Everywhere, in the U.S. and beyond, the wind-and-solar fantasies of local politicians boil down to an unspoken expectation that power will always be available from somewhere far away to bail them out when local wind and sun are uncooperative.

One ally Mr. Trump should have but doesn't: Fraudulent greens who whine about the meaningless Paris climate treaty and yet won't lift a finger to keep open nuclear power plants that generate carbon-free energy. Once gone, these unique and possibly precious facilities won't be coming back.

The Perils of Corporate Concentration

POLITICS & IDEAS
By William A. Galston

Amid the din of daily political combat, it's easy to overlook long-term trends reshaping the country. The stock market has quadrupled since 2009's Great Recession low, but the growth of real wages has failed to accelerate, even as unemployment has fallen from 10% to under 4%. An International Monetary Fund paper published earlier this month suggests these developments are linked to a single cause—increasing corporate concentration throughout the U.S. economy.

A standard definition of market power, say the authors of the IMF paper, is the ability to maintain prices above marginal cost—the level that would prevail under perfect competition. They find that between 1980 and 2016, markups by U.S. companies have increased by an average of 42%. Although markups have risen in all major industry sectors, some have experienced increases far above the average, led by 419% for biotechnology. Not surprisingly, there is a strong relationship between markups and profitability.

There is also evidence that markups are related to market concentration, which has surged in recent decades. Since the mid-1990s the standard measure of concentration used in antitrust analysis, the Herfindahl-Hirschman Index, has risen by 50%.

These findings have important real-world consequences, says the IMF. At first higher markups are associated with increasing investment in both physical plant and research and development. But beyond a certain point the relationship reverses. "At higher levels of markups, or at higher levels of market concentration," the authors find, "the marginal relation between innovation and markups becomes negative." In short, as a firm's market position strengthens, its incentive to invest in innovation decreases. If we care about the pace of innovation in the economy, we have reason to resist excessive levels of sectoral concentration.

There's another reason to care about companies' rising market power: as the level of concentration rises, the IMF paper concludes, firms can appropriate "a growing share of the rents from production," leaving less for labor. Unlike the relationship between concentration and innovation, which takes the shape of an inverted U that rises and then falls, the relationship between concentration and returns to labor is linear: The higher the market concentration, the lower the labor share.

Rising market concentration means more for profit and less for labor. This helps explain why wages have increased so slowly since the Great Recession even as the stock market has soared. If we have reasons to care about workers' ability to share in the growth of their firms—and we do—we have little choice but to rein in market concentration when it upsets the balance that makes the American dream possible.

This conclusion has nothing to do with a sentimental attachment to small business, let alone an ideological preference for individual producers. As modes of production change, so will the scale of production. Some technologies make smaller companies more profitable, while others push in the opposite direction. In the aggregate, technological change has made possible increased economies of scale, an evolution we have no compelling reason to resist.

U.S. companies are too big and have too much market power. Workers are suffering.

"Too much of a good thing is wonderful," said Mae West. She was an acute social observer, but not much of an economist. If big is beautiful, it doesn't follow that bigger is even more beautiful. Beyond a certain point, which can only be determined empirically rather than theoretically, growing company size has perverse consequences. The practical question is whether we will accept these consequences as unavoidable or use public policy to resist them.

The time has come to reinvigorate antitrust enforcement. The current guidelines state: "Mergers that cause a significant increase in concentration and result in highly concentrated markets are presumed to be likely to enhance market power." Although this is the right principle, in practice regulators have adopted an excessively restrictive definition of what counts as a significant increase. This has led to a myopic focus on the most highly concentrated sectors—those with four or fewer competitors—even when somewhat less concentrated sectors also experience rising market power. The Justice Department and the Federal Trade Commission should adopt a broader view.

In addition, companies in concentrated sectors can engage in two different forms of anticompetitive behavior—"exclusionary" conduct that prevents new competitors from entering a market, and "exploitative" conduct that allows dominant parties to take advantage of their market power. At present, U.S. regulators have few tools to address the latter abuse, forcing the government to rely on public shaming to counteract predatory pricing such as Mylan's notorious 400% price hikes for its EpiPen.

We can argue about the details, but without more effective measures to counteract hyperconcentration, American workers will continue to draw the short straw.

Saving Lives Is in My Blood

By Rich Prior

I was lounging on the couch as a storm raged outside when a doctor from the New York Blood Center called. I panicked. Did my last donation turn up some fatal disorder? No. The doctor calmly said there was an urgent need for my blood, a perfect match for a sick 11-year-old girl.

Fifteen years earlier, when my dad was diagnosed with esophageal cancer at 69, I made a bargain with God. If dad survived, I swore to give back for that gift. When dad initially improved after chemo, radiation and surgery, I started volunteering. In my mid-40s I washed dishes at a soup kitchen, worked at the New York City Marathon and sporadically tutored music students.

But I found my calling when the evening news reported that winter storms had created a blood shortage. I donated for the first time in memory. They said my blood type was O-positive and I could give again in 56 days. I calendared the date, which was unnecessary because my phone rang the instant I was eligible.

Becoming a donor, I didn't know how much I had to give.

At my second donation, I teased the phlebotomist by saying the staff stalked me like Dracula. She laughed, then pulled up my records. "Ah, no wonder. You're a 'baby donor.' Wow, and you're Code 96 too. Being O-positive—that's the trifecta!" O-positive is the most common blood type and is compatible with roughly 80% of recipients. I was also CMV-negative, which meant I didn't have cytomegalovirus. That's what made me a baby donor: CMV, which infects more than half of adults by middle age, is usually harmless but can cause severe problems for infants and pregnant women. Code 96 denotes I have a particular combination of antigens that make my red cells a "specific match" for other 96ers.

I'd found a form of charity for which I was especially qualified. "You're such a good bleeder," one attendant told me. I enjoyed emails informing me that my blood had gone to patients at local hospitals or to Florida and Texas hurricane victims. Over time, instead of giving whole blood, the persuasive vampires hooked me to apheresis machines, which separate and extract platelets or plasma—as well as double red cells, called "power red."

When the blood-center doctor called me recently about the 11-year-old girl, she asked: "Could you possibly rush to the east side center for a leukapheresis procedure?" In this case, they would harvest only my white cells. I went, and the attendant inserted needles and tubes from a whirring machine into both arms. One took blood, the other reintroduced it, the white cells replaced with saline. Within a couple of hours, my white cells, which last only 24 hours, were with the girl's doctors.

My father died at 71, two years after his diagnosis. My big regret is that as his junior I didn't give him grandchildren to keep his Prior surname alive. But just as I inherited dad's blue eyes and bad back, I inherited my unique blood and rare antigens that live on in his name to take care of others like he did for us.

Mr. Prior, a former Broadway musician, is writing a memoir about developing focal dystonia, a neurological disorder that ended his performing career.

BOOKSHELF | By John Donvan

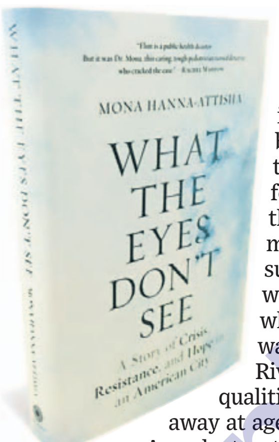
Sounding Flint's Siren

What the Eyes Don't See

By Mona Hanna-Attisha
(One World, 364 pages, $28)

In September 2015, during the very week a pediatrician-turned-researcher exposed the high likelihood that lead-laced water was poisoning the child population of Flint, Mich., two officials of the Environmental Protection Agency engaged in an email exchange that, in retrospect, serves as an encapsulation of that city's water crisis. Wrote one to the other: "I'm not so sure Flint is the community we want to go out on a limb for." Came the too-succinct reply: "I concur."

The mindset among the many layers of bureaucrats who failed to protect Flint is the dragon in Mona Hanna-Attisha's account of the crisis, "What the Eyes Don't See." And she, in the story she tells, is the dragon-slayer, that same pediatrician-turned-researcher whose weapons against a failed system were persistence, data and her own outrage. As such, this book is not a journalistic account of Flint's water crisis, but the memoir of an activist—first-hand, intimate and inescapably subjective. This vantage point enhances the story, and gets in its way.



Dr. Hanna-Attisha's story begins in the summer of 2015 when, at a barbecue of all places, she gets a tip from a friend who once worked for the EPA. That night, by email, the friend flags an 8-week-old EPA memo, recently leaked to the press, suggesting that the system's pipes were leaching lead. It turns out that, when Flint switched from buying water from Detroit to using the Flint River as its source, the corrosive qualities of the river water quickly ate away at aged pipes.

As a doctor, the author knows how dangerous elevated lead levels are. Even minute amounts of consumed lead pose serious risks to children, with high potential for compromising brain development. But she is shocked at the apparent inertia of the various public health bureaucrats whom she expects to be taking action. "They didn't hear the sirens I was hearing," she writes, "while I couldn't get them out of my head." There have been no public warnings, no follow-up investigations and no effort to mitigate the lead in the water, which could have been corrected by a chemical treatment costing the government only $140 per day. "It could be laziness," Dr. Hanna-Attisha muses, "or, worse, an indifference to poor black and brown people."

The dramatic heart of "What the Eyes Don't See" is the author's effort to provide the missing piece of the equation. If she can produce data establishing a recent spike in the level of lead in the blood of Flint kids, and trace it to the moment Flint River water first came through their faucets, the collision of those facts will essentially seal the case.

For pages, the author relates her struggle to pry the relevant raw data loose from initially unresponsive bureaucrats, detailing her frustration and mounting anger given the stakes. She also shares, in a fresh way, the set of internal hurdles that any whistleblower must get across. "When you're in the middle of a backlash," she writes, "the psychological stress is extraordinary." There is the expectation of retaliation, the anticipation of counterattack on one's reputation and, worst of all, the fear of being wrong on the facts.

In a bracing—if overly dramatic—memoir, a doctor recounts her role alerting the public to the presence of lead in a Michigan city's water supply.

But Dr. Hanna-Attisha is not wrong. The breakthrough comes when she gets a look at medical records for a group of 350 children, and then a larger group of nearly 2,000, who were given routine blood screening for toxins, including lead. She analyzes the data, checks and re-checks her analysis, and finds the correlation she suspected was there all along.

The day she went public with her findings in a press conference was indeed the moment when the Flint water scandal broke into the open. Ever since, as the scandal led to criminal prosecutions for officials on numerous steps of the hierarchy, Dr. Hanna-Attisha has been compared with Erin Brockovich, the 1990s environmental whistleblower best known because her story was turned into a 2000 movie starring Julia Roberts. The parallels are there, but at times "What the Eyes Don't See" can seem too aware of them, as if the author, or maybe her editor, intended the book to work also as a pitch to Hollywood.

The book's weakness is its incessant, borderline tiresome, insistence that its author is on the side of good; that she's in it "for the kids"; that she suffers in the knowledge that others suffer. "Now I was wondering whether I'd ever sleep or eat again," she writes, about first hearing about the possibility of a lead problem. The heat gets turned up early, and does not let up by the final chapters.

There are minutes that feel like hours, nights of tossing and turning, chest-thumping heartbeats, hand-trembling anger, meals missed and coffee mainlined. There are also the requisite scenes of domestic life—the kids who wish their mom was not so busy with her important mission, the endlessly supportive spouse. Dr. Hanna-Attisha describes in detail the early-morning conversation with her husband, Elliott, when she first told him about the lead situation. He was momentarily silent, and it was, she writes, "the kind of silence that meant his heart was breaking." It might play on screen. In a book, it feels cheesy.

Spread out over 300 pages, the author's account creates the impression of a long, exhausting campaign against a stubborn bureaucracy that threw up steep barriers. In fact, Dr. Hanna-Attisha's triumph came relatively quickly. The entire journey, from barbecue to press conference, took less than a month. Between the time she reached out to a colleague at her hospital for the first 350 medical records, and the time she received them, only four days went by. Between filing for permission to access the batch of 2000 records, and receiving that permission, 24 hours. To be sure, every day counts when kids are drinking poisoned water, but this book's storytelling has been designed to squeeze every bit of drama out of the facts. It shows, and it distracts.

Mona Hanna-Attisha deserves a huge amount of credit. She was one of the few people who did go out on a limb for the people of Flint. As a result, the water reaching their homes is safer. That is an accomplishment that needs no hyping. Less of that would have made "What the Eyes Don't See" a better read.

Mr. Donvan is the co-author, with Caren Zucker, of "In a Different Key: The Story of Autism."

OPINION

REVIEW & OUTLOOK

Exit From ObamaCare

One perverse effect of the Affordable Care Act is that corporate America escaped some of the onerous mandates that hurt small enterprises. The Trump Administration is now trying to mitigate that inequity with a rule on association health plans, or AHPs, and perhaps the result will be a durable and popular alternative to ObamaCare coverage.

A new association health plan rule may spur better alternatives.

On Tuesday the Labor Department rolled out a final rule on AHPs. The point is to allow more small businesses to join forces to offer health insurance, using economies of scale to reduce costs and diversify risk. This is how corporations and unions manage health insurance in the large group market, either by paying an outside issuer or self-insuring.

Some groups can form AHPs now, but on a very limited basis. The new rule would allow industry groups across the country and local chambers of commerce to set up plans, which heretofore hasn't been allowed under Labor's interpretation of the Employee Retirement Income Security Act (Erisa). Free-lancers such as Lyft drivers could now also band together.

The left says association plans are junk insurance that will blow up ObamaCare. But association plans are subject to ObamaCare rules such as pre-existing condition coverage and bans on lifetime limits. The plans also must abide by state regulations and benefit mandates, which as a practical matter could limit growth of the plans.

The headlines note that AHPs are exempt from the federal mandate on essential health benefits, with the false implication that this means no one will cover maternity care. But the main savings from association plans come from lower administrative costs and larger risk pools, not skimpy benefits.

Chris Condeluci, a lawyer who worked on the Affordable Care Act in the Senate, has explained that the law exempts the large group market from the benefits mandate because corporate coverage tends to be at least as comprehensive as the mandate and high in actuarial value. He is also right that employers team up in an AHP to "attract and retain talent" and compete with larger firms, which requires that plans be generous.

The real panic on the left is that many Americans may leave the ObamaCare exchanges for plans they prefer in price, quality or both. In other words, people might get better coverage.

Still, there are disappointments in the new rule, especially a provision that purports to be about nondiscrimination. The debate has been whether association plans could price premiums for an employer based on past health claims, which is a common tool that reflects risks and costs. This deals with groups of employees, not denying coverage because someone has cancer.

The draft Labor rule said an employer could price plans based on job function or other categories, but not health claims. Some existing AHPs sent rockets saying that could put them out of business. Labor's final rule allows AHPs to continue to form under the traditional narrow path, protecting current plans.

But new associations formed under the expanded route will not be able to price based on past health data. The rule seems to wink that other factors can be a proxy for that information. The Administration wants to insulate the rule from court challenges, which are coming regardless of the details. But the concern on the policy merits is that this pricing limitation could reduce the incentive to join.

On the plus side, the rule includes language to ensure that association plans don't implicate "joint-employer" liability, which will protect businesses from such litigation. The International Franchise Association applauded the rule on Tuesday, and franchises are a natural constituency for association plans.

The Congressional Budget Office says new AHPs will attract four million Americans, about 400,000 of whom are uninsured, and that means more affordable and better coverage for people who might not otherwise have it. For once the test of a health-care policy will depend less on government dictates than on the choices of millions of Americans.

The GOP's Trade Abdication

Would Republicans in Congress stay mute if a President imposed income or sales taxes on U.S. industries on an arbitrary whim? We doubt it, so it's dispiriting to see Senate Republicans let Donald Trump impose tens of billions of dollars in border taxes without so much as a vote of protest.

Trump escalates his tariff war as Senators shrink from a debate.

That's the sad story as GOP Senators last week blocked a vote on Bob Corker's amendment to reclaim at least some of the power to impose tariffs that Congress has ceded to Presidents. Perhaps Mr. Trump took the silence as assent because he is escalating. On Monday he threatened tariffs on up to $450 billion in Chinese goods, and financial markets are finally losing their foolish complacency. Shares in exporters vulnerable to retaliation like Boeing and Caterpillar fell more than 3.6% Tuesday.

Mr. Corker's bipartisan measure would have required Congress to approve trade restrictions that Mr. Trump is imposing under Section 232 of the Trade Expansion Act of 1962. This is the law that lets a President impose more or less whatever tariffs he wants with an elastic definition of national security. Mr. Trump has used this open-ended authority to inflict his 25% tariff on steel and 10% on aluminum, and he's threatening a 25% levy on imported cars under the same law. His new China tariffs are based on a different legal rationale (Section 301).

"I would bet that 95 percent of the people on this side of the aisle support intellectually this amendment," Mr. Corker said on the floor with some acidity. "And a lot of them would vote for it if it came to a vote. But, no, no, no. 'Gosh, we might poke the bear' is the language I've been hearing in the hallways."

Mr. Corker is right that GOP leaders fear a Trump tweet in the middle of election season. Some of them are also griping in private that Mr. Corker has the luxury of bucking the President because he isn't running for re-election. But Mr. Corker's modest bill isn't the political threat to Republicans. The growing damage from Mr. Trump's trade war is.

By not allowing trade votes, Republicans are giving Mr. Trump free rein to impose tariffs that are doing substantial economic harm to many of their constituents. Farm state Senators deserve a chance to vote against tariffs that are spurring retaliation against U.S. agricultural exports of everything from pork to apples. So do Senators who represent U.S. manufacturers. The fear of a Trump tantrum is precluding an important fight about what the party of free enterprise supposedly believes.

The economic fallout may also hurt the GOP's chances of holding the Senate in November. Democrats Heidi Heitkamp (North Dakota) and Claire McCaskill (Missouri) are running against the tariffs as a way to oppose Mr. Trump and defend their states' agricultural interests. The longer Republicans shrink from standing up to Mr. Trump's protectionism, the more voters will conclude that Republicans in Congress are complicit in the damage.

Kathy Kraninger's Credentials

Elizabeth Warren is threatening to block the confirmation of Kathy Kraninger to run the Consumer Financial Protection Bureau (CFPB), which amounts to an endorsement. The Massachusetts Senator is worried that Ms. Kraninger, who was nominated Monday by President Trump, will impose long-term discipline on the rogue agency. Excellent.

A nominee to take long-term control over a rogue regulator.

Ms. Kraninger would replace Mick Mulvaney, the White House budget director who has been moonlighting as acting CFPB chief since November. His writ was set to expire this week under the Federal Vacancies Reform Act, but now that someone has been formally nominated he can stay until she's confirmed.

Ms. Kraninger is also getting some flack for lacking experience in consumer finance. But she has more than enough of the experience that matters at the CFPB—in how bureaucracies work. She is currently White House budget office associate director for "general government," which covers some $250 billion in spending for seven cabinet departments and 30 agencies. The budgets for all financial regulators fall under her purview.

The CFPB choice requires care because the director operates with rare independent authority. She can more or less write her own budget, which comes on demand from the Federal Reserve and not from a Congressional appropriation. She'd serve a five-year term, which would extend beyond the next presidential election, and can only be fired for "inefficiency, neglect of duty or malfeasance."

Mr. Mulvaney has built reform momentum that Ms. Kraninger could continue. She'd inherit policy advisers who chronicled the agency's bad behavior when they worked for House Financial Services Chairman Jeb Hensarling. Her task would be to steer the bureau to perform its original function of aiding consumers rather than abetting trial-lawyer raids on law-abiding businesses as it did under former director Richard Cordray. Our sources say Ms. Kraninger has been a free-market ally in debates over Dodd-Frank, spending and federal rule-making.

One risk of not confirming Ms. Kraninger is what might happen if Mr. Mulvaney leaves government. Then the director job would fall to Leandra English, Mr. Cordray's deputy whom he tried to install as director as he went out the door. That was pre-empted by Mr. Mulvaney's appointment, but Ms. English is suing in federal court to oust him. If she wins, she'll bring back Mr. Cordray's agenda.

Democrats won't confirm any nominee for the job if they retake the Senate in November, so Senate Republicans would be smart to move on Ms. Kraninger with dispatch. If Republicans can't kill the CFPB, or reform its unconstitutional governance structure, they can at least give it better long-term leadership.

LETTERS TO THE EDITOR

IG Answers Some Questions, Raises Others

The new FBI director, Christopher Wray, does indeed have a big job ahead of him ("The Disgrace of Comey's FBI," Review & Outlook, June 15). But I question whether even he realizes the magnitude and impact of the Justice Department inspector general's report. In his press conference on June 14, Mr. Wray stated that the report was not an indictment of the rank-and-file FBI (true) but then proceeded to spend most of the press conference defending the FBI.

If Mr. Wray is to "restore public trust" in the FBI, he first needs to acknowledge that the DOJ IG report was an indictment of the FBI leadership, and thereafter explain the measures he will take to restore competent leadership to the world's premier investigative agency. Beyond implementing recommendations and ending "the FBI's stonewall of Congress," he needs to also publicly identify the unnamed agents whose bias was clearly evident in their communications, refer for prosecution those whose actions may have risen to the level of criminality and dismiss those who were merely stupid or incompetent.

I suspect most Americans will not regain confidence in the FBI until Mr. Wray cleans house starting at the top.

Dave Erchull
Tucson, Ariz.

The FBI doesn't trust Congress, which has little sway with Justice, which thinks that regardless of what Hillary Clinton, Cheryl Mills and Huma Abedin did, it was fine. It's no wonder the voters don't trust our government since the people in it can't trust each other.

Michael P. Carter
Savannah, Ga.

Kimberley Strassel's "Insubordination and Bias at FBI" (Potomac Watch, June 15) notes that "the bureau discovered" the existence of Anthony Weiner's laptop computer which may contain classified data from Hillary Clinton. In fact, the laptop and files were "discovered" by the New York City Police Department during the investigation of Weiner's sexting case. Imagine Mr. Comey's panic as he realized the files could contain information that could compromise his decision to drop charges in Hillary Clinton's illegal email server case. The NYPD and the New York prosecutor could use the files in a public trial. Mr. Comey's action to reopen the Clinton case was required to sequester the files and ultimately declare them harmless.

Gordon Osborne
Woodland Hills, Calif.

What seems puzzling almost to the point of humor is how government officials make "errors in judgment" while bank robbers and thugs commit crimes. Prosecutors illegally withhold exculpatory evidence also deemed errors in judgment. It would appear we need a set of laws specifically aimed at the incarceration of public officials who commit these "errors in judgment" so they may join the other criminals.

James W. Benefiel
Dunedin, Fla.

If one believes, as I do, that President Obama wanted Hillary Clinton protected and elected, then everything the FBI did was done with that purpose in mind. Before the Clinton unsecured mail-server investigation got very far, the president announced that Mrs. Clinton hadn't breached national security. That sent the message to everyone in the administration. The DOJ and FBI changed the interpretation of the statute, Mr. Comey cleared her before interrogating her and then Mr. Comey and Attorney General Loretta Lynch allowed her to have her lawyer present, and she wasn't under oath when questioned. Mr. Comey made a decision he had no legal right to make. Intent is difficult to prove so one must connect the dots.

Dick Berkowitz
Savannah, Ga.

"The IG scores Mr. Comey for 'ad hoc decision-making based on his personal views.'" For most professional people who are expected to follow established protocols, modes of behavior and standards, that quote is pretty much the definition of "bias." Who is kidding whom here?

Tom O'Hare
Charlestown, R.I.

While there were ongoing investigations of both presidential candidates, only one was made public in the closing days of the campaign. There was no basis for prosecution in one, and we won't know about the other until Robert Mueller completes his work.

Tom Scott
Morgan Hill, Calif.

If the Justice Department's inspector general's report regarding the performance of the FBI and DOJ involving Hillary Clinton's use of a private email server were to be published on either Angie's List or TripAdvisor, would any rational individual have confidence in retaining the services of these agencies?

This IG report affirms the public's skepticism of our nation's bedrock institutions.

Boca Raton, Fla.

The Justice Department report aside, the ultimate punishment for those found "insubordinate" in the FBI investigation is that Donald Trump was elected, is still president and is executing on his campaign promises.

Dan Sukys
Cleveland

Feds Must Take EMP Threat More Seriously

Regarding your editorial "Rick Perry's Obama Imitation" (June 6): The failure of the Federal Energy Regulatory Commission (FERC) to take needed action to protect the electric grid from a catastrophic electromagnetic pulse (EMP) attack is reason enough to support Energy Secretary Rick Perry's efforts to provide additional emergency fuel supplies at power plants. There may not be an emergency now or a perceived "immediate threat to system reliability," but there will be an emergency if there is a successful EMP attack. The FERC commissioners claim to be improving grid reliability, but what have they done to make us safe from an EMP attack, and when will we be safe? All we have seen the last few years has been frightening studies and testimony from the FERC with no important regulatory actions taken.

It is good that FERC has an investigation into whether grid operators are fairly compensating "fast-start resources" that can respond "quickly to unforeseen system needs." But shouldn't that investigation have started years ago? The FERC has known about the EMP threat for at least 10 years. As noted in the Heritage Foundation's April 4 report, "The Danger of EMP Requires Innovation and Strategic Action," "U.S. efforts to understand and address the threat have been hampered by the dispersion of information and responsibilities among different parts of the government and the private sector." We need leadership on this issue now with clear roles and defined areas of responsibility. It is time for the president and Congress to make clear who is in charge of protecting us from the EMP threat.

F. Joseph Feely III
Park City, Utah

The Renewables Policy Has Made the Grid Less Secure

Paul Segal's June 14 letter is largely on point when he says that government intervention in the energy markets will lead to a grid that is less resilient. But he fails to acknowledge that billions of dollars in taxpayer subsidies to renewable energy have already created a grid that is just that. Consistently negative offer prices to wholesale power markets from renewable energy create soft market prices that continue to drive out more resilient coal and nuclear generation.

Until utility-scale (battery) power-storage technology is fully commercialized, the fast-start, fast-response characteristics of gas-fired generation will be crucial to backfill the quick output changes caused by wind and cloud variability. This is why natural-gas interests are so supportive of renewable energy.

Dennis Rackers
Fordland, Mo.

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Pepper ... And Salt

THE WALL STREET JOURNAL

"Sorry. That was the fourteen hours of binge-watching talking."

Health Savings Accounts for Everyone

By Scott W. Atlas

Despite failing to repeal and replace ObamaCare fully, health-care reform is progressing under President Trump. The individual mandate is nullified. The administration has permitted more low-cost "limited duration" insurance plans, and more small businesses now have access to association health plans. The next step should be to expand and improve health savings accounts.

Health savings accounts allow people to set aside money tax-free to pay for health expenses, but their fundamental purpose is not simply to cushion the blow of costly care. HSAs put consumers directly in charge of their health-care purchases. This drives competition, which leads to lower prices for everyone.

Congress should make HSAs universal and raise the cap to $7,350, which would drive competition.

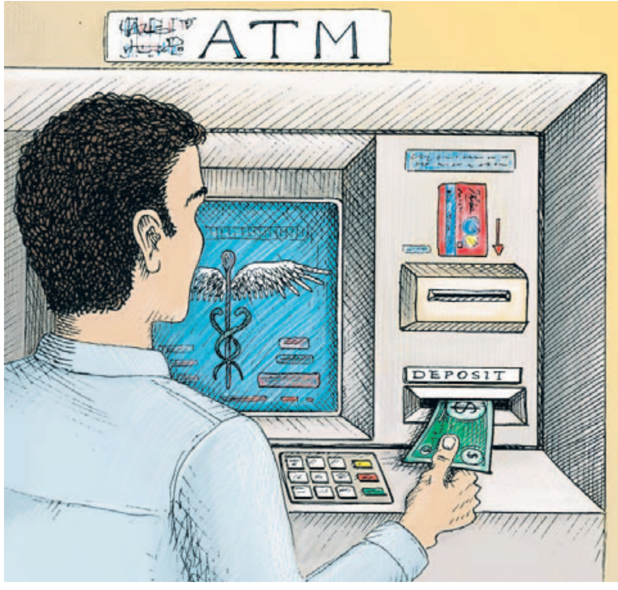
ObamaCare, and most of the proposals that followed, stressed making insurance more affordable, mainly through subsidies. Subsidizing premiums artificially props up coverage that typically minimizes out-of-pocket payment. This is counterproductive. Patients with such coverage don't think of themselves as paying for services. This shields medical providers from competing on price.

Instead of subsidizing premiums, policy should focus on reducing the cost of medical care itself by generating competition for patients. That is the most effective pathway to affordable, high-quality care. The market should be reformed to encourage patients to consider the price of the medical care they consume and to equip them with the tools to do so.

Outpatient nonemergency care, which forms the bulk of health expenditures, is amenable to price-conscious purchasing. Almost 60% of all health expenditures for privately insured adults under 65 and almost 40% of the elderly's expenses are for outpatient care, according to a 2012 report from the IMS Institute for Healthcare Informatics. Prices rapidly decrease when patients pay out-of-pocket for procedures like Lasik corrective vision surgery and MRI or CT screening. Data from MRI and outpatient surgery confirm that prices fall almost 20% when patients are motivated to shop around.

Because HSAs reward saving, they are particularly effective at putting downward pressure on prices. Spending reductions averaged 15% annually, according to a 2015 National Bureau of Economic Research working paper, when workers were given high-deductible plans and personal medical accounts. When HSAs were added to high-deductible plans, savings increased to up to double the savings that high-deductible plans alone produced. Most of the savings reflected price-conscious decision-making. Corroborating prior studies, these reductions occurred without harming patients' health.

By increasingly choosing HSAs when given the opportunity, American consumers are approving their value. By the end of 2017, there were at least 22 million health savings accounts in the U.S., up 11% year-over-year. This isn't a tax benefit for the rich: Median household income for HSA holders is $57,060, and two-thirds earn less than $75,000 a year. The challenge now is to expand HSA use and fully leverage its power to reduce health-care prices.



BARBARA KELLEY

Congress should pass legislation making HSAs universally available. These accounts should not be connected to specific insurance deductibles, a counterproductive requirement that limits the possibility of HSAs with tailored- or direct-payment plans. To maximize consumer power on prices, Congress should remove restrictions on full HSA participation by seniors on Medicare. Motivating seniors, the biggest users of health care, to seek value is crucial to driving prices down.

Congress should raise the maximum allowable HSA contribution to match total possible out-of-pocket spending under ObamaCare—$7,350 for individuals in 2018. Account holders should be allowed to use their HSA funds to pay for the care of elderly parents. And the accounts should be fully owned by individuals. This means abolishing more restrictive variants tied to employers and eliminating expiration or forfeiture due to arbitrary "use it or lose it" deadlines. When account holders die, they should be allowed a tax-sheltered rollover of their HSA funds to all surviving family members, not only spouses.

HSAs have also been a valuable vehicle through which employers offer effective wellness programs and medical screening. Yet ObamaCare limits financial incentives from employers, like deposits into employee HSAs. Congress should abolish this rule.

Legislators can also change the tax code to encourage more people to sign up for HSAs. Today's unlimited income exclusion for employer-sponsored health benefits is harmful, because consumers are rewarded for spending more on health care. This reduces concern for price and value. Beyond capping any total health expense deduction or exclusion, the tax code should also limit eligibility to HSA contributions and catastrophic coverage premiums.

Increasing the supply of medical care by eliminating anticompetitive barriers would make HSAs even more effective, as patients need enough choices to compare. Despite widely recognized doctor shortages, scope-of-practice limits on nurse practitioners and physician assistants prevent competition with doctors for simple primary care. Archaic nonreciprocal state licensing restricts telemedicine. State certificate-of-need requirements limit competitive technology. Scandalous contractual gag clauses prohibit pharmacists from telling patients that medication may be cheaper if purchased outside insurance.

Health savings accounts are not appropriate for every patient. But they represent a powerful tool to lower prices and improve access to quality care for everyone. And those are goals that everyone can share.

Dr. Atlas, a physician, is a senior fellow at Stanford University's Hoover Institution and author of "Restoring Quality Health Care: A Six Point Plan for Comprehensive Reform at Lower Cost" (Hoover, 2016).

My Lazy Summer as a Public Employee

UPWARD MOBILITY
By Jason L. Riley

One summer during college in the early 1990s, I landed a cushy job reading residential water meters for the local utility. The pay was excellent—thank you, taxpayers—and I enjoyed working outdoors in the warm weather. But what made the job so memorable was the minimal work requirements.

Each morning after we'd punched in and donned our uniforms, a half-dozen of us summer hires—mostly college kids like me who had gotten the job via our parents' connections—would pile into a utility van. Waiting behind the wheel was a genial old-timer named Hank, who drove us to the assigned neighborhood, where we would walk house-to-house recording the meter readings. Once we finished our routes, Hank told us that first morning, the rest of the day was ours. Typically, it took only about two hours.

The upshot was that we spent most of the summer devising creative ways to kill entire afternoons, and not a few late mornings. We'd read, nap, hit the beach, shoot hoops, catch a movie, play videogames and engage in various other activities that I'm almost certain fell outside the job description for a water-meter reader. After we'd decided on a plan, Hank would drop us off and disappear until it was time to return the van to the dispatcher and punch out for the day. My recollection is that no one on my crew ever asked questions or feared getting caught. And the summer workers on other crews, we eventually learned, were up to the same antics.

When I told my father what was going on, he just laughed and recounted the old joke about why government employees don't look out the window in the morning. (So they'll have something to do in the afternoon.) For a summer, it felt like I was living the punch line. The real joke, though, is on the local taxpayers, who fund all the featherbedding. And that joke never gets old.

Baltimore's utility workers are in hot water for loafing on the clock. That brings back a few memories.

Last week, Baltimore's inspector general revealed that over a 20-month period, city meter readers earned $120,000 while loafing on the clock. "For over a year, Baltimore's water meter readers would get a list of jobs at the beginning of their shifts," the Baltimore Sun reported. "When they were done, workers either drove around aimlessly or went home instead of getting more work to do." Investigators used GPS records from work vehicles to catch the errant employees, but their behavior was an open secret among supervisors. As the Sun explained: "Investigators learned that Department of Public Works, which employed the meter readers, had an unofficial policy condoning the practice."

Yes, $120,000 is chump change in a city the size of Baltimore, which passed a $2.8 billion budget earlier this month. But you'd be a fool to think that meter readers in Baltimore are the only public employees gaming the system. New York City's new $89 billion budget—larger than those of most states—is up 19% since Bill de Blasio, the spendthrift progressive mayor, took office in 2014. "A significant contributor to that growth," the New York Times noted recently, "has been the steep increase in the number of city workers, making the city's payroll and headcount, with about 300,000 workers, the highest it's ever been."

State and local governments currently employ more than 19 million people, according to the federal Bureau of Labor Statistics. As a percentage of the civilian workforce, however, they have been shrinking steadily since the end of the Great Recession, while private-sector hiring has been increasing. If you want less government spending, along with a more efficient and productive public workforce, you welcome this trend.

In government, where there is no profit motive and agencies tend to be monopolies, a bloated workforce can help politicians win votes and placate special-interest groups, such as labor unions. Whether hiring more people makes sense economically is often an afterthought for a mayor or governor. Private employers, held accountable by shareholders and the need to remain competitive, don't have the same luxury. Cities like Baltimore and New York continue to spend more money to hire more workers to perform more tasks, even though neither city is experiencing explosive population growth.

If Target operated this way, rivals would eat its lunch. Yet city officials in Baltimore can simply apologize, promise to do better, and then move on. Even the meter readers probably won't face serious consequences. Prosecutors had considered bringing charges but eventually decided not to, the Sun reported, "because the workers appeared to have the approval of the department." Ah, the memories.

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The 'Punt' That Wasn't

By Katherine L. McKnight

The U.S. Supreme Court declined on Monday to pass judgment on a pair of challenges to partisan gerrymandering. In *Gill v. Whitford*, the justices held unanimously that the plaintiffs had failed to show that their individual votes had been impaired. "This Court is not responsible for vindicating generalized partisan preferences," Chief Justice John Roberts wrote in an opinion all his colleagues joined, which returned the case to a lower court to consider whether the Wisconsin plaintiffs could show their individual votes had been burdened.

This was not the "punt" news outlets suggest. It presses plaintiffs to make a near-impossible showing. The high court has consistently declined to review claims of partisan gerrymandering because other restraints exist, courts have no manageable standard to apply, and gerrymandering is a self-limiting exercise—a party can only add so many supporters to one district before endangering its majority in another.

The Constitution delegates the task of drawing congressional maps to state legislatures. The Founders placed the process in the middle of the push, pull and compromise of lawmaking. The *Gill* plaintiffs would have judges determine whether an electoral map has the "right" number of Democrats or Republicans.

But how to count? We are not all Democrats or Republicans, and even partisans are not always consistent. The Pew Research Center reports that the share of independents is at its highest in more than 75 years of polling. One-third of Wisconsin's counties—whose boundaries didn't change—voted for Barack Obama twice and for Donald Trump. When judges determine whether a map has the "right" number of Democrats, which election results should they use?

By seeking court protection for Democrats and Republicans as such—more protection than is afforded historically protected classes including racial minorities—plaintiffs ignore these political realities. The Supreme Court is right to press plaintiffs on harm: What kind of harm does a conservative Democratic voter endure when the district elects a moderate Republican?

In a gerrymandering case, the Supreme Court holds plaintiffs to a nearly impossible standard.

Politics divides us today. As with any complicated and emotional matter, quick solutions are appealing. But in the case of partisan gerrymandering, often cited as a source of our political problems, the solution does not lie in politicizing our judges.

Gerrymandering has not caused our political divide, political scientists agree. Concerns that one party is entrenched are countered by recent electoral shifts: George W. Bush and Hillary Clinton carried Colorado and Virginia; John Kerry and Donald Trump carried Pennsylvania and Wisconsin. This flux is crucial to our democracy. Political judges are not.

Ms. McKnight is a partner at BakerHostetler, where her clients include litigants in voting-rights and redistricting cases.

Undergrads Can Improve Psychology

By Russell T. Warne And Jordan Wagge

A lot of what we think we know about human psychology is bunk. That's because experimental psychology has a "replication crisis": Too many studies, when repeated, fail to produce the same results. Here are three examples from a week in May:

• A study found that subjects who were asked to recall the Ten Commandments were less likely to cheat on a later task than those who were asked to recall the names of 10 books they read in high school. The replication found no difference.

• A study found that people who are exposed to hostile stimuli interpret later ambiguous behaviors as hostile. Cited more than 1,500 times, this finding is part of the foundation of a body of social-psychology literature about "behavioral priming." The replication found no such effect.

Replication studies aren't glamorous, but they're a good way to learn the techniques of science.

• The most prominent example was a replication of the famous "marshmallow test." The original study, published in 1990, found that children who could delay gratification—defined by not eating a marshmallow in order to get a larger reward later—had higher SAT scores as teenagers. That study has won awards, been featured in textbooks, and even been the topic of sermons. But the replication found a correlation only half as strong—and it disappeared after controlling for demographic variables. The replication is a stronger study, with a sample 10 times as large and more socioeconomically diverse.

The causes of the replication crisis in psychology are complex, but among them is that academia doesn't reward these types of studies with tenure, promotion or grants. Those benefits tend to flow to scholars who come up with exciting new findings, though they may not stand up to scrutiny.

Here's a solution: Enlist students to perform replications as part of scientific training. Almost every undergraduate and graduate student studying psychology must take a course in research methods. They can learn by attempting to replicate earlier studies.

The Collaborative Replications and Education Project follows this model. CREP is a crowdsourcing project in which highly cited studies in psychology are selected and posted online for teams of undergraduates to try to replicate. Each step of the process is reviewed by experts, and results from multiple sites are pooled and published as a combined study called a meta-analysis.

Students respond positively to performing replications, which is not surprising—studies have shown that research projects positively influence student engagement and retention. What makes CREP unique is its adherence to the principles of good science (such as publicly documenting all aspects of the research process) and the important service to the field that each direct replication provides. Future scholars learn how to do things the right way early, and the results from their projects serve a public purpose beyond pedagogy.

Replications are also superior to the traditional procedure of teaching research methods—namely having students design and implement their own studies, usually before they've been taught the principles of study design. Students benefit from learning the nuts and bolts of data collection and analysis without having to invent their own procedures.

Student-run replications aren't feasible in all cases. Research on children or institutionalized adults, for instance, are often ethically complex, requiring more supervision than would be practicable. Other studies may require equipment (e.g., a magnetic-resonance imaging machine) that students don't have or aren't trained to use.

Nevertheless, students are capable of replicating many studies in psychology. Only by conducting replications can psychologists understand the severity of the replication crisis—and even undergraduates can make a valuable contribution.

Mr. Warne is an associate professor of psychology at Utah Valley University and the author of "Statistics for the Social Sciences: A General Linear Model Approach." Ms. Wagge is an associate professor of psychology at Avila University and an executive reviewer for CREP.

TECHNOLOGY: APPLE'S GLOBAL DISPUTE OVER IPHONE FIXES REACHES AUSTRALIA B4

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AT&T in Talks for Digital Ad Firm

Telecom giant is expected to pay about $1.6 billion to acquire AppNexus

By Benjamin Mullin And Drew FitzGerald

AT&T Inc. is in talks to acquire advertising technology company **AppNexus**, according to people familiar with the matter, a deal that would give the telecom giant a foothold in digital ad sales as it seeks to become a challenger to **Alphabet** Inc.'s Google and **Facebook** Inc.

AT&T is expected to pay around $1.6 billion, the people said. AppNexus, which is backed by investors including ad giant **WPP** PLC, investment firm TCV and Wall Street Journal parent **News Corp**, was valued at $1.8 billion in a 2015 funding round.

The company filed confidentially for an IPO in 2016 but has held off amid an unforgiving climate for public offerings.

Acquiring AppNexus would advance AT&T's ambitions to build a robust advertising business. AppNexus operates one of the largest online ad exchanges, automated marketplaces that allow advertisers to buy space across thousands of websites, targeting their desired audiences.

Website Cheddar earlier reported the AT&T talks with AppNexus.

Already, AT&T's DirecTV unit sells TV ads. The company's recent acquisition of **Time Warner** Inc.—renamed WarnerMedia—will give it access to much more TV ad space from channels like TNT, TBS and CNN.

AT&T believes it can appeal to advertisers by allowing granular targeting of TV ads to households with certain characteristics using its huge amount of data on wireless customers to target ads and measure whether they are effective. The company last summer brought in a top executive from WPP, Brian Lesser, to run its advertising and analytics business.

With an acquisition of AppNexus, AT&T would move deeper into the digital ad realm. But it would remain a relatively small player compared to the giants, Google and Facebook, which together are expected to have 56.8% of the U.S. digital ad market this year, according to eMarketer.

While some ad tech firms work only for publishers, helping them manage ad space on their sites, or ad buyers, helping agencies purchase ads, AppNexus is in both lines of business.

The company's chief executive, Brian O'Kelley, is an ad tech veteran. He is credited with building one of the first ad

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Trade Spat Batters Global Markets

Global stocks, commodities and bond yields tumbled Tuesday, the starkest sign yet of investors betting tensions between the U.S. and China could escalate into a trade war.

By Akane Otani, Mike Bird and Shen Hong

Stocks had slid on trade worries repeatedly this year, only to bounce back as investors wagered the Trump administration's rhetoric would prove more posturing than actual policy. The scale of the market's pullback Tuesday exposed the vulnerability of those bets: showing investors reassessing their appetite for risk after doubting the willingness of the world's two largest economies to pursue policies that could cause long-lasting economic damage.

The Dow Jones Industrial Average tumbled 1.1%, or 287.26 points, for its biggest one-day slide of the month, while the Shanghai Composite Index fell to its lowest level since mid-2016 and major indexes in Germany and France lost more than 1% apiece.

"Since the middle of 2016, we've all known this administration would take a harder line on trade, but I think for many of us the assumption was perhaps that the tough talk was just going to be a negotiating position," said Ron Temple, head of U.S. equities and co-head of multiasset investing at Lazard Asset Management. "Now, what's unnerving is that the trade dispute has broadened out well beyond China."

Analysts and investors said there is still room for a compromise. But rising trade ten-

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Car-Rental Firms Try to Push Upstarts to Curb

By Adrienne Roberts

JASON HENRY FOR THE WALL STREET JOURNAL

App-based startups like Turo, which allow people to rent out their private cars, are presenting challenges for Hertz, Enterprise and others.

One car you rent from a company-owned fleet; the other you rent from a private owner with the help of an app.

So, which one is a rental car? The answer to that question, which is popping up in state legislatures and courts around the country, could determine whether peer-to-peer car-sharing services get regulated the same way as traditional car-rental companies.

The fights involve upstarts **Turo** and Getaround Inc., which let people rent their private cars out via apps, and car-rental giants such as Enterprise Rent-A-Car-Holdings Inc. and **Hertz Global Holdings** Inc. Some cities and states, seeing a potential source of revenue in regulating the new entrants, are getting involved. The battles evoke recent tussles between Uber Technologies Inc. and taxi drivers, and Airbnb Inc. and the hotel industry, where the newcomers usually pitch themselves as platforms connecting people to services and the incumbents call them direct competitors.

Maryland this month passed a bill that will require car-sharing companies to comply with regulations akin to those intended for car-rental companies, such as paying sales tax. Roughly a dozen state legislatures are considering similar rules. Alaska is suing Turo to try to enforce a subpoena to obtain its financial records in order to tax it.

Car-rental companies, already under strain from ride-hailing services, have been behind much of the action taken by airports and states. They initially pushed to create awareness about these competitors among government officials.

"Someone is renting a vehicle to another person for profit," said Greg Scott, a lobbyist for the American Car Rental Association, which represents Enterprise, Hertz and others. Such peer-to-peer car-sharing services should "play by the same set of rules," he said.

Representatives for **Enterprise Holdings** Inc. and Hertz referred questions to the association. Avis, also a member, didn't respond to requests for comment.

The association says it supports various bills to regulate car sharing and is talking to legislators, airports and cities about the matter. The car-rental industry argues that no matter who owns the car, the service offered is the same, and all companies should be subject to the same rules, from paying fees to operate at airports to complying with state insurance requirements.

Turo and Getaround, which dominate the car-sharing business, say they aren't car-rental companies and shouldn't be subject to the same rules.

Turo is a "platform," said Michelle Peacock, Turo's vice president of government relations. "It's a completely different way of doing business."

Getaround CEO Sam Zaid said traditional car-rental companies are using outdated consumer-protection rules "as a weapon to block growth of the peer-to-peer movement."

The two companies say they provide vehicle owners a way to earn income on an underused asset. The average vehicle spends only about 5% of its life on the road, according to calculations by the Brookings Institution. The companies also say that renting out a vehicle can offset the cost of ownership at a time when vehicle prices are rising; the av-

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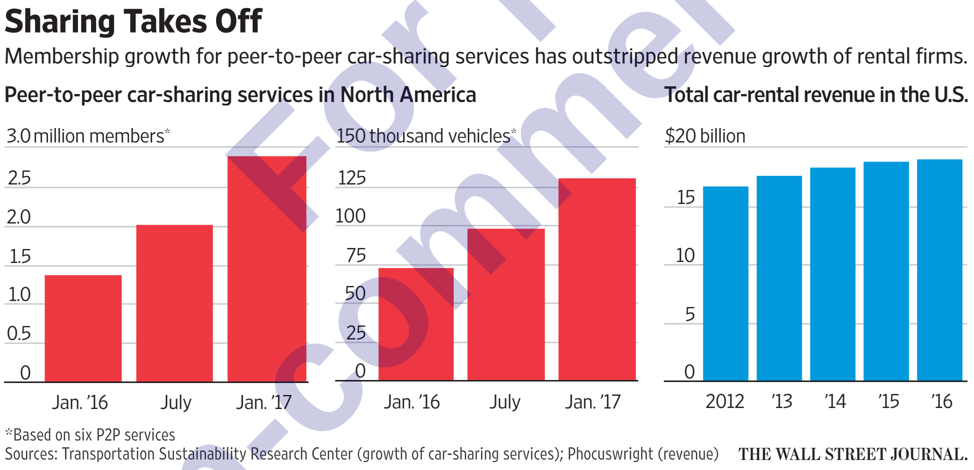

McKinsey Held Back Chapter 11 Positions

By Gretchen Morgenson And Tom Corrigan

A **McKinsey** & Co. retirement fund held investments that gave it a financial interest in the outcome of six bankruptcy cases in which the company also was serving as an adviser, court and regulatory filings show.

McKinsey's restructuring unit, known as McKinsey RTS, didn't disclose those investments publicly. Rules governing the chapter 11 bankruptcy process require advisers to disclose all relationships that might give rise to a conflict of interest, to ensure that advisers will be disinterested advocates for their clients and that other participants in the cases are aware of them.

The McKinsey retirement fund's investments with two hedge-fund companies, **Whitebox Advisors** LLC and **Strategic Value Partners** LLC, gave it a stake in the debt or other obligations of six companies that sought bankruptcy protection: United Airlines parent UAL Corp. in 2002; American Airlines parent AMR Corp. in 2011; Edison Mission Energy in 2012; NII Holdings Inc. in 2014; Alpha Natural Resources Inc. in 2015; and SunEdison Inc. in 2016. McKinsey was a bankruptcy adviser to all six companies.

The Wall Street Journal reported on the Alpha Natural Resources investment in April in an article about McKinsey's scant disclosures in bankruptcy courts.

In each bankruptcy case McKinsey advised on, its officials signed a sworn statement

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GE Drops Out of the Dow After A Century

By Michael Wursthorn And Thomas Gryta

General Electric Co. will drop out of the Dow Jones Industrial Average next week, a milestone in the decline of a firm that once ranked among the mightiest of blue-chips.

It will be replaced by drugstore retailer **Walgreens Boots Alliance** Inc., the latest sign of the rise of the global consumer economy and the postcrisis boom in debt issuance that has fueled a worldwide deal-making frenzy.

The decision to drop GE, an original member of the Dow that has been a part of the 30-stock index continuously since 1907, marks the latest setback for a company that once was the most valuable U.S. firm but has been hit hard in recent years by the unraveling of its finance business and competitive problems.

With the departure of GE and the addition of Walgreens,

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HEARD ON THE STREET | By Spencer Jakab

Takeout Is Winning Food War

Of all of the trends working against supermarkets and packaged-food companies, one seems especially hard to surmount: People don't want to cook anymore.

Americans have always eaten out. What has changed is the growth of restaurant meals eaten at home, and most recently, prepared-meal kits. According to the Bureau of Labor Statistics, food spending for meals prepared at home grew by less than 2% a year from 2013 to 2016 while spending on meals prepared elsewhere grew more than 20%.

Americans have spent roughly 13% of their income on food for years. But for 2016, the latest year for which U.S. data are available, they spent nearly 44% of those food dollars on food prepared away from home—a share just shy of the peak seen during the housing boom over a decade ago. As recently as 2013, that share was below 40%.

Part of that change is cyclical. Restaurant spending fell sharply during the recession. When consumer confidence is high and people have a few extra dollars in their pockets, they will pay someone else to do the cooking and dishes, or at least to prepare ingredients. But part of it is secular. Convenience is increasingly important and now encompasses rapidly growing web-based restaurant and meal-kit-delivery services like **Grubhub** and **Blue Apron**.

"All of a sudden the whole model is shifting away from home, but at the same time still at home," says food-industry expert David H. Stone, a managing partner at The New England Consulting Group.

A handful of percentage points might not sound that significant for companies that make food such as Kraft Heinz or those that sell it like Kroger or Walmart, but it is. And these trends will likely continue.

The Food Institute looked at expenditures in 2013 and found that millennial households spent 6.5% more a week than baby-boomer households on meals away from home despite having lower income overall. Baby boomers will spend less as they age if current demographic patterns hold.

But today's 35-year-olds, who haven't cooked much for themselves so far, will likely keep ordering as family demands squeeze their time and increase overall dollars spent.

Restaurants do, of course, buy food from divisions of some of the same manufacturers that stock supermarket shelves. But Mr. Stone notes that restaurants squeeze suppliers on price the same way supermarkets do.

Supermarkets are fighting back by acting like restaurants with more prepared foods and in-store seating. Coupled with rising sales for fresh meat and vegetables, there is hope for some of them. For packaged-food brands, though, the challenge is deeper.

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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.

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BUSINESS & FINANCE

CVS Adds Home Delivery

The drugstore chain recruits the U.S. Postal Service to cross the last mile to customers

By Sharon Terlep


JOE RAEDLE/GETTY IMAGES

The company hopes to fend off competition from Amazon.com as well as startups such as PillPack.

CVS Health Corp. has enlisted the U.S. Postal Service for a new home-delivery service, as the drugstore giant strives to stave off **Amazon.com** Inc. and other rivals.

CVS struck a deal on Tuesday with the Postal Service to pick up prescriptions at CVS stores and take them to customers' homes in one or two days. Customers will be charged $4.99 per delivery, which could also include over-the-counter products such as aspirin or face wash.

The chain is rolling out the nationwide service as it fights falling sales in its roughly 9,800 pharmacies and braces for potential competition from Amazon, which has considered launching a prescription offering and has made a bigger push into medical supplies. CVS also is facing competition from venture-backed startups such as PillPack Inc. and Capsule Corp., which provide home delivery of medicines.

CVS executives last year said they would launch the service, but didn't say how they would handle the last-mile delivery, an expensive service that has vexed many businesses. The Postal Service will carry out a mission for CVS that other major retailers have tasked to parcel giants like United Parcel Service Inc. and FedEx Corp. or turned over to startups.

Target Corp. last year paid $550 million to acquire grocery-delivery startup Shipt Inc. in an effort to quickly expand shipping services. Walmart Inc. plans to offer grocery delivery in 100 cities by the end of the year. It has turned to several services that use contract workers similar to Uber, and a handful of stores are testing a program in which store workers deliver some orders placed on Walmart.com.

For years, filling prescriptions was a reliable way for CVS to draw shoppers to its stores, where it could also sell other items. Last year, retail accounted for about 40% of the company's total revenue. As the pharmacy industry shifts, CVS has focused on the insurance and pharmacy benefits businesses, including a $66 billion bid for insurer Aetna Inc. CVS offers mail-order prescriptions through its pharmacy benefits manager.

Amazon relies on the Postal Service to deliver about half of its U.S. packages every day, according to analysts' estimates. The service Amazon primarily uses requires the shipper to sort its packages by ZIP Code and postal route, and drop off the parcels at the closest post office for delivery.

CVS, by having the Postal Service pick up packages at stores, will avoid the logistical challenge of getting packages to the post office. Still, the Postal Service's network was built for letters, not parcels. The deal also comes at a time that President Donald Trump has criticized the quasigovernmental agency's dealings with Amazon and launched a task force to examine its finances.

McKinsey Kept Quiet On 6 Stakes

Continued from page B1

that the firm was a disinterested party.

"McKinsey RTS' bankruptcy disclosures meet all legal requirements and have been consistently approved by the courts," a McKinsey spokesman said.

In response to questions about the investments, the spokesman said MIO Partners, a McKinsey unit that oversees the retirement fund and other investments, "operates primarily as a 'fund of funds,' investing in a broad set of third-party managers who make specific investment decisions, independent of MIO and McKinsey & Co."

The spokesman said that MIO is run independently of McKinsey. Regulatory filings show that six of the 11 MIO directors are current McKinsey officials and an additional three are former McKinsey executives. MIO's co-CEO and chief risk officer are former McKinsey executives. Jon Garcia, the founder of McKinsey's restructuring unit, was a director at MIO Partners for 11 years before stepping down last year, according to regulatory filings. Mr. Garcia declined to comment.

The investments by the retirement fund, McKinsey Master Retirement Trust, appear in filings with the Labor Department and were cross-checked against bankruptcy cases in which McKinsey performed an advisory role.

Those investments were valued around $130 million as of December 2016, the latest data available. The six cases account for half of the 12 chapter 11 bankruptcy cases on which McKinsey worked from 2002 through 2016.

Interactions between advisers such as McKinsey and creditors including hedge funds aren't detailed in bankruptcy-court filings. It isn't clear how much—or even whether—the outcome of five of the bankruptcy cases benefited the investments of MIO Partners. In one case, Alpha Natural Resources, the hedge fund McKinsey invested in received valuable assets.

A spokeswoman for the U.S. Trustee, the arm of the Justice Department that monitors the bankruptcy system for abuse, said in a written statement: "Conflicts and disclosure analysis has become more complex in recent years, as financial advisory firms have grown larger with more complex corporate structures with affiliates." She declined to comment on whether the Trustee was aware of the McKinsey investments.

Adam J. Levitin, a professor at Georgetown University Law School, said: "In bankruptcy, it is not simply that you have to disclose. Even after you disclose, you have to be disinterested."

The McKinsey retirement fund with the hedge-fund investments is run for current and former employees and had $5.6 billion in assets at the end of 2016. MIO Partners also manages an additional $6.5 billion for the firm's partners, employees and their families, regulatory filings show.

Other bankruptcy advisers also have retirement funds for employees, but they held no hedge funds or offshore accounts, documents show. Instead, they offered participants a menu of large U.S. mutual funds that are transparent and liquid.

Whitebox, one of the hedge funds handling the retirement-fund money, declined to comment on specific investments or client relationships. A fund spokesman said the firm makes its investment decisions independently.

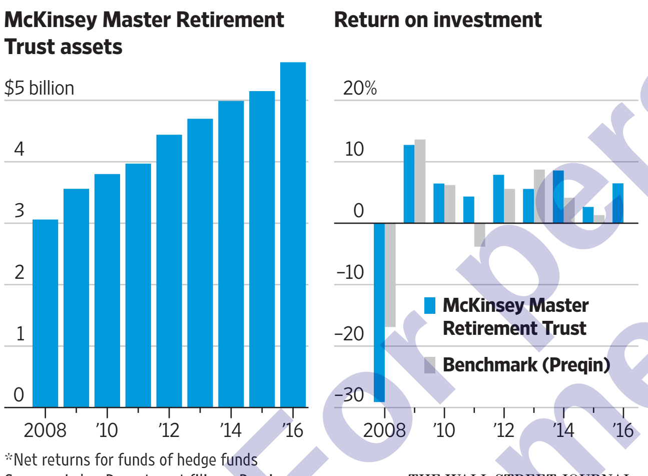
Strategic Value Partners, the other hedge fund, oversees Strategic Value Master Fund, which held debt in Edison Mission Energy and **SunEdison**. McKinsey was an adviser to both companies.

Regulatory filings show that McKinsey's retirement plan had $7 million in a portfolio that invested in the Strategic Value Master Fund during 2013, when most of the action in the Edison Mission bankruptcy took place. At the end of 2016, the year SunEdison filed for bankruptcy protection, McKinsey's retirement fund had less than $10,000 in holdings in the Master Fund, the regulatory filings show.

A spokesman for Strategic Value Partners didn't respond to a request for comment.

In-House Investments

A McKinsey & Co. fund called McKinsey Master Retirement Trust has frequently outperformed a fund-of-funds benchmark.



*Net returns for funds of hedge funds
Sources: Labor Department filings; Preqin
THE WALL STREET JOURNAL.

Car Rental Firms Duel Upstarts

Continued from page B1

erage transaction price of a new vehicle in May topped $32,000, a record for the month, according to J.D. Power. Getaround advertises that car owners can make up to $10,000 a year renting their vehicle out.

Peer-to-peer car-sharing services in North America count nearly 3 million registered users, according to the Transportation Sustainability Research Center at the University of California, Berkeley. Customers use an app to select a specific car, which comes with insurance, and then work with the owner to arrange a spot to pick it up. Users can rent vehicles from car owners for an hourly or daily fee; the average Turo customer pays $45 a day to rent a vehicle.

In Illinois, a May amendment to a bill about voiding damage waivers for car rentals that recently passed both houses of the state legislature, changed the definition of renting. Enterprise lobbyists, who were proponents of the bill, backed an amendment to it defining renting a vehicle as a transaction that results in someone other than the vehicle's owner driving the car. If the bill is signed into law, car-sharing services would be taxed and regulated like car-rental companies.

Both Turo and Getaround said bills like the one in Illinois, which aren't specifically written to apply to car-sharing companies, are aimed at stifling their growth and could put them out of business. Turo says it is already being taxed, because its renters pay a sales tax when they purchase a vehicle.

In January, San Francisco sued Turo on behalf of the city's airport, saying that the nine-year-old company was getting around the airport's permit system and should be charged like a car-rental business. Turo countersued, saying it shouldn't be classified as a car-rental company. The outcome is pending.

Early Trial Data Boost Sarepta

By Aisha Al-Muslim

Sarepta Therapeutics Inc. gained about $2.5 billion of stock market value Tuesday after an early stage trial of a gene therapy showed promise in its ability to treat patients with Duchenne muscular dystrophy.

Sarepta said study results showed the therapy helped patients with the crippling disease significantly reduce levels of creatine kinase, an enzyme associated with muscle damage caused by the disorder. Results also showed patients receiving the treatment had robust levels of a protein key to muscle function. No serious adverse events were observed in the study, the Cambridge, Mass., biopharmaceutical company said.

The results are from a trial that featured only three children. To get regulatory approval for the treatment, Sarepta may have to conduct additional tests with larger patient pools.

"Although the data are early and preliminary, these results, if they persist and are confirmed in additional patients, will represent an unprecedented advancement in the treatment of DMD," said Jerry Mendell, a neurologist at the Nationwide Children's Hospital in Columbus, Ohio, in prepared remarks. Dr. Mendell was among several speakers at the company's event highlighting Tuesday its research and development efforts.

Test of the Duchenne muscular dystrophy treatment showed 'strong promise.'

Sarepta shares surged nearly 37% to close at $143.93 on Tuesday. The gains value the company at about $9.4 billion. Shares of Sarepta have more than quadrupled in the past year.

Sarepta's news also helped drive the share price of **Solid Biosciences** Inc. up 46% in Tuesday trading, bringing that company's market capitalization to about $1.5 billion. The stock also closed higher Monday after the Food and Drug Administration lifted a clinical hold on its Duchenne muscular dystrophy treatment after it addressed agency questions regarding study results after an adverse event was reported with a patient.

Sarepta's results highlight the "strong promise" of the company's gene therapy and should position the company as a leader in the field, according to a note from Boston-based health-care investment bank Leerink Partners.

Duchenne muscular dystrophy is a rare, fatal genetic disease that causes progressive muscular weakness, typically in male children.

AT&T Seeks Deal

Continued from page B1

exchanges, Right Media, which he eventually sold to Yahoo in 2007.

AT&T's main rival, **Verizon Communications** Inc., already is a player in online advertising after its 2015 purchase of AOL for $4.4 billion. Verizon purchased the digital assets of Yahoo in 2016 for $4.83 billion and merged them with AOL to create a new company called Oath.

"By all rights, the carriers really should be the next big mobile media players," said Jon Jackson, founder and chief executive of Mobile Posse, a mobile advertising technology company. "They have over a hundred million subscribers unlocking their AT&T phones 120 times a day, they're in a great position. But first they need to sort out how they get content in front of their subscribers and next sort out how to plug in mobile advertising."

Audi CEO Steps Aside After Arrest

Prosecutors expect Stadler to cooperate with emissions probe; release possible soon

BY WILLIAM BOSTON

BERLIN—**Volkswagen** AG on Tuesday said the chief executive of its Audi luxury brand, jailed in a probe into the car maker's diesel-emissions cheating scandal, has stepped aside pending clarification of the issues that led to his arrest.

Prosecutors said Rupert Stadler had agreed to cooperate with authorities and that candid testimony could hasten his release.

Mr. Stadler, 55 years old, is the only member of Volkswagen's executive board to be arrested in connection with the company's admission in 2015 to rigging millions of diesel-powered cars to cheat emissions tests. He was arrested Monday after prosecutors said they found evidence that he was planning to interfere with the investigation.

After his arrest at his home, Mr. Stadler told prosecutors he wanted to answer their questions as soon as possible, said Stephan Necknig, a Munich prosecutor.

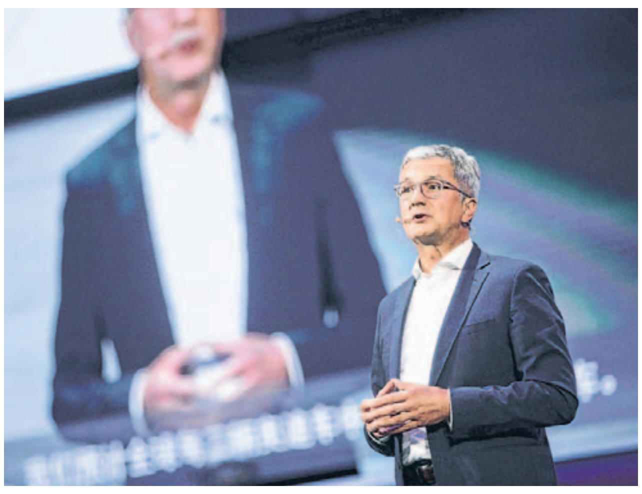
"Mr. Stadler has declared that he was willing to testify," Mr. Necknig said Tuesday.

Volkswagen and Audi declined to comment on Mr. Stadler's arrest or the investigation against him.

After a meeting of Volkswagen and Audi directors, Volkswagen said Tuesday that the directors agreed to temporarily relieve Mr. Stadler of his duties at his own request while he tries to clear his name. Last week, the Munich prosecutor's office added the executive to a list of suspects in a probe into fraud and illegal advertising related to the emissions scandal.

Volkswagen named Abraham Schot, Audi's sales chief, as the brand's interim CEO.

Mr. Stadler's attorney didn't return a request for comment Tuesday. Mr. Stadler has in the past said he had no prior knowledge that illegal software had been installed on



EPA/SHUTTERSTOCK

Prosecutors said Rupert Stadler had agreed to cooperate.

Volkswagen or Audi engines.

Mr. Stadler hasn't been charged with any wrongdoing. In Germany, it is common practice for prominent individuals suspected of a crime to be named by prosecutors in public. Being named a suspect doesn't mean the person will ultimately be charged.

Munich prosecutors last week ordered a raid on Mr. Stadler's home. Mr. Necknig said investigators confiscated documents, computers, telephones and thumb drives and gathered witness testimony.

Without going into detail, Mr. Necknig said investigators issued an arrest warrant after finding evidence among the seized materials and witness testimony that led them to believe Mr. Stadler would obstruct the investigation.

Volkswagen admitted in 2015 to rigging nearly 11 million diesel-powered vehicles to cheat on emissions tests, including models made by Audi. Volkswagen pleaded guilty to defrauding the U.S. government and has incurred about $25 billion in penalties, fines, and compensation for customers stemming from the resolution of civil suits and the criminal charges filed by the U.S. government.

The U.S. has indicted eight Volkswagen executives, including former CEO Martin Winterkorn, on charges of conspiracy to defraud the U.S., to commit wire fraud, and to violate the Clean Air Act. Mr. Winterkorn has stated publicly that he had no knowledge that Volkswagen vehicles were rigged to cheat. His attorney declined to comment.

In Germany, Mr. Stadler's arrest marked a turning point in the scandal. He is the highest-level executive to be arrested in connection with the affair, a sign that prosecutors are turning up the pressure in more than a dozen separate investigations by state's attorneys in three German states.

Volkswagen declined to comment on any of the continuing investigations.

Ford, VW Weigh Plans to Team Up

BY AUSTEN HUFFORD

Ford Motor Co. and **Volkswagen** AG are exploring how they could work together to better compete globally as cars become more technologically advanced and customer expectations evolve.

The companies said Tuesday they were exploring a strategic alliance that could include jointly developing a range of commercial vehicles as well as other projects. The two companies said they weren't discussing cross-ownership stakes or stock arrangements, implying that the two companies aren't in merger talks.

In recent months, Volkswagen approved a plan to prepare Volkswagen Truck & Bus, its commercial-vehicle division, for a potential stock-market listing as early as next year.

Auto companies routinely forge joint-development partnerships to help defray the high cost of new models and technologies. For instance, Ford recently announced it would expand its partnership with Indian auto maker **Mahindra & Mahindra** Ltd. to jointly develop SUV and electric-car models in emerging markets.

"Markets and customer demand are changing at an incredible speed," Dr. Thomas Sedran, Volkswagen's head of group strategy, said in prepared remarks on Tuesday.

Ford executives have said new joint-development partnerships will be key to hitting cost-cutting goals.

Ford CEO Jim Hackett has worked to implement a so-called corporate fitness plan to slash $25.5 billion in cumulative costs over the next four years and help the Dearborn, Mich.-based company catch up on profitability with traditional rivals **General Motors** Co. and **Fiat Chrysler** Automobiles NV.

Starbucks to Trim U.S. Locations

BY JULIE JARGON

Starbucks Corp. said it would close more coffee shops in the increasingly crowded U.S. market where it was a pioneer.

The coffee giant said Tuesday that it will close 150 U.S. stores in its 2019 fiscal year, triple the number it has closed on average in recent years. Starbucks said it also will slow the growth of licensed stores in airports, supermarkets and other retail stores, reflecting criticism that the coffee-shop pioneer was expanding too rapidly.

Most of Starbucks's growth in recent years has come from those licensed stores, which are less profitable than company-owned stores. Chief Financial Officer Scott Maw said Starbucks can introduce products more quickly and price its drinks and foods more consistently at its own stores.

Starbucks on Tuesday also raised its quarterly dividend by 20% and said it plans to return $25 billion to shareholders in dividends and buybacks through its 2020 fiscal year, a $10 billion increase from the cash return target it set on Nov. 2.

Starbucks shares fell 1.93% in after-hours trading on Tuesday to $56.32.

Starbucks has opened more than 2,000 new cafes in the U.S. in the past three years, contributing to what some analysts say is a broader oversupply of coffee shops. With nearly 14,300 U.S. locations, there are now more Starbucks than there are McDonald's Corp. restaurants in America.

Sales at Starbucks stores in the U.S. have been slowing in recent years. Late last year, Starbucks reduced its long-term sales and profit targets. On Tuesday, the company said it expects 1% same-store sales growth in the current quarter.

Starbucks Chief Executive Kevin Johnson said his company still has room to grow in some parts of the U.S., such as the Midwest and the South. Most of the stores that will be closed are in more urban parts of the country where Starbucks stores are tightly clustered and where rent and wages are high, he said.

At an investor event on Tuesday, Mr. Johnson, who became chief executive last April, also sought to draw a distinction between his plans and those of Howard Schultz, the longtime CEO who recently said he is stepping down as chairman later this month. Mr. Johnson said he is more data-driven and analytical than Mr. Schultz.

ELAINE THOMPSON/ASSOCIATED PRESS

Barista Sarah Dacuno serves a customer at a shop referred to as the original Starbucks, in Seattle's Pike Place Market. The chain has opened more than 2,000 cafes in the U.S. in the past three years,

Icahn Wins 4 SandRidge Seats

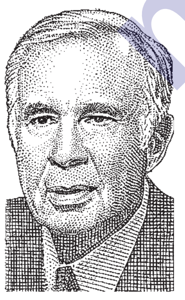
BY CARA LOMBARDO

Carl Icahn won a majority of seats on **SandRidge Energy** Inc.'s board, the company said Tuesday.

The activist investor won four board seats in a shareholder vote, and the oil-and-gas company agreed to give him a fifth after another was too close to call. SandRidge held on to three seats after striking a deal with Mr. Icahn to expand the board by one.

Mr. Icahn, who has criticized the Oklahoma City company's deal making and executive pay, had aimed to replace the entire board with his own nominees.

Mr. Icahn is SandRidge's largest investor, with a roughly 13.5% stake.



Carl Icahn

It is rare for activist investors to succeed at replacing an entire board, but it has happened, including at Darden Restaurants Inc. in 2014 and at retailer Destination Maternity Corp. earlier this year. It is even unusual for activists to win control of a board as Mr. Icahn has at SandRidge.

The billionaire activist has done so through a proxy fight only four times in his career, according to activist research firm 13D Monitor.

SandRidge had early success in the American shale boom but a protracted oil-price slump led it to bankruptcy in 2016. It emerged later that year and now has a market value of about $590 million. SandRidge shares, which were down about 25% this year through Monday, rose 7.5% to $17.02 on Tuesday.

Mr. Icahn had been vocal in his opposition to SandRidge's since-abandoned bid to buy Bonanza Creek Energy Inc. last year and its rejection of an unsolicited offer from Midstates Petroleum Co. in March. The company has since said it is open to a full or partial sale of itself.

The SandRidge contest was closely watched not only because Mr. Icahn sought to replace an entire board but also because it was one of the highest-profile proxy fights so far to use universal ballots, which allow investors to select a mix of nominees backed by either side.

The two primary shareholder advisory firms, Glass Lewis & Co. and Institutional Shareholder Services Inc., recommended SandRidge shareholders back some of each side's nominees.

Roche to Buy Rest of Cancer Firm

BY PIETRO LOMBARDI

Roche Holding AG said Tuesday that it would pay $2.4 billion to buy the shares it doesn't already own in **Foundation Medicine** Inc., furthering its bet on personalized cancer care.

The Swiss drug giant, which already owns roughly 57% of Foundation, will pay $137 a share for the U.S.-based company, valuing it at $5.3 billion.

Foundation, based in Cambridge, Mass., makes molecular-diagnostic tests that identify alterations in a patient's cancer. Doctors then use the results to match patients with targeted treatments and clinical trials.

The deal to take full control of Foundation comes after Roche first bought a stake in the company in 2015. Roche expects the deal, which has been approved by the boards of both companies, to close in the second half of the year.

"This is important to our personalized health-care strategy as we believe molecular insights and the broad availability of high-quality comprehensive genomic profiling are key enablers for the development of, and access to, new cancer treatments," said Daniel O'Day, chief executive of **Roche Pharmaceuticals**.

Foundation was founded in 2010 and two years later launched its flagship test, FoundationOne, which is used for solid tumor cancers including lung, breast and ovarian. It went public in September 2013 and trades on Nasdaq. So far the company's various tests have profiled more than 180,000 patients, according to its website.

The acquisition follows recent Roche purchases of oncology-software company Flatiron Health Inc. and cancer-therapy company Ignyta Inc.

The Foundation deal fits Roche's strategy, said Stefan Schneider, an analyst at Vontobel. "The deal helps Roche take a driving seat and be a leading player in the future development of personalized medicine," he said.

DAVID GRAY/REUTERS

A court ordered Apple to pay $6.7 million for refusing free fixes of a glitch in its phones. An iPhone in use in Sydney.

Apple Is Faulted on Repairs

Australian fine results from rejection of devices serviced at noncompany stores

By Mike Cherney

SYDNEY—**Apple** Inc. was fined in Australia for refusing to offer free fixes for iPhones and iPads that were previously serviced by non-Apple stores, the latest episode in a global dispute between companies and consumers about the right to repair.

A court ordered Apple to pay a penalty of 9 million Australian dollars ($6.7 million), after it told consumers several years ago that it wouldn't offer free repairs for devices that had become inoperable due to a glitch known as "Error 53." The fault occurred after consumers downloaded an update to Apple's operating system.

Apple rebuffed at least 275 Australian customers affected by Error 53, citing the servicing of their devices at non-Apple stores, which effectively voided guarantees. From February 2015 to February 2016, the information was provided on Apple's website, by Apple's Australia in-store staff and on customer-service phone calls.

Under Australian law, customers are entitled to a repair or replacement, and sometimes a refund, if a product is faulty, according to the Australian Competition and Consumer Commission, which sued Apple.

Commissioner Sarah Court said on Tuesday that the Federal Court of Australia ruled Apple couldn't cease consumer guarantees because an iPhone or iPad had been repaired by a party other than Apple. Apple didn't immediately respond to a request for comment.

Conflict over where consumers can get their products repaired has intensified in recent years as consumer devices get increasingly complex.

In the U.S., the Repair Association has lobbied for state laws to require manufacturers to share information that independent repair shops need to fix products. Others, though, have raised concerns that unauthorized repairs could jeopardize the security of data held on the devices.

Apple had said Error 53 could happen after "an unauthorized or faulty screen replacement" and was intended to protect customers if a fraudulent fingerprint sensor was used. It later said it was a mistake and designed to be a factory test. Apple apologized and posted instructions on its website for consumers to fix the problem.

After Apple was notified of the Australian regulator's investigation, the company reached out to some 5,000 customers who were affected by Error 53 to compensate them, the regulator said.

Apple also agreed to improve staff training, as well as beef up its internal systems and procedures to make sure it is complying with Australian consumer laws, the regulator said. Under that agreement, Apple also committed to providing new replacement devices, not just refurbished ones, if a product is faulty.

Consumers are likely to be the major beneficiaries from the court ruling because third-party repairers typically charge lower prices, said James Thomson, senior industry analyst at IBISWorld. Apple and other major companies may have to reduce repair costs to retain business, he said. "While the financial penalties are relatively insignificant to a company of Apple's size, the publicity surrounding the misrepresentations are likely to have a greater influence on the company and wider industry."

Phone Maker Delays China Offering

By Stella Yifan Xie and Julie Steinberg

HONG KONG—Chinese smartphone maker **Xiaomi** Corp. postponed a widely anticipated share sale in mainland China, saying it would proceed first with an initial public offering in Hong Kong in the coming weeks.

In talks with potential investors, the Beijing-based company recently discussed a market valuation of roughly $60 billion, according to people familiar with the matter, a far cry from the $100 billion valuation Xiaomi aspired to achieve earlier this year. The figure could change as discussions continue, some of the people said.

BOBBY YIP/REUTERS

Xiaomi's IPO in Hong Kong will precede a sale in mainland China.

The company in a statement dated June 18 said it applied to China's stock market regulator to delay a review of its proposal to issue so-called Chinese Depositary Receipts, without giving a reason. Less than a week ago, Xiaomi had submitted a plan to sell at least half its IPO shares—or more than 7% of its total share capital—to domestic investors.

Xiaomi said Tuesday it will launch the Chinese securities "at an appropriate time" after the company lists in Hong Kong. China's Securities Regulatory Commission in a separate statement said it would respect Xiaomi's decision and suspend its planned review.

Beijing-based Xiaomi delayed its domestic stock sale because some details of China's rules for depositary receipts are still being worked out, according to people familiar with the matter.

China earlier this month published guidelines for overseas-incorporated companies that want to issue yuan-denominated depositary receipts. Xiaomi, which is incorporated in the Cayman Islands and does the bulk of its business in China, was poised to be the first company to participate in the program.

Japanese Sales App Soars in IPO

By Mayumi Negishi and Takashi Mochizuki

TOKYO—**Mercari** Inc.'s valuation jumped to $6.5 billion on the flea-market app's first day of trading, as investors celebrated the Japanese rival to **eBay** Inc. in a country that is nearly bereft of influential technology startups.

Shares in Mercari closed up 77% above their offering price after the company raised ¥130.5 billion ($1.2 billion) on the Tokyo Stock Exchange's market for startup companies. It was Japan's biggest tech initial public offering since messaging app Line Corp. listed in July 2016 and the largest IPO in Japan this year.

Mercari's app allows people to buy and sell mostly used goods such as jeans, handbags and games. It has been a hit in its home market, drawing many young people who have become accustomed to penny-pinching in the nation's long economic doldrums.

In Japan, Mercari's growth stems from its easy-to-use mobile app, which taps its database to automatically complete postings merely from a smartphone photo. Sellers can remain anonymous and buyers don't have to pay until they confirm the item has arrived.

Dragged down by its U.S. results, Mercari logged a net loss of ¥4.2 billion for its fiscal year ended June of last year on ¥22 billion in revenue.

Cost of Handling Goods Rises Sharply

Tight capacity has businesses spending more for shipping and warehousing

By Erica E. Phillips

U.S. businesses are spending more on transportation and warehousing as demand and prices for logistics services increase.

Costs for everything from big-rig haulers and rail transportation to airfreight, parcel carriers and storage have risen steeply since the middle of last year. And demand doesn't show any signs of slowing, according to the Council of Supply Chain Management Professionals' annual State of Logistics report.

In 2017, total spending on logistics rose to a record of nearly $1.5 trillion, up 6.2% from the year before and about $250 billion more than companies spent on logistics in 2008. Rising interest rates, the higher price of fuel and impending tariffs on imports are expected to add to business expenses in general in the coming year, the report's authors said.

A year ago, the freight market was showing signs of picking up after nearly two years of excess capacity, said Sean Monahan, a consultant with A.T. Kearney and one of the authors of the annual report.

"Many shippers had been lulled into a very soft market, costs were coming down and it was a beneficial fuel market," Mr. Monahan said. "That's when things started to go crazy," he said. "I think many organizations were caught a bit flat-footed."

The annual report, which measures total spending on transportation and warehousing by U.S. companies, shows freight rates jumping late last year, during and after the hurricanes in U.S. Gulf Coast states and Puerto Rico. The storms strained logistics networks, and transportation providers scrambled to deliver relief supplies as Houston's flooded freight hubs worked to get back up and running. Not long after, a federal mandate went into effect requiring that electronic devices be installed in trucks to log driver hours, intensifying capacity constraints by limiting drivers' time behind the wheel.

That tight capacity has driven prices higher. By end of last year, U.S. business logistics costs accounted for 7.7% of the nation's gross domestic product—a slight increase from the previous year's 7.6% though still below the previous five years when it hovered around 7.9%.

The cost to ship goods and products will likely grow faster than GDP this year, Mr. Monahan said, driving that percentage higher.

David Broering, president of the freight brokerage division at NFI, a third-party logistics company, said the average rate per mile has risen between 20% and 30% this year—and that is before the annual peak shipping season, which ramps up in the late summer months.

Since late last year, motor carriers also have been turning down loads because they can't find drivers.

Large retailers and manufacturers will need to develop broader contracts with their carriers to guarantee capacity, said Lisa Harrington, president of supply-chain consultancy Lharrington Group LLC. "If I don't have those relationships in place, it's going to be fire drills to get my freight to market," she said.

Motor-carrier costs rose 7.8% to $641 billion for U.S. businesses in 2017, according to the annual report. Rail transportation rose 8.2% to $80.5 billion, airfreight grew 3.1% to $67.2 billion and the cost for inventory storage was up 4.2% at $148 billion, according to the report.

Rising e-commerce sales, which grew more than 15% to $448 billion in 2017, drove up parcel delivery costs for businesses to $99 billion, a rise of 7% from 2016. Higher volumes of e-commerce shipping and residential deliveries have shifted resources away from traditional logistics operations, further expanding business costs—especially at times of year when volumes reach their peak.

Leading up to and during the holiday season, demand for workers at e-commerce fulfillment operations and other facilities is also expected to increase, and with unemployment at historic lows that may be hard to accommodate. Mr. Monahan said many logistics and warehousing operations may turn increasingly to automation, using new technology to pick, pack and ship holiday orders.

The report's findings come as U.S. trade enters a period of uncertainty with renegotiations of the North American Free Trade Agreement stalled and the U.S. trading first jabs with China in what could become a trade war.

A breakdown of U.S. trade relationships could have a chilling effect on the overall global economy and weaken demand for logistics services, the report said.

"Cumulatively, it's just adding to the misery," said Mary Holcomb, professor of supply-chain management at the University of Tennessee.

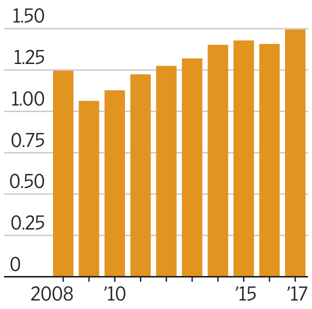
LUKE SHARRETT/BLOOMBERG NEWS

Spending on logistics by U.S. companies rose more than 6% last year, according to an annual supply-chain report.

Heavier Lifting

The cost for U.S. businesses to move and store goods rose 6.2% in 2017.

Total business logistics costs



Source: Council of Supply Chain Management Professionals 2018 State of Logistics Report

THE WALL STREET JOURNAL.

FedEx Profit Rises As Tax Cut Helps

FedEx Corp.'s profit rose in the latest quarter as the delivery company benefited from tax cuts and a turnaround in its express business.

Chief Executive Fred Smith said on an earnings call on Tuesday that he has never been so optimistic about the company's future, but he warned about the potential impact of escalating tensions between the U.S. and trading partners.

"Trade is a two-way street, and FedEx supports lowering trade barriers for our customers, not raising them," he said.

Operating income in FedEx's express business increased 11% to $990 million in the quarter. The results followed a disappointing holiday season in which that segment posted a steep profit decline.

In the ground business, income increased 18% to $832 million for the period. FedEx had been investing in automating its ground unit, which sped up its service and posted strong gains in the previous quarter.

Overall revenue rose about 10% to $17.3 billion.

The Memphis, Tenn.-based company got a $1.6 billion windfall from the federal tax overhaul. FedEx said the tax cuts also led to pay increases for certain U.S. hourly workers that began in April.

—Patrick Thomas

Two Fox Television Producers Criticize Fox News Commentary

By Joe Flint

Two of **21st Century Fox**'s top television producers spoke out against Fox News's commentary on the Trump administration policy separating children from their parents at the border, saying they are embarrassed to work at the company that owns the cable news channel.

Steve Levitan, the creator of "Modern Family," and Seth MacFarlane, creator of "Family Guy," criticized the remarks Fox News commentators have made in support of the policy. Fox anchor Laura Ingraham compared the detention centers where children are being housed to "summer camp."

"I'm disgusted to work at a company that has anything whatsoever to do with Fox News," Mr. Levitan tweeted Tuesday, adding that the channel's opinion shows are the opposite of what his sitcom "Modern Family" stands for.

Mr. MacFarlane, responding to Fox News anchor Tucker Carlson's call for viewers to ignore what they hear on rival news outlets regarding the immigration situation, said, "it's business like this that makes me embarrassed to work for this company."

Representatives for Fox News and **Twentieth Century Fox Television** declined to comment. A spokeswoman for 21st Century Fox didn't immediately respond to a request for comment. The Fox News commentators have said they're providing an alternative to biased coverage at other outlets.

Steve Levitan and Seth MacFarlane reacted to remarks on immigration policy.

21st Century Fox and Wall Street Journal parent **News Corp** share common ownership.

There have long been tensions between Fox News, with its conservative commentators, and the rest of the 21st Century Fox media empire, but it is unusual for high-profile creative talent to go public with their concerns.

One 21st Century Fox executive said writers and producers have become frustrated with the channel's favorable coverage of President Donald Trump, with flashpoints including the white supremacist protests in Charlottesville, Va.

Part of the motivation to speak up now, this executive said, is because 21st Century Fox is in the process of selling the bulk of its entertainment assets, including the Twentieth Century Fox studio. Walt Disney Co. has an agreement to acquire the assets, but **Comcast** Corp. has made a hostile bid as well.

Fox News, which has been a profit engine for 21st Century Fox, making up for an entertainment wing that has at times been a laggard, isn't among the assets the company is selling. It would be part of a remaining company that would also include the Fox broadcast network and the cable channel Fox Sports 1.

It won't be easy for Fox producers to distance themselves from the owners of Fox News, even if a sale goes through. That is because many shows produced by the Fox studio air on the Fox network.

Mr. MacFarlane's animated "Family Guy" and science fiction show "The Orville" both air on Fox. Mr. Levitan's "Modern Family" airs on ABC.

In a tweet, Mr. Levitan said, "I look forward to seeing #ModernFamily through to the end and then, sale or no sale, setting up shop elsewhere."

In a statement released later through his agent, Mr. Levitan said he has great respect for the leadership at the studio. "I will take some time to see where those people land, and at that point, make a decision about my future," he said.

Mr. Levitan's deal with Twentieth Century Fox was due to expire next month but was recently extended a few more months in anticipation of his working on the coming season of "Modern Family," a person familiar with the situation said.

U.K. Clears Path In Bidding for Sky

LONDON—The U.K. government has all but given Rupert Murdoch's **21st Century Fox** Inc. permission to partake in a bidding war for British pay-TV giant **Sky** PLC, clearing one of the last obstacles for a corporate takeover battle that also includes **Walt Disney** Co. and **Comcast** Corp.

British Culture Secretary Matt Hancock earlier this month indicated he would approve Fox's $15 billion bid to buy the 61% of Sky it doesn't already own, on the condition that Fox sell Sky's news channel if its bid succeeds. On Tuesday, Mr. Hancock said he approved of Fox's sweetened proposal to sell the channel to Disney, which itself is trying to buy the majority of Fox. The government blessing came after Fox pledged to fund a Disney-owned Sky News channel for 15 years, up from its previous proposal of 10 years, for at least £100 million ($132 million) a year.

Formal approval is now expected after a 15-day period for feedback.

The U.K. government was concerned that Fox's full ownership of Sky would give Mr. Murdoch and his family too much influence in British media. Mr. Murdoch and his family are major shareholders in both Fox and **News Corp**, which publishes three U.K. newspapers as well as The Wall Street Journal.

—Stu Woo

THE PROPERTY REPORT

PETER FOLEY FOR THE WALL STREET JOURNAL (2)

The Gowanus Canal's past as a toxic dumping ground hasn't stopped developers from building housing, retail shops and restaurants along the Brooklyn waterway. Right, the Carroll Street Bridge.

Builders Reclaim Forgotten Waterfronts

Once-neglected parcels are being transformed as people flock to cities looking for housing

By Lara Korte

For decades, the Gowanus Canal in Brooklyn was considered a noxious waterway surrounded by gritty industrial buildings.

But lately it has been targeted by developers of apartment buildings, retail and restaurants. They believe shoppers, diners and dwellers will look beyond the canal's most recent past as a toxic dumping ground to its aesthetic qualities, the kind that have attracted human beings to waterfronts for millennium.

Some planners and developers have even speculated that the canal may one day resemble Venice with gondola rides. "It screamed out to us as a natural space that people would want to live," said Mitchell Hochberg president of Lightstone Group, the developer behind a 430-unit luxury-housing structure along the canal.

In cities throughout the U.S., developers are straying further off the beaten path to find neglected parcels of waterfront property for commercial development. Most of the obvious locations, like Baltimore's Harborplace and New York's South Street Seaport, opened decades ago.

But during the recent economic recovery, there has been another wave of waterfront projects as urban locations have become more popular with employers and young workers.

Examples include a 42-acre mixed-use development that has been built on the banks of the Anacostia River in Washington, D.C., replacing a former Navy yard. New projects also are sprouting up on the Delaware River in Philadelphia, the Miami River waterfront and the North Branch of the Chicago River.

The trend isn't limited to major cities. Developers also are pioneering new sections of waterfronts in cities like Cleveland and Tampa, Fla. In April, for example, ground was broken in Tampa on the first hotel that is planned for a 50-acre commercial project on former industrial land along Garrison Channel.

The $3 billion Tampa Bay project is being developed by a venture of Jeff Vinik, a local developer, and **Cascade Investment** LLC, an investment fund controlled by Microsoft founder Bill Gates. It's the latest step in a decadeslong effort to enhance the city's waterfront.

Before the waterfront renaissance began, part of it "was a phosphate dumping pit populated by rats with a broken-down rail trestle that ran across it with no hopes for a better future," said Tampa Mayor Bob Buckhorn at the April groundbreaking ceremony.

But the new waterfront developments can be controversial, too. In some cities, manufacturers and others have fought to maintain zoning laws along waterfronts that exclude residential and retail projects, in an effort to protect industrial jobs.

'It screamed out to us as a natural space that people would want to live.'

Groups in other areas have resisted new waterfront projects, arguing that they raise real-estate values and push out low-income residents that have traditionally lived there.

In April, civil-rights attorney Aristotle Theresa filed a federal lawsuit against the District of Columbia Department of Housing and Community Development on behalf of several African-American residents who live in neighborhoods near the Anacostia River. The residents are concerned that development east of the river will spread into low-income areas. "These land use policies...overwhelmingly do not include family units or true affordable housing," the complaint said.

A department spokeswoman declined to comment.

This latest land rush along America's waterfronts began as the U.S. recovered from the 2008 financial crisis. During those years, millennials and others flocked to downtowns to live closer to jobs, transit and urban amenities.

"They don't want to live in the suburbs," said Ronald Terwilliger, founder of the Urban Land Institute's Terwilliger Center for Housing. "They want to live in walkable areas where there's entertainment."

As housing became in short supply in these areas, developers looked for waterfront sites, well aware that buyers and tenants generally pay more for waterfront views and amenities.

In Philadelphia, along the city's Delaware River, developer K4 Philadelphia LLC is building a mixed-use project named Liberty on the River. The development plans include 3 million square feet of construction across 10 towers housing condos, rental units, a senior-living facility, hotel and 100,000 square feet of retail and restaurant space.

In Boston's expanding Seaport district, developer Cottonwood Management is building a 1.33 million-square-foot mixed-use development with three residential towers. Cottonwood CEO Alexander Shing said they're expecting units to be filled by the employees of the new **Amazon.com** Inc. and **General Electric** Co. offices.

Firm Stakes Claim in Data Turf

By Keiko Morris

The big data scrum in the commercial real-estate industry is about to heat up with the launch of a new service by a startup whose investors include **Blackstone Group** LP.

VTS provides a mobile-friendly dashboard to landlords and brokers that allows them to track prospective tenants from the time they inquire about a space until they move in. This has given the startup insight on critical market metrics such as current rents and how much interior work landlords must pledge to persuade tenants to sign deals.

Now, the company is offering a tool, set to be announced Monday, that amalgamates the data it has on individual leases to give clients a window into market trends.

"We can show average base rents, tour activity, what kinds of industries are looking and average transaction times for different industries," said Nick Romito, chief executive of VTS. "Now you're making decisions with empirical data vs. 'I've got a feeling the market is hot.' "

ALEXANDER COHN/THE WALL STREET JOURNAL

VTS principals Nick Romito, left, and Brandon Weber. The startup will gather data to give clients a window into market trends.

VTS isn't the first to recognize the value of such market insight to tenants and landlords. Market data also is being sold by **CoStar Group** Inc., which listed on the Nasdaq Stock Market in 1998 at under $10 a share and is currently trading above $400. Other startups, like **CompStak** Inc., have rolled out similar services in recent years.

The emergence of the new players has posed a threat to traditional real-estate-services firms like **JLL**, **CBRE Group** Inc. and **Newmark Group** Inc. These companies, which used to have a monopoly on market data, are being forced to adapt as information becomes available on other sources.

Many of them are shifting from keepers of market data to advisory roles similar to the change in the financial-services industry, where many stock-market brokers have become financial advisers. "The real-estate brokerage world has gone through and is going through a similar transformation, albeit 15 years behind," said Michael Shenot, a managing director at real-estate-services firm JLL.

The real-estate industry has been slow to adopt new technology. Many landlords were protective of building and lease information because they thought they could drive higher rents, some real-estate executives said.

"There are very few industries in the world where you aren't using large data sets to make decisions," VTS's Mr. Romito said. The office, retail and industrial sectors "have been this laggard part of the space where everyone around us is using market information to make decisions except for us," he said.

CoStar was the first major disruptive force in the commercial real-estate data industry. Before its launch in 1987, landlords and brokers held most of the information for such things as commercial rents, building tenancies and occupancy rates.

But CoStar amassed data on properties by talking to brokers and landlords, taking photos and looking at building tenant rosters. Traditional brokerage firms eventually ceded control of some market data to CoStar and formed a love-hate relationship with the company: They liked its data but resented the high prices it charged.

Later entrants have used different approaches to collecting data. CompStak taps a crowdsourcing system to gather specific lease details from brokers and others who report the data in exchange for access to other CompStak information.

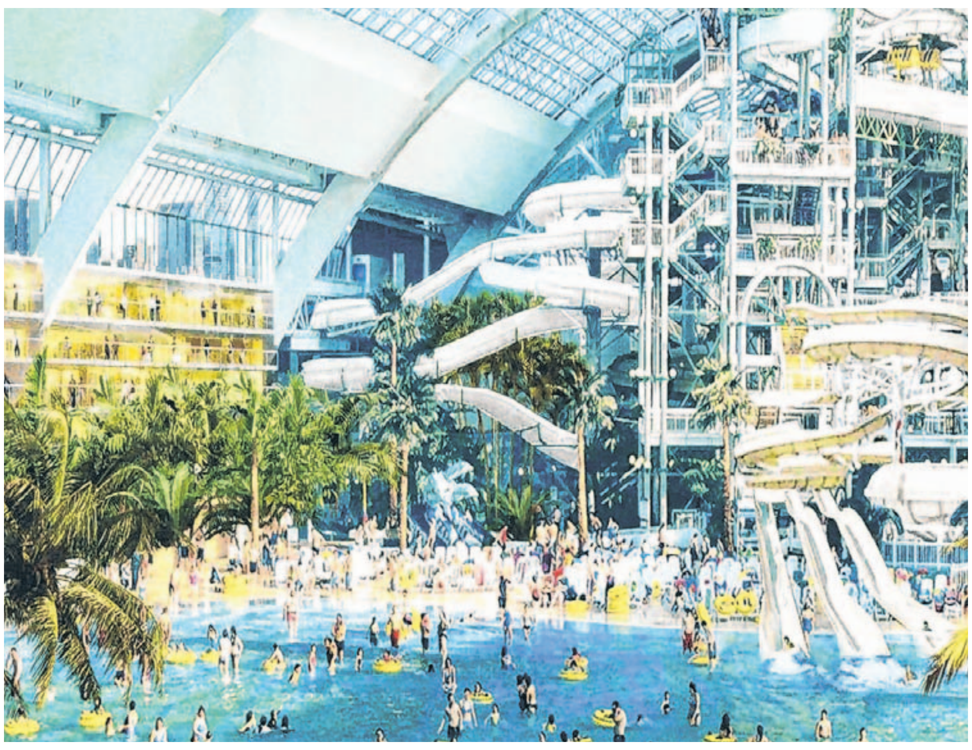
CompStak Chief Executive Michael Mandel said that as companies like CompStak and VTS expand there is a greater chance of butting heads.

"As we each get bigger we will start competing more with each other," Mr. Mandel said.

THE PROPERTY REPORT

Biggest U.S. Mall Gets Florida OK

By Esther Fung



When completed, the 6.2-million-square-foot American Dream Miami will include a water park.

At a time when store closures are accelerating and struggling malls pockmark the country, county commissioners in Florida have approved a plan to build what would be the largest mall in the U.S.

American Dream Miami would also be the most expensive mall ever built, according to Canadian developer **Triple Five Worldwide Group** of Cos. The 6.2-million-square-foot retail-and-entertainment complex would cost an estimated $4 billion, Triple Five says.

The cost would include 2,000 hotel rooms, an indoor ski slope, an ice-climbing wall and a water park with a "submarine lake," where guests can enter a plexiglass submarine and descend underwater.

Edmonton, Alberta-based Triple Five secured zoning approval in May from the Miami-Dade County Commission in an 11-1 vote, and is now in the process to secure environmental and water permits for the 174-acre site.

The project provides a window into the thinking of North America's largest mall developers as they confront the revolution in the shopping world sparked by e-commerce. They recognize it is no longer enough to fill malls with stores selling clothing, food, electronics and other merchandise people can buy online.

Developers are instead filling malls with restaurants, rides, trampoline parks, gyms, services and other types of entertainment. This strategy taps into the increasing preference of consumers to spend their money on experiences as opposed to goods.

Triple Five's plan for American Dream Miami faces hurdles: Residents have raised worries about traffic and the environmental impact of the project, while other mall owners have protested possible government subsidies for the project.

Triple Five blames most of the opposition on a coalition of local mall owners who are afraid of the competition. "They launched a campaign of disinformation to mislead the public and decision makers," said Miguel Diaz de la Portilla, a Miami-based attorney representing Triple Five.

Triple Five owns some of the largest retail and entertainment properties in North America, including West Edmonton Mall in Edmonton, Canada, and Mall of America in Bloomington, Minn.

A big part of the debate is over whether American Dream Miami should get any public subsidies. The South Florida Taxpayers Alliance, a group of mall owners including **Simon Property Group**, **Taubman Centers** Inc. and **GGP** Inc., have lobbied county officials to prevent Triple Five's project from being funded or subsidized by taxpayer dollars.

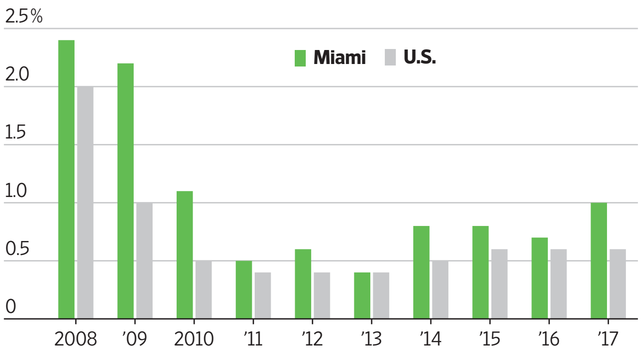
Triple Five had a history of landing public subsidies for Mall of America and for American Dream Meadowlands.

But Triple Five says it isn't planning on subsidies this time. "American Dream Miami will be built by private dollars," said Mr. Diaz de la Portilla.

The board of commissioners passed a resolution to guarantee that Miami-Dade County doesn't pay for any part of the construction of the project. The resolution doesn't prohibit the possibility of subsidies from other sources, such as from the state.

More Construction in Miami

Growth rate of retail real-estate space



Source: CoStar Group

THE WALL STREET JOURNAL.

BUSINESS WATCH

BITHUMB

Bitcoin Exchange Sustains Breach

Seoul-based bitcoin exchange **Bithumb** said Wednesday it had lost over $30 million as the result of being hacked, the second cyberattack in two weeks to hit a major South Korean cryptocurrency exchange.

Bithumb said it had lost $31.6 million (35 billion won) worth of cryptocurrencies and has temporarily halted withdrawal and deposit services. The company said it would compensate customers for all lost assets.

Bitcoin fell about 2% immediately after Bithumb disclosed the hack and traded around $6,600, according to research site CoinDesk.

Bitcoin prices fell earlier this month after another South Korean cryptocurrency called **Coinrail** said it lost 70% of its digital assets from a "cyber intrusion."

—Eun-Young Jeong and Steven Russolillo

VERSCEND TECHNOLOGIES

A $4.16 Billion Pact Reached for Cotiviti

Verscend Technologies Inc., backed by private-equity firm **Veritas Capital**, has agreed to acquire **Cotiviti Holdings** Inc. for about $4.16 billion to create a data and analytics firm focused on health care.

Under the agreement, Cotiviti shareholders will receive $44.75 in cash per share of Cotiviti stock owned, which represents a 32% premium to Cotiviti's share price as of June 4, the day before reports surfaced that the company was exploring a sale.

—Aisha Al-Muslim

ORACLE

Method Changes for Reporting Revenue

Oracle Corp. on Tuesday surprised investors by changing the way it reports revenue from its business units and warned that currency conversions would weaken performance this quarter.

Under Oracle's old revenue-reporting model, co-CEO Safra Catz said, total cloud revenue would have been $1.7 billion, implying a stronger-than-expected 25% rise from a year ago. With the new system, in which cloud revenue is part of a broader group, Oracle reported an 8% revenue increase.

On Tuesday, Oracle reported profit for the quarter ended May 31 rose 5% to $3.41 billion, or 82 cents a share. Excluding stock-based compensation and other items, profit rose to 99 cents a share from 89 cents a share a year earlier. Revenue rose 3% to $11.25 billion. Analysts surveyed by Thomson Reuters expected 94 cents a share in adjusted profit and $11.19 billion in revenue.

In the current quarter, "exchange rates have moved from a 3% revenue tailwind to now being a 1% headwind," Ms. Catz said in a conference call, estimating the four percentage-point move would lower revenue by about $300 million. Shares were down 3.6% after hours.

—Maria Armental

GAMESTOP

Retailer in Talks Over Potential Deal

Videogame retailer **GameStop** Corp. said Tuesday that it was in "exploratory discussions" with unnamed third parties regarding a potential deal.

GameStop has struggled with leadership issues recently, while its core business has faced declining sales as more people download games directly to consoles, computers and mobile devices, bypassing retail stores.

—Austen Hufford

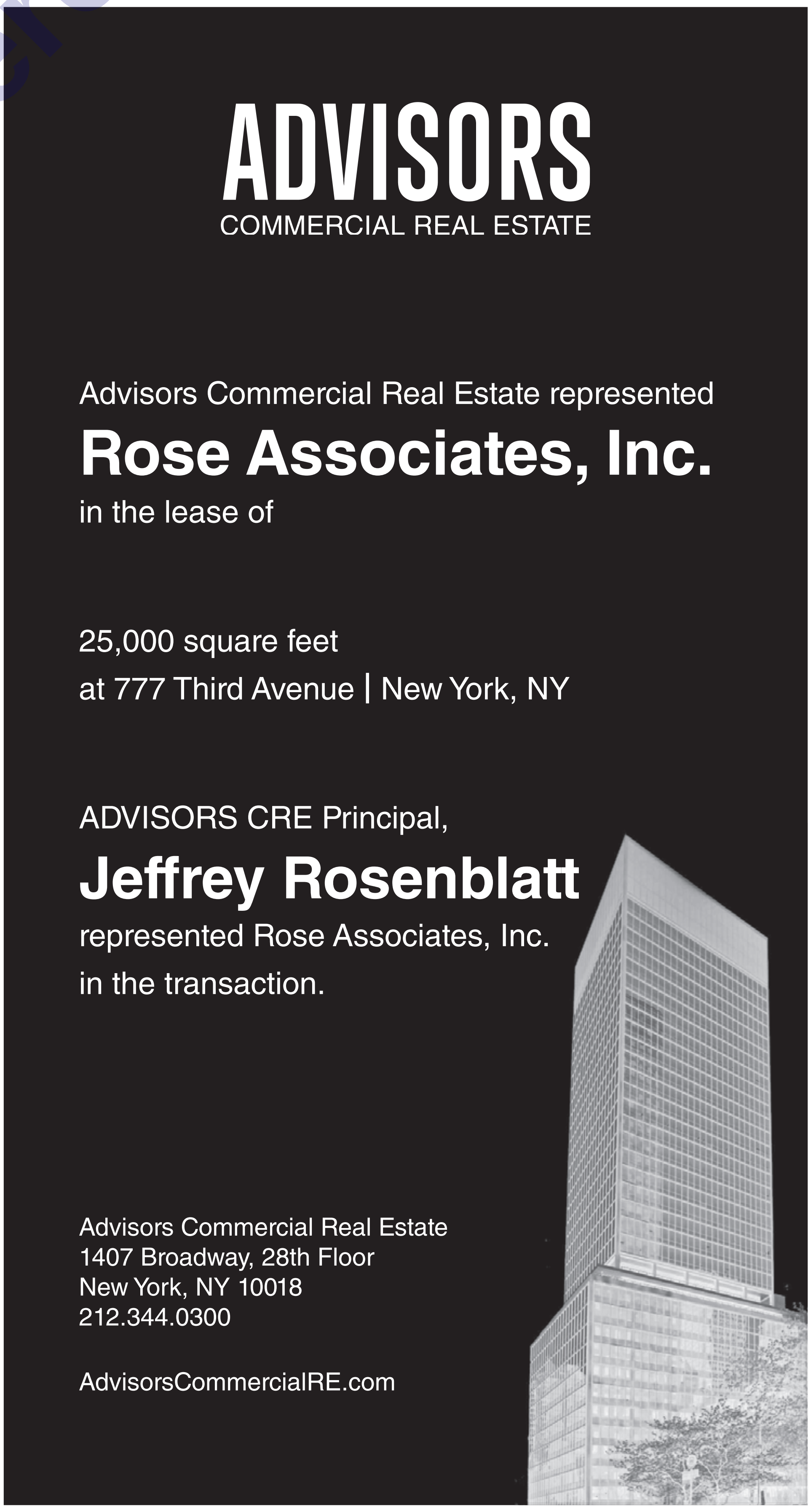
BLUE APRON HOLDINGS

Meal-Kit Maker Taps Supply-Chain Chief

Blue Apron Holdings Inc. hired consumer-packaged goods veteran Alan Blake as its chief supply-chain officer as the meal-kit company seeks to improve its operations.

Mr. Blake, previously of Revlon, and Campbell Soup, is to start next week.

—Heather Haddon



BIGGEST 1,000 STOCKS

How to Read the Stock Tables

The following explanations apply to NYSE, NYSE Arca, NYSE American and Nasdaq Stock Market listed securities. Prices are composite quotations that include primary market trades as well as trades reported by Nasdaq BX (formerly Boston), Chicago Stock Exchange, Cboe, NYSE National and Nasdaq ISE.

The list comprises the 1,000 largest companies based on market capitalization.

Underlined quotations are those stocks with large changes in volume compared with the issue's average trading volume.

Boldfaced quotations highlight those issues whose price changed by 5% or more if their previous closing price was $2 or higher.

Footnotes:
▲-New 52-week high.
▼-New 52-week low.
dd-Indicates loss in the most recent four quarters.
FD-First day of trading.
h-Does not meet continued listing standards
lf-Late filing
q-Temporary exemption from Nasdaq requirements.
t-NYSE bankruptcy
v-Trading halted on primary market.
vj-In bankruptcy or receivership or being reorganized under the Bankruptcy Code, or securities assumed by such companies.

Wall Street Journal stock tables reflect composite regular trading as of 4 p.m. and changes in the closing prices from 4 p.m. the previous day.

Tuesday, June 19, 2018

Stock	Sym	Close	Net Chg
A B C			
ABB	ABB	22.47	-0.18
ADT	ADT	8.26	-0.03
AES	AES	13.08	0.01
Aflac	AFL	45.00	-0.17
AGNC Invt	AGNC	18.99	0.05
ANGI Homesvcs	ANGI	16.23	-0.10
Ansys	ANSS	176.76	-1.16
ASML	ASML	206.18	-4.92
AT&T	T	32.39	0.20
AbbottLabs	ABT	62.34	-0.48
AbbVie	ABBV	98.01	-0.47
Abiomed	ABMD	439.64	-3.51
Accenture	ACN	163.31	0.43
ActivisionBliz	ATVI	77.24	-0.63
AdobeSystems	ADBE	251.74	-3.95
▲ AdvanceAuto	AAP	138.30	0.06
AdvMicroDevices	AMD	16.69	-0.42
Aegon	AEG	6.28	0.13
AerCap	AER	54.69	-0.29
Aetna	AET	189.28	2.33
▼ AffiliatedMgrs	AMG	154.00	1.00
AgilentTechs	A	63.52	-1.45
AgnicoEagle	AEM	44.48	-0.95
AirProducts	APD	159.55	-3.79
AkamaiTech	AKAM	81.68	-0.90
AlaskaAir	ALK	62.47	-0.30
Albemarle	ALB	91.40	-1.47
Alcoa	AA	44.47	-1.31
AlexandriaRlEst	ARE	126.36	-0.04
AlexionPharm	ALXN	121.91	3.24
Alibaba	BABA	204.43	-4.14
AlignTech	ALGN	365.24	-4.86
Alkermes	ALKS	50.97	0.20
Alleghany	Y	586.49	-1.32
Allegion	ALLE	80.17	-1.31
Allergan	AGN	173.05	1.33
AllianceData	ADS	234.49	1.02
AlliantEnergy	LNT	41.08	0.75
Allstate	ALL	93.48	0.49
AllyFinancial	ALLY	26.13	-0.25
AlnylamPharm	ALNY	104.62	-1.61
Alphabet C	GOOG	1168.06	-5.40
Alphabet A	GOOGL	1178.69	-4.89
Altaba	AABA	80.17	-1.44
AlticeUSA	ATUS	17.10	-0.22
Altria	MO	56.79	0.19
▼ AlumofChina	ACH	11.72	-0.42
▲ Amazon.com	AMZN	1734.78	10.99
Ambev	ABEV	5.00	0.01
Amdocs	DOX	69.60	-0.54
Amerco	UHAL	360.27	2.30
Ameren	AEE	58.28	0.64
AmericaMovil A	AMOV	15.79	-0.16
AmericaMovil	AMX	15.96	-0.05
AmerAirlines	AAL	41.51	-0.93
AEP	AEP	66.87	1.41
AmerExpress	AXP	97.14	-1.33
AmericanFin	AFG	109.69	0.16
AmHomes4Rent	AMH	21.53	0.33
AIG	AIG	55.50	-0.05
AmerTowerREIT	AMT	139.08	0.85
AmerWaterWorks	AWK	82.80	0.85
Ameriprise	AMP	148.30	-0.45
AmerisourceBrgn	ABC	92.17	0.60
Ametek	AME	73.38	-1.51
Amgen	AMGN	186.19	2.24
Amphenol	APH	89.68	-1.12
AnadarkoPetrol	APC	69.08	-0.56
AnalogDevices	ADI	100.06	-1.03
Andeavor	ANDV	137.99	-0.39
AndeavorLog	ANDX	43.74	-0.28
AB InBev	BUD	96.42	-0.18
AnnalyCap	NLY	10.59	0.06
AnteroResources	AR	20.18	0.39
Anthem	ANTM	244.49	0.45
Aon	AON	139.70	-0.56
Apache	APA	43.26	0.42
ApartmtInv	AIV	40.75	-0.20
ApolloGlbMgmt	APO	31.65	-0.54
Apple	AAPL	185.69	-3.05
ApplMaterials	AMAT	48.55	0.23
Aptiv	APTV	100.56	-2.37
AquaAmerica	WTR	34.21	0.35
Aramark	ARMK	38.49	-0.88
ArcelorMittal	MT	31.62	-1.22
ArchCapital	ACGL	80.72	0.34
ArcherDaniels	ADM	46.07	-0.12
Arconic	ARNC	17.40	-0.24
AristaNetworks	ANET	273.80	-5.42
ArrowElec	ARW	78.37	-0.23
AspenTech	AZPN	96.60	-0.96
AstraZeneca	AZN	35.94	-0.16
AthenaHealth	ATHN	160.55	0.76
Athene	ATH	45.52	-0.50
Atlassian	TEAM	65.04	-1.57
AtmosEnergy	ATO	88.32	1.21
Autodesk	ADSK	141.04	-0.22
Autohome	ATHM	114.82	-3.79
Autoliv	ALV	155.82	-2.68
ADP	ADP	138.60	-0.39
AutoZone	AZO	686.49	-0.48
Avalonbay	AVB	167.29	-0.29
Avangrid	AGR	51.40	0.60
AveryDennison	AVY	102.07	-3.06
AxaltaCoating	AXTA	30.51	0.03
BB&T	BBT	52.23	-0.05
▼ BCE	BCE	40.54	-0.39
BHPBilliton	BHP	47.64	-1.33
BHPBilliton	BBL	43.39	-1.31
BOK Fin	BOKF	97.99	1.93
BP	BP	45.15	-0.20
BT Group	BT	13.85	0.01
BWX Tech	BWXT	62.95	-2.13
Baidu	BIDU	262.11	-6.78
BakerHughes	BHGE	32.75	0.21
Ball	BLL	35.97	-0.77
BancoBilbaoViz	BBVA	6.91	0.07
BancodeChile	BCH	94.84	-0.31
BcoSantChile	BSAC	31.75	-0.16
BcoSantMex	BSMX	6.60	-0.04
BancoSantander	SAN	5.43	...
BanColombia	CIB	46.64	-0.96
BankofAmerica	BAC	29.26	-0.14
BankofMontreal	BMO	77.02	-0.48
BankNY Mellon	BK	57.34	0.10
▼ BkNovaScotia	BNS	57.13	-0.57
BankofOzarks	OZRK	47.96	0.14
Barclays	BCS	10.38	-0.18
BarrickGold	ABX	12.86	0.02
BaxterIntl	BAX	74.17	-0.13
BectonDicknsn	BDX	230.02	-1.07
BeiGene	BGNE	165.10	-2.02
Berkley	WRB	74.78	0.50
BerkHathwy A	BRK.A	286699	-900.10
BerkHathwy B	BRK.B	190.35	-0.76
BerryGlobal	BERY	46.45	-0.04
BestBuy	BBY	76.41	-0.65
Bilibili	**BILI**	**19.18**	**-2.10**
Bio-Techne	TECH	163.56	-0.12
Bio-RadLab A	BIO	299.87	-1.59
Biogen	BIIB	292.04	2.92
BioMarinPharm	BMRN	95.62	0.04
▲ BlackKnight	BKI	53.70	0.80
BlackBerry	BB	11.89	-0.31
BlackRock	BLK	526.61	-0.93
Blackstone	BX	32.73	-0.31
bluebirdbio	BLUE	177.80	1.15
Boeing	BA	341.12	-13.62
BookingHldgs	BKNG	2139.26	-5.96
BoozAllen	BAH	45.42	0.19
BorgWarner	BWA	47.13	-0.85
BostonProps	BXP	118.78	-0.09
BostonSci	BSX	31.92	-0.37
Braskem	BAK	26.33	-0.15
BrightHorizons	BFAM	106.00	0.52
Bristol-Myers	BMY	53.64	-0.01
BritishAmTob	BTI	48.55	0.21
Broadcom	AVGO	260.95	-1.80
BroadridgeFinl	BR	116.16	-0.30
BrookfieldMgt	BAM	40.92	-0.54
BrookfieldInfr	BIP	39.17	0.06
Brown&Brown	BRO	28.51	0.09
Brown-Forman A	BF.A	50.95	-0.40
Brown-Forman B	BF.B	52.51	-0.63
BuckeyePtrs	BPL	36.39	0.06
Bunge	BG	71.86	0.78
BurlingtonStrs	BURL	153.59	-0.51
CA	CA	36.93	-0.17
CBRE Group	CBRE	48.71	-0.04
CBS A	CBS.A	56.99	0.29
CBS B	CBS	56.46	0.15
CDK Global	CDK	64.15	-0.14
CDW	CDW	84.72	-0.32
CF Industries	CF	45.20	-0.75
CGI Group	GIB	62.46	-0.10
CH Robinson	CHRW	89.98	-0.65
CIT Group	CIT	51.24	-0.04
CME Group	CME	166.96	-2.24
CMS Energy	CMS	45.21	0.73
CNA Fin	CNA	47.77	0.22
CNH Indl	CNHI	10.90	-0.37
CNOOC	CEO	161.09	-3.39
CRH	CRH	36.62	-0.64
CSX	CSX	64.83	-1.28
CVS Health	CVS	70.77	3.03
CabotOil	COG	23.95	0.23
CadenceDesign	CDNS	44.92	-0.26
CaesarsEnt	CZR	11.40	-0.35
CamdenProperty	CPT	89.59	-0.24
CampbellSoup	CPB	37.03	0.36
▲ CanadaGoose	GOOS	67.42	2.69
CIBC	CM	86.96	-0.52
CanNtlRlwy	CNI	80.97	-1.50
CanNaturalRes	CNQ	31.54	-0.32
CanPacRlwy	CP	190.35	-3.09
Canon	CAJ	33.34	-0.01
CanopyGrowth	CGC	32.05	1.22
CapitalOne	COF	96.34	-1.09
CardinalHealth	CAH	54.10	1.10
Carlisle	CSL	107.36	-0.97
Carlyle	CG	22.35	-0.30
CarMax	KMX	72.75	0.35
Carnival	CCL	63.47	-0.98
Carnival	CUK	63.91	-0.60
Carvana	CVNA	43.68	0.49
Caterpillar	CAT	143.30	-5.38
CboeGlobalMkts	CBOE	105.20	1.66
Celanese A	CE	112.13	-2.44
Celgene	CELG	79.44	1.71
Cemex	CX	6.21	0.04
CenovusEnergy	CVE	9.41	-0.10
Centene	CNC	124.27	-0.77
CenterPointEner	CNP	26.38	0.30
CenturyLink	CTL	18.44	0.31
Cerner	CERN	61.37	...
CharterComms	CHTR	292.99	-2.26
CheckPoint	CHKP	99.59	-0.87
Chemours	CC	47.20	-1.45
CheniereEnergy	LNG	64.89	-0.23
CheniereEnerPtrs	CQP	35.69	-0.13
▲ CheniereEnHldgs	CQH	31.21	0.93
Chevron	CVX	125.54	-0.43
ChinaEastrnAir	CEA	41.90	-0.83
ChinaLifeIns	LFC	13.68	-0.22
▼ ChinaMobile	CHL	44.38	-0.22
ChinaPetrol	SNP	89.87	-1.25
ChinaSoAirlines	ZNH	53.32	-1.22
ChinaTelecom	CHA	45.14	-0.84
ChinaUnicom	CHU	12.70	-0.13
Chipotle	CMG	469.22	0.76
Chubb	CB	129.65	0.21
ChunghwaTel	CHT	35.99	0.08
Church&Dwight	CHD	51.44	1.16
Cigna	CI	173.36	-0.57
CimarexEnergy	XEC	93.07	3.15
CincinnatiFin	CINF	68.76	0.29
Cintas	CTAS	190.55	-0.48
CiscoSystems	CSCO	43.82	-0.39
Citigroup	C	66.78	0.03
CitizensFin	CFG	41.75	-0.10
CitrixSystems	CTXS	108.36	0.88
Clorox	CLX	127.56	0.63
Coca-Cola	KO	43.60	0.05
Coca-Cola Euro	CCE	39.27	-0.26
▼ Coca-Cola Femsa	KOF	54.72	-0.64
Cognex	CGNX	45.27	-0.56
CognizantTech	CTSH	79.20	-0.81
ColgatePalm	CL	64.00	0.69
ColumbiaSportswr	COLM	92.59	-0.04
Comcast A	CMCSA	32.81	0.23
Comerica	CMA	95.31	0.63
CommerceBcshrs	CBSH	66.22	0.33
ConagraBrands	CAG	38.30	0.36
ConchoRscs	CXO	130.55	1.93
ConocoPhillips	COP	66.26	-0.34
ConEd	ED	74.86	0.96
ConstBrands A	STZ	231.85	-0.41
ContinentalRscs	CLR	62.23	0.13
Cooper	COO	233.54	-1.06
▲ Copart	CPRT	59.43	0.61
Corning	GLW	28.38	-0.49
CoStar	CSGP	414.57	-2.30
Costco	COST	207.53	1.32
Coty	COTY	14.46	0.29
Credicorp	BAP	223.50	0.17
CreditAcceptance	CACC	368.04	-1.04
CreditSuisse	CS	15.12	-0.10
CrownCastle	CCI	101.93	0.97
CrownHoldings	CCK	44.84	-0.93
Ctrip.com	CTRP	49.90	-1.32
Cullen/Frost	CFR	113.99	0.46
▼ Cummins	CMI	139.77	-2.64
CypressSemi	CY	17.23	-0.40
D E F			
DCT Industrial	DCT	64.78	-0.67
DISH Network	DISH	34.01	-0.44
DTE Energy	DTE	99.10	1.70
DXC Tech	DXC	83.06	-0.59
Danaher	DHR	100.03	-1.24
Darden	DRI	94.61	0.29
DaVita	DVA	72.97	0.06
Deere	DE	142.28	-5.51
DellTechs	DVMT	89.00	-0.57
DeltaAir	DAL	53.78	-1.02
DentsplySirona	XRAY	45.01	0.29
DeutscheBank	DB	11.17	0.09
DevonEnergy	DVN	41.61	0.51
DexCom	DXCM	100.81	-0.08
Diageo	DEO	144.88	-0.82
DiamondbkEner	FANG	127.58	5.00
DigitalRealty	DLR	106.26	0.32
DiscoverFinSvcs	DFS	73.94	-0.65
DiscoveryA	DISCA	27.55	0.34
DiscoveryC	DISCK	25.68	0.34
Disney	DIS	106.10	-0.96
DocuSign	DOCU	63.87	-0.03
DolbyLab	DLB	65.12	-0.44
DollarGeneral	DG	97.43	-0.51
DollarTree	DLTR	87.27	-1.13
DominionEner	D	66.94	0.94
▲ Domino's	DPZ	287.39	5.66
Donaldson	DCI	46.80	-0.99
DouglasEmmett	DEI	39.38	0.12
Dover	DOV	74.43	-2.06
DowDuPont	DWDP	66.36	-1.43
DrPepperSnap	DPS	121.79	-0.01
Dropbox	**DBX**	**39.70**	**-2.30**
DukeEnergy	DUK	75.67	1.26
DukeRealty	DRE	28.28	-0.23
ENI	E	36.12	0.18
EOG Rscs	EOG	117.08	0.46
EPAM Systems	EPAM	123.31	-3.12
EQT	EQT	56.45	0.55
E*TRADE	ETFC	64.47	0.08
EXACT Sci	EXAS	69.49	-0.47
EastWestBncp	EWBC	70.19	0.17
EastmanChem	EMN	104.19	-3.64
Eaton	ETN	78.21	-1.02
EatonVance	EV	54.43	-0.26
eBay	EBAY	39.18	0.32
Ecolab	ECL	144.59	-0.34
Ecopetrol	EC	19.92	-0.63
EdisonInt	EIX	60.57	0.08
EdwardsLife	EW	153.60	0.49
ElectronicArts	EA	143.09	-1.77
EmersonElec	EMR	70.56	-1.58
Enbridge	ENB	31.70	-0.61
Encana	ECA	12.22	-0.20
▲ EncompassHealth	EHC	67.87	0.16
EnelAmericas	ENIA	9.41	0.05
EnelChile	ENIC	5.21	-0.08
Energen	EGN	64.47	0.74
EnergyTransferEq	ETE	17.14	0.01
EnergyTransfer	ETP	18.79	-0.06
Entergy	ETR	79.98	1.58
EnterpriseProd	EPD	27.93	-0.34
Equifax	EFX	126.02	1.23
Equinix	EQIX	401.76	0.07
Equinor	EQNR	26.17	-0.37
EquityLife	ELS	90.44	-0.88
EquityResdntl	EQR	62.01	-0.41
EssexProp	ESS	232.52	0.04
EsteeLauder	EL	155.00	-2.05
EverestRe	RE	229.23	2.48
Evergy	EVRG	53.97	1.04
EversourceEner	ES	55.76	0.67
Exelon	EXC	41.61	-0.11
Expedia	EXPE	124.67	-0.59
ExpeditorsIntl	EXPD	74.63	-2.12
ExpressScripts	ESRX	80.58	0.10
ExtraSpaceSt	EXR	97.34	0.16
ExxonMobil	XOM	80.70	-0.12
F5Networks	FFIV	179.54	-1.74
FMC	FMC	86.20	-2.42
Facebook	FB	197.49	-0.82
FactSet	FDS	213.91	0.10
FairIsaac	FICO	200.16	-0.40
Fastenal	FAST	52.12	-0.25
FederalRealty	FRT	118.20	-0.71
FedEx	FDX	258.39	-5.28
Ferrari	RACE	145.45	-2.36
FiatChrysler	FCAU	20.64	-0.19
FibriaCelulose	FBR	18.96	-0.36
FidNatlFin	FNF	37.64	-0.33
FidNatlInfo	FIS	107.39	0.12
FifthThirdBncp	FITB	30.57	-0.10
58.com	WUBA	78.86	-1.96
51job	JOBS	103.92	-3.08
FirstData	FDC	21.84	0.17
FirstHorizonNatl	FHN	19.18	0.07
FirstRepBank	FRC	100.67	0.92
FirstEnergy	FE	34.92	0.18
Fiserv	FISV	76.16	-0.06
▲ FleetCorTech	FLT	220.08	-0.36
Flex	FLEX	14.20	-0.15
FlirSystems	FLIR	54.00	-0.72
Fluor	FLR	49.21	-0.50
FomentoEconMex	FMX	82.05	-0.49
FootLocker	FL	56.03	0.13
FordMotor	F	11.89	-0.10
ForestCity A	FCE.A	23.01	0.09
Fortinet	FTNT	64.32	-1.85
Fortis	FTS	31.42	0.17
Fortive	FTV	79.01	-1.36
FortBrandsHome	FBHS	56.61	0.61
Franco-Nevada	FNV	69.20	-0.73
FranklinRscs	BEN	33.41	0.04
FreeportMcM	FCX	16.26	-0.54
FreseniusMed	FMS	50.34	-0.01
G H I			
GGP	GGP	20.59	-0.08
Gallagher	AJG	66.02	-0.37
Gaming&Leisure	GLPI	35.02	-0.12
Gap	GPS	32.53	-0.01
GardnerDenver	GDI	29.47	-0.51
Garmin	GRMN	60.93	-0.33
Gartner	IT	137.20	-0.56
▼ GeneralDynamics	GD	190.69	-5.28
GeneralElec	GE	12.95	-0.25
GeneralMills	GIS	44.98	0.25
GeneralMotors	GM	42.26	-1.69
Gentex	GNTX	25.07	-0.15
GenuineParts	GPC	93.90	-0.41
Gerdau	GGB	3.71	-0.05
Gildan	GIL	28.76	-0.61
GileadSciences	GILD	70.94	1.88
GSK	GSK	41.04	-0.23
GlobalPayments	GPN	116.18	-0.97
GoDaddy	GDDY	73.80	-0.94
Goldcorp	GG	13.72	-0.29
GoldmanSachs	GS	228.32	-3.07
Goodyear	GT	25.03	-0.13
Graco	GGG	45.83	-0.50
GrafTechIntl	EAF	19.26	-0.73
Grainger	GWW	312.11	-4.00
Grifols	GRFS	22.60	-0.17
GrubHub	GRUB	114.00	-3.31
GpoAvalAcc	AVAL	8.27	-0.16
GrupoTelevisa	TV	17.74	-0.12
Guidewire	GWRE	93.48	-0.72
HCA Healthcare	HCA	105.52	-0.43
HCP	HCP	24.00	0.05
HDFC Bank	HDB	103.44	-0.56
HD Supply	HDS	43.47	-0.84
HP	HPQ	23.52	-0.13
HSBC	HSBC	48.09	-0.42
HUYA	**HUYA**	**42.72**	**-5.85**
Halliburton	HAL	46.11	-0.51
Hanesbrands	HBI	20.99	0.14
HarleyDavidson	HOG	44.71	-0.86
Harris	HRS	145.45	-3.82
HartfordFinl	HIG	53.05	-0.12
Hasbro	HAS	90.00	-1.11
Heico	HEI	90.30	-1.92
Heico A	HEI.A	73.50	-1.00
Helm&Payne	HP	64.04	0.17
HenrySchein	HSIC	72.40	-0.50
Hershey	HSY	91.92	0.37
Hess	HES	61.40	-0.20
HewlettPackard	HPE	15.90	-0.01
Hexcel	HXL	68.80	-2.00
Hill-Rom	HRC	91.06	-0.11
Hilton	HLT	82.98	-1.35
HollyFrontier	HFC	74.70	0.50
Hologic	HOLX	39.75	-0.49
HomeDepot	HD	199.21	-1.48
HondaMotor	HMC	31.29	-0.38
Honeywell	HON	147.28	-2.67
HormelFoods	HRL	35.71	0.04
DR Horton	DHI	41.71	-0.22
HostHotels	HST	21.11	-0.07
HuanengPower	HNP	27.27	-0.70
Huazhu	HTHT	47.82	-1.66
Hubbell	HUBB	110.28	-2.92
Humana	HUM	299.81	-5.29
JBHunt	JBHT	127.30	-1.99
HuntingtonBcshs	HBAN	15.37	0.04
HuntingIngalls	HII	214.53	-7.22
Huntsman	HUN	31.15	-1.40
HyattHotels	H	82.29	-1.34
IAC/InterActive	IAC	162.91	-1.82
ICICI Bank	IBN	8.61	-0.07
ICU Medical	ICUI	301.95	0.15
IdexxLab	IDXX	225.38	-0.87
IHSMarkit	INFO	50.67	...
ING Groep	ING	14.60	-0.09
Invesco	IVZ	26.98	0.16
IPG Photonics	IPGP	239.38	-4.46
IQVIA	IQV	105.95	1.07
IcahnEnterprises	IEP	72.25	-0.48
Icon	ICLR	135.81	1.04
IDEX	IEX	141.60	-2.39
IllinoisToolWks	ITW	143.11	-2.61
Illumina	ILMN	285.74	-3.11
ImperialOil	IMO	32.23	-0.91
Incyte	INCY	72.98	0.96
Infosys	INFY	18.20	-0.24
Ingersoll-Rand	IR	91.02	-1.00
Ingredion	INGR	115.25	0.81
Intel	INTC	52.93	-0.29
InteractiveBrkrs	IBKR	67.81	-0.84
ICE	ICE	74.27	-0.14
InterContinentl	IHG	64.67	-1.08
IBM	IBM	143.90	-0.58
IntlFlavors	IFF	125.31	-0.24
IntlPaper	IP	54.78	-1.08
Interpublic	IPG	23.36	-0.27
▲ Intuit	INTU	210.61	1.45
IntuitiveSurgical	ISRG	488.60	-2.07
InvitatHomes	INVH	22.25	-0.22
▲ iQIYI	IQ	42.58	-1.35
IronMountain	IRM	33.83	0.45
IsraelChemicals	ICL	4.72	-0.06
ItauUnibanco	ITUB	10.52	0.42
J K L			
JD.com	JD	41.89	-1.87
JPMorganChase	JPM	107.55	-0.63
▲ JackHenry	JKHY	133.15	1.04
JacobsEngg	JEC	64.80	-0.70
JamesHardie	JHX	16.06	-0.07
JanusHenderson	JHG	32.03	0.33
▲ JazzPharma	JAZZ	180.35	2.54
JefferiesFin	JEF	22.40	0.19
JetBlue	JBLU	18.97	-0.21
J&J	JNJ	122.57	1.25
JohnsonControls	JCI	34.50	-0.04
JonesLang	JLL	169.04	2.26
JuniperNetworks	JNPR	26.82	-0.25
KAR Auction	KAR	55.08	0.01
KB Fin	KB	49.70	-0.56
KKR	KKR	24.18	0.22
KLA Tencor	KLAC	110.58	-1.47
KT	KT	13.86	-0.17
KSCitySouthern	KSU	106.86	-1.99
Kellogg	K	66.59	0.33
KeyCorp	KEY	20.57	0.13
KeysightTechs	KEYS	61.24	-0.26
KilroyRealty	KRC	75.88	-0.31
KimberlyClark	KMB	102.34	1.60
KimcoRealty	KIM	16.46	0.10
KinderMorgan	KMI	17.35	0.19
Knight-Swift	KNX	41.35	-0.40
Kohl's	KSS	75.35	1.02
KoninklijkePhil	PHG	41.65	-0.58
KoreaElcPwr	KEP	15.10	-0.65
KraftHeinz	KHC	62.14	1.27
Kroger	KR	25.99	-0.02
Kyocera	KYO	57.15	-1.03
LATAMAirlines	LTM	11.48	0.10
L Brands	LB	35.96	-0.40
▼ LG Display	LPL	8.92	-0.17
LINE	LN	39.16	0.19
LKQ	LKQ	32.83	-0.22
LPL Financial	LPLA	68.98	-0.65
L3 Tech	LLL	193.63	-4.72
LabCpAm	LH	187.31	1.40
LamResearch	LRCX	173.35	-0.85
LamarAdv	LAMR	69.08	-0.92
LambWeston	LW	66.38	1.45
LasVegasSands	LVS	79.34	-1.18
Lazard	LAZ	52.06	-1.39
Lear	LEA	200.56	-2.42
Leidos	LDOS	59.50	...
Lennar A	LEN	52.07	0.10
Lennar B	LEN.B	42.27	0.78
LennoxIntl	LII	205.99	-3.27
LibertyBroadbandC	LBRDK	75.91	-0.42
LibertyBroadbandA	LBRDA	75.48	-0.40
LibertyGlobal C	LBTYK	27.91	-0.32
LibertyGlobal A	LBTYA	29.00	-0.23
LibertyFormOne A	FWONA	31.93	-0.25
LibertyFormOne C	FWONK	33.49	-0.27
LibertyBraves A	BATRA	25.79	0.10
LibertyBraves C	BATRK	25.93	0.10
LibertySirius C	LSXMK	47.18	-0.72
LibertySirius A	LSXMA	47.07	-0.78
LibertyProperty	LPT	43.67	-0.70
EliLilly	LLY	86.82	0.71
LincolnElectric	LECO	90.95	-2.23
LincolnNational	LNC	65.32	-1.40
LiveNationEnt	LYV	46.96	-0.01
▼ LloydsBanking	LYG	3.28	...
LockheedMartin	LMT	302.52	-7.00
Loews	L	49.73	-0.20
LogitechIntl	LOGI	44.37	-0.98
Lowe's	LOW	98.16	-0.43
lululemon	LULU	128.10	-1.59
LyondellBasell	LYB	111.25	-3.46
M N			
M&T Bank	MTB	174.37	0.30
MGM Resorts	MGM	29.91	-1.41
MPLX	MPLX	34.64	-0.54
MSCI	MSCI	171.76	0.18
Macerich	MAC	55.91	0.22
Macy's	M	38.88	0.15
MadisonSquGarden	MSG	276.01	-3.99
MagellanMid	MMP	69.54	0.10
MagnaIntl	MGA	63.42	-2.25
▼ Manpower	MAN	90.29	-0.87
ManulifeFin	MFC	18.71	-0.19
MarathonOil	MRO	20.53	0.21
MarathonPetrol	MPC	74.52	-0.27
Markel	MKL	1103.44	0.13
MarketAxess	MKTX	214.33	0.46
Marriott	MAR	136.58	-2.09
Marsh&McLen	MMC	82.30	-0.32
MartinMarietta	MLM	227.58	-3.10
MarvellTech	MRVL	21.32	-0.45
Masco	MAS	37.76	-0.02
Mastercard	MA	199.69	-1.44
MatchGroup	MTCH	43.90	0.02
Mattel	MAT	17.11	-0.67
MaximIntProducts	MXIM	60.35	-0.77
McCormick	MKC	105.75	0.20
McCormickVtg	MKC.V	105.64	0.22
McDonalds	MCD	164.97	-1.31
McKesson	MCK	146.74	0.70
Medtronic	MDT	86.61	0.36
MelcoResorts	MLCO	29.24	-0.51
MercadoLibre	MELI	295.26	0.68
Merck	MRK	61.03	0.04
MetLife	MET	45.73	-0.90
MettlerToledo	MTD	581.06	-4.25
MichaelKors	KORS	67.02	-1.58
MicroFocus	MFGP	17.97	-0.14
MicrochipTech	MCHP	100.40	-1.24
MicronTech	MU	59.25	0.80
Microsoft	MSFT	100.86	...
MidAmApt	MAA	96.29	0.27
Middleby	MIDD	104.23	-2.44
▼ MitsubishiUFJ	MUFG	5.80	-0.06
MizuhoFin	MFG	3.47	0.03
MobileTeleSys	MBT	8.82	-0.14
MohawkInds	MHK	210.59	0.44
MolinaHealthcare	MOH	96.86	0.32
MolsonCoors B	TAP	67.62	0.61
Momo	MOMO	51.09	-2.04
Mondelez	MDLZ	40.34	0.16
MonolithicPower	MPWR	139.07	-2.05
MonsterBev	MNST	55.88	-0.21
Moody's	MCO	173.23	-1.93
MorganStanley	MS	49.92	-0.85
Mosaic	MOS	28.31	-0.94
▲ MotorolaSol	MSI	115.80	0.30
Mylan	MYL	38.73	0.15
NICE	NICE	110.95	0.45
NRG Energy	NRG	31.96	-1.02
NVR	NVR	3099.00	-7.00
NXP Semi	NXPI	108.99	-2.46
Nasdaq	NDAQ	93.99	-0.22
NationalGrid	NGG	54.94	0.01
NatlOilwell	NOV	42.19	-0.03
NatlRetailProp	NNN	42.22	0.09
NektarTherap	NKTR	57.36	-1.05
NetApp	NTAP	77.89	-0.30
Netease	NTES	249.19	-3.17
▲ Netflix	NFLX	404.98	14.58
▲ Neurocrine	NBIX	102.72	0.43
NewOrientalEduc	EDU	105.69	0.72
NewRelic	NEWR	109.11	-1.52
▲ NewResidInvt	NRZ	18.55	0.18
NewellBrands	NWL	26.26	0.34
NewmontMin	NEM	38.35	-0.08
NewsCorp A	NWSA	15.95	-0.11
NewsCorp B	NWS	16.10	-0.20
NextEraEnergy	NEE	163.00	2.59
NielsenHoldings	NLSN	30.65	-0.32
Nike	NKE	74.26	-1.35
NiSource	NI	24.67	0.28
NobleEnergy	NBL	34.85	-0.13
Nokia	NOK	5.96	-0.10
▼ NomuraHoldings	NMR	4.94	-0.06
Nordson	NDSN	129.56	-1.44
Nordstrom	JWN	51.18	-0.42
NorfolkSouthern	NSC	150.91	-2.87
NorthernTrust	NTRS	107.80	0.69
NorthropGrum	NOC	313.84	-8.58
NorwegCruise	NCLH	53.61	-0.94
▼ Novartis	NVS	73.57	-0.52
NovoNordisk	NVO	44.67	-0.08
Nucor	NUE	65.47	-1.28
Nutanix	NTNX	61.55	-2.16
Nutrien	NTR	52.77	-0.71
NVIDIA	NVDA	260.17	-4.92
O P Q			
OGE Energy	OGE	34.49	0.20
ONEOK	OKE	68.79	0.27
OReillyAuto	ORLY	282.01	-0.10
OccidentalPetrol	OXY	82.58	-1.21
OldDomFreight	ODFL	159.60	-1.38
OldRepublic	ORI	21.09	0.15
OmegaHealthcare	OHI	30.96	-0.29
Omnicom	OMC	75.07	-0.49
ON Semi	ON	24.76	-0.61
OpenText	OTEX	35.47	-0.19
Oracle	ORCL	46.27	-0.25
Orange	ORAN	16.77	-0.01
Orix	IX	80.95	-2.22
OwensCorning	OC	67.04	1.38
PG&E	PCG	39.89	0.10
PNC Fin	PNC	142.15	-0.35
POSCO	PKX	78.06	-3.54
PPG Ind	PPG	104.13	-0.87
PPL	PPL	27.26	-0.05
PRA HealthSci	PRAH	95.36	-0.86
PTC	PTC	97.80	...
PVH	PVH	160.39	-3.22
Paccar	PCAR	62.75	-0.83
PackagingCpAm	PKG	116.72	-2.35
PacWestBancorp	PACW	53.94	-0.04
PagSeguroDig	**PAGS**	**27.40**	**-4.70**
PaloAltoNtwks	PANW	210.97	-0.87
ParkHotels	PK	30.87	...
ParkerHannifin	PH	163.61	-5.94
ParsleyEnergy	PE	27.80	-0.14
Paychex	PAYX	69.45	...
PaycomSoftware	PAYC	113.68	-0.45
PayPal	PYPL	84.52	-1.33
Pearson	PSO	11.34	-0.22
PembinaPipeline	PBA	34.54	-0.30
Pentair	PNR	43.13	-0.75
People'sUtdFin	PBCT	18.53	-0.21
PepsiCo	PEP	105.96	0.58
PerkinElmer	PKI	76.35	-1.18
Perrigo	PRGO	75.64	1.28
PetroChina	PTR	74.68	-1.10
PetroleoBrasil	PBR	9.52	0.25
PetroleoBrasilA	PBR.A	8.19	0.38
Pfizer	PFE	36.22	0.06
PhilipMorris	PM	80.84	0.81
Phillips66	PSX	114.58	-0.36
PinnacleFoods	PF	64.40	0.07
PinnacleWest	PNW	77.69	1.34
PioneerNatRscs	PXD	180.14	-4.46
PivotalSoftware	PVTL	28.46	0.62
PlainsAllAmPipe	PAA	24.58	-0.08
PlainsGP	PAGP	25.15	-0.23
PolarisIndustries	PII	124.62	-3.25
▲ Pool	POOL	154.59	0.59
Praxair	PX	155.31	-3.16
PrincipalFin	PFG	55.78	-0.27
Procter&Gamble	PG	76.33	0.49
Progressive	PGR	61.96	0.46
Prologis	PLD	63.51	-0.66
Proofpoint	PFPT	123.79	-1.97
PrudentialFin	PRU	97.60	-0.35
Prudential	PUK	48.40	-0.30
PublicServiceEnt	PEG	52.86	0.01
PublicStorage	PSA	217.07	2.39
PulteGroup	PHM	29.43	-0.19
PureStorage	PSTG	24.46	-0.44
Qiagen	QGEN	36.52	-0.24
Qorvo	QRVO	83.51	-2.28
Qualcomm	QCOM	58.70	-0.50
QuestDiag	DGX	110.67	0.32
QurateRetailA	QRTEA	21.28	-0.20
R S			
RELX	RENX	21.11	-0.29
RELX	RELX	21.55	-0.33
RPM	RPM	50.54	-0.15
RSP Permian	RSPP	41.46	0.63
RalphLauren	RL	139.41	-1.17
▼ RandgoldRscs	GOLD	74.68	-0.51
RaymondJames	RJF	96.95	-0.83
Raytheon	RTN	196.60	-6.01
RealtyIncome	O	52.86	-0.04
RedHat	RHT	170.64	-5.63
RegencyCtrs	REG	59.06	-0.58
RegenPharm	REGN	327.07	11.46
RegionsFin	RF	18.95	0.23
ReinsGrp	RGA	141.65	-0.37
RelianceSteel	RS	91.96	-2.53
RepublicSvcs	RSG	69.16	-0.07
ResMed	RMD	106.10	-0.18
RestaurantBrands	QSR	60.80	-0.17
RingCentral	RNG	77.00	-3.35
RioTinto	RIO	54.95	-2.11
RobertHalf	RHI	69.25	-0.55
Rockwell	ROK	170.26	-5.21
RockwellCollins	COL	134.60	-2.69
RogersComm B	RCI	46.53	-0.51
Rollins	ROL	52.72	-0.21
RoperTech	ROP	276.41	-5.25
RossStores	ROST	84.95	...
RoyalBkCanada	RY	75.27	-0.84
RoyalBkScotland	RBS	6.90	0.05
RoyalCaribbean	RCL	112.30	-2.32
RoyalDutchA	RDS.A	67.50	-0.10
RoyalDutchB	RDS.B	71.05	-0.22
RoyalGold	RGLD	92.17	-0.06
Ryanair	RYAAY	113.61	-0.28
SAP	SAP	118.51	-0.96
S&P Global	SPGI	207.24	-0.36
SBA Comm	SBAC	158.45	0.60
SEI Investments	SEIC	65.87	-0.11
Sina	SINA	89.14	-3.01
SINOPEC	SHI	67.60	0.23
SK Telecom	SKM	23.74	-0.14
SLGreenRealty	SLG	99.37	-0.42
▲ SS&C Tech	SSNC	54.67	0.16
SVB Fin	SIVB	316.78	-1.49
Sabre	SABR	25.99	-0.01
SageTherap	SAGE	162.09	-0.70
Salesforce.com	CRM	139.52	-0.28
Sanofi	SNY	39.15	-0.44
SantanderCons	SC	19.00	-0.12
▲ **SareptaTherap**	**SRPT**	**143.93**	**38.69**
Sasol	SSL	35.18	-0.77
Schlumberger	SLB	65.70	-1.34
SchwabC	SCHW	55.27	-0.21
Seagate	STX	57.95	-0.40
SealedAir	SEE	44.05	-0.69
SeattleGenetics	SGEN	65.78	0.03
SemicondctrMfg	SMI	6.85	-0.22
SempraEnergy	SRE	113.27	0.60
ServiceCorp	SCI	36.42	-0.04
ServiceMaster	SERV	60.40	0.01
ServiceNow	NOW	183.61	-2.80
ShawComm B	SJR	20.77	-0.17
SherwinWilliams	SHW	397.61	-0.73
ShinhanFin	SHG	40.98	-0.20
Shire	SHPG	156.98	-3.07
Shopify	SHOP	170.61	-2.23
SignatureBank	SBNY	129.73	1.17
SimonProperty	SPG	165.39	0.35
SiriusXM	SIRI	7.47	-0.17
SixFlags	SIX	71.98	-0.06
Skyworks	SWKS	99.44	-1.66
SmithAO	AOS	61.49	-1.35
Smith&Nephew	SNN	36.53	0.10
Smucker	SJM	104.52	0.33
Snap	**SNAP**	**13.31**	**-0.74**
SnapOn	SNA	158.78	-0.56
SOQUIMICH	SQM	48.07	-1.50
Sogou	**SOGO**	**13.93**	**-1.50**
Sony	SNE	48.24	-0.13
Southern	SO	45.06	0.49
SoCopper	SCCO	47.26	-1.34
SouthwestAir	LUV	51.71	-0.66
SpectraEnerPtrs	SEP	31.36	-0.29
SpiritAeroSys	SPR	86.00	-2.20
Splunk	SPLK	116.74	-0.49
Spotify	SPOT	169.89	-4.46
Sprint	S	5.53	-0.02
Square	SQ	65.96	-0.24
StanleyBlackDck	SWK	137.76	-3.47
Starbucks	SBUX	57.43	0.21
StateStreet	STT	97.74	-0.92
SteelDynamics	STLD	46.48	-1.00
Steris	STE	106.75	-0.79
STMicroelec	STM	24.72	-1.08
Stryker	SYK	169.73	-0.52
SumitomoMits	SMFG	8.17	0.03
SunComms	SUI	95.70	-0.76
SunLifeFinancial	SLF	41.02	-0.29
SuncorEnergy	SU	39.53	-0.22
SunTrustBanks	STI	68.93	0.25
Symantec	SYMC	20.99	-0.17
SynchronyFin	SYF	34.81	-0.19
Synopsys	SNPS	89.20	-1.28
SynovusFin	SNV	55.79	0.37
▲ Sysco	SYY	66.90	0.15
T U V			
TAL Education	TAL	40.22	0.04
TD Ameritrade	AMTD	59.22	-0.14
TE Connectivity	TEL	96.73	-1.55
Telus	TU	34.90	-0.20
Ternium	TX	35.11	-0.54
TIM Part	TSU	17.22	0.21
TJX	TJX	95.75	-0.21
T-MobileUS	TMUS	60.54	0.18
TRowePrice	TROW	122.93	-0.78
TableauSftwr	DATA	104.29	-0.19
TaiwanSemi	TSM	37.56	-0.69
TakeTwoSoftware	TTWO	117.83	-2.86
Tapestry	TPR	46.88	-0.05
TargaResources	TRGP	47.66	0.26
Target	TGT	76.57	-0.55
TataMotors	TTM	22.12	-0.53
TechnipFMC	FTI	31.47	-0.02
TeckRscsB	TECK	26.31	-0.34
TelecomArgentina	TEO	21.21	0.46
TelecomItalia	TI	7.88	0.04
TelecomItalia A	TI.A	6.81	0.07
TeledyneTech	TDY	201.51	-3.47
Teleflex	TFX	276.35	-3.51
Ericsson	ERIC	7.86	0.13
TelefonicaBras	VIV	12.32	-0.01
▼ Telefonica	TEF	8.55	-0.02
TelekmIndonesia	TLK	25.91	-0.24
Tenaris	TS	34.68	-0.18
Teradyne	TER	38.99	-0.06
Tesla	TSLA	352.55	-18.28
TevaPharm	TEVA	24.05	-0.17
TexasInstruments	TXN	113.66	-0.73
Textron	TXT	66.30	-1.15
ThermoFisherSci	TMO	209.93	-2.89
ThomsonReuters	TRI	40.25	-0.57
3M	MMM	199.39	-4.78
Tiffany	TIF	136.07	-1.27
Torchmark	TMK	84.27	0.15
Toro	TTC	60.70	-1.00
TorontoDomBk	TD	57.19	-0.45
Total	TOT	59.81	-0.95
TotalSystem	TSS	87.65	-0.19
ToyotaMotor	TM	136.15	-0.37
TractorSupply	TSCO	75.61	...
TransCanada	TRP	42.64	-0.22
TransDigm	TDG	337.19	-2.97
TransUnion	TRU	71.78	0.27
Travelers	TRV	128.16	0.57
Trimble	TRMB	33.56	-0.76
▲ TripAdvisor	TRIP	59.12	-0.20
▲ 21stCenturyFoxA	FOXA	44.71	0.15
21stCenturyFoxB	FOX	44.29	-0.08
Twitter	TWTR	44.95	-1.05
▲ TylerTech	TYL	238.16	0.28
TysonFoods	TSN	70.80	-0.20
▼ UBS Group	UBS	15.16	-0.12
UDR	UDR	36.39	-0.08
UGI	UGI	50.61	0.69
▲ US Foods	USFD	37.65	0.34
USG	USG	43.15	-0.11
UbiquitiNetworks	UBNT	87.78	0.43
UltaBeauty	ULTA	246.26	-1.00
UltSoftware	ULTI	279.19	1.23
UltraparPart	UGP	13.04	0.31
UnderArmour A	UAA	22.62	-0.69
UnderArmour C	UA	20.86	-0.70
Unilever	UN	53.96	-0.07
Unilever	UL	53.51	-0.09
UnionPacific	UNP	142.81	-3.74
UnitedContinental	UAL	73.00	-1.49
UnitedMicro	UMC	3.02	-0.01
UPS B	UPS	114.82	-1.95
UnitedRentals	URI	159.39	-3.93
US Bancorp	USB	51.65	0.37
US Steel	X	35.15	-0.97
UnitedTech	UTX	125.05	-2.44
UnitedHealth	UNH	253.02	-1.85
UniversalHealthB	UHS	115.08	-0.08
UnumGroup	UNM	38.53	-0.08
VEREIT	VER	7.32	0.01
VF	VFC	83.45	-0.96
VICI Prop	VICI	20.65	0.05
Visa	V	135.11	-1.09
VailResorts	MTN	280.82	-4.23
Vale	VALE	12.97	-0.20
ValeantPharm	VRX	24.24	0.68
ValeroEnergy	VLO	116.62	0.08
VarianMed	VAR	121.09	-1.14
▲ Vectren	VVC	71.35	-0.03
▼ Vedanta	VEDL	13.20	-0.34
VeevaSystems	VEEV	83.17	-0.04
Ventas	VTR	53.71	0.05
VeriSign	VRSN	143.47	-1.72
VeriskAnalytics	VRSK	109.21	-0.39
Verizon	VZ	48.50	1.04
VertxPharm	VRTX	154.50	2.81
Viacom B	VIAB	29.32	-0.37
Viacom A	VIA	34.40	-0.30
Vipshop	VIPS	11.44	-0.22
VistraEnergy	VST	23.46	-0.06
VMware	VMW	151.25	-0.19
▼ Vodafone	VOD	24.51	0.02
VornadoRealty	VNO	71.70	-0.42
VoyaFinancial	VOYA	51.11	-0.61
VulcanMatls	VMC	131.16	-1.39
W X Y Z			
▼ WABCO	WBC	120.19	-2.20
WEC Energy	WEC	61.77	0.85
WEX	WEX	189.71	-0.43
W.P.Carey	WPC	65.86	0.10
WPP	WPP	79.87	-0.11
WPX Energy	WPX	17.66	0.07
Wabtec	WAB	102.03	-0.57
WalgreensBoots	WBA	64.61	0.46
Walmart	WMT	83.61	0.61
WasteConnections	WCN	75.87	-0.22
WasteMgt	WM	82.68	-0.59
Waters	WAT	195.02	-3.67
Watsco	WSO	186.00	-2.10
Wayfair	W	113.87	0.05
Weibo	**WB**	**101.17**	**-6.14**
WellCareHealth	WCG	238.68	-1.17
WellsFargo	WFC	55.08	...
Welltower	WELL	57.21	0.21
WestPharmSvcs	WST	101.70	0.20
WestAllianceBcp	WAL	61.78	0.10
WesternDigital	WDC	80.51	0.24
WesternGasEquity	WGP	35.64	0.06
WesternGasPtrs	WES	48.88	-0.12
WesternUnion	WU	21.00	0.24
WestlakeChem	WLK	105.61	-3.92
WestpacBanking	WBK	20.72	-0.23
WestRock	WRK	58.49	-0.91
Weyerhaeuser	WY	36.99	-0.13
WheatonPrecMet	WPM	21.98	-0.22
Whirlpool	WHR	147.00	-3.63
Williams	WMB	27.20	0.11
WilliamsPartners	WPZ	40.80	0.16
WillisTowers	WLTW	153.96	-1.02
Wipro	WIT	4.80	-0.03
WooriBank	WF	44.93	0.03
Workday	WDAY	129.56	-1.57
Worldpay	WP	84.93	-0.20
WyndhamDest	WYND	48.21	-0.41
WynnResorts	WYNN	172.42	-2.67
XL Group	XL	56.19	-0.01
XPO Logistics	XPO	111.81	-2.23
XcelEnergy	XEL	44.19	0.59
▼ Xerox	XRX	27.53	0.29
Xilinx	XLNX	68.50	-1.25
Xylem	XYL	68.81	-2.78
YPF	YPF	16.59	0.37
YY	YY	111.48	-2.95
Yandex	YNDX	35.99	-0.86
YumBrands	YUM	81.01	-1.80
YumChina	YUMC	40.29	-0.45
ZTO Express	ZTO	20.30	-1.00
ZayoGroup	ZAYO	36.47	-0.07
ZebraTech	ZBRA	152.56	-2.48
Zendesk	ZEN	58.05	-0.78
Zillow C	Z	63.08	-1.70
Zillow A	ZG	62.93	-1.39
ZimmerBiomet	ZBH	111.81	-0.03
ZionsBancorp	ZION	55.90	0.30
Zoetis	ZTS	87.25	-1.68

BANKRATE.COM® MMA, Savings and CDs

Average Yields of Major Banks

Tuesday, June 19, 2018

Type	MMA	1-MO	2-MO	3-MO	6-MO	1-YR	2-YR	2.5YR	5YR
National average									
Savings	0.17	0.08	0.08	0.20	0.27	0.48	0.66	0.60	1.14
Jumbos	0.32	0.08	0.09	0.21	0.29	0.52	0.72	0.69	1.21
Weekly change									
Savings	0.00	0.01	0.00	0.01	0.01	0.02	0.02	0.00	0.02
Jumbos	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02	0.01

Consumer Savings Rates

Explanation of ratings: Safe Sound SM, (855) 733-0700, evaluates the financial condition of federally insured institutions and assigns a rank of **1,2,3,4 or 5** based on data from the fourth quarter of 2015 from federal regulators. **5:** most desirable performance; **NR:** institution is too new to rate, not an indication of financial strength or weakness. Information is believed to be reliable, but not guaranteed.

High yield savings

Bank/rank, Phone number	Minimum	Yield (%)
Money market and savings account		
VirtualBank /4, (877) 998-2265	$100	2.01
CIT Bank /5, (855) 462-2652	$100	1.85
DollarSavingsDirect /5, (866) 395-8693	$1	1.80
One-month CD		
EH National Bank /4, (888) 392-5265	$0	0.83
M.Y. Safra Bank, FSB /NR, (212) 652-7200	$5,000	0.30
Mount McKinley Bank /5, (907) 452-1751	$5,000	0.15
Two-month CD		
VirtualBank /4, (877) 998-2265	$10,000	0.15
Applied Bank /5, (800) 616-4605	$1,000	0.05
Three-month CD		
CD Bank /4, (888) 201-8185	$10,000	1.90
First Internet Bank of Indiana /4, (888) 873-3424	$1,000	1.56
M.Y. Safra Bank, FSB /NR, (212) 652-7200	$5,000	1.55
Six-month CD		
CD Bank /4, (888) 201-8185	$10,000	2.10
Ally Bank /5, (877) 247-2559	$25,000	2.00
First Internet Bank of Indiana /4, (888) 873-3424	$1,000	1.97
One-year CD		
CD Bank /4, (888) 201-8185	$10,000	2.50
ableBanking, a division of Northeast Bank /5, (888) 426-2253	$1,000	2.50
VirtualBank /4, (877) 998-2265	$10,000	2.35
Two-year CD		
ableBanking, a division of Northeast Bank /5, (888) 426-2253	$1,000	2.80
CD Bank /4, (888) 201-8185	$10,000	2.75
First Internet Bank of Indiana /4, (888) 873-3424	$1,000	2.58
Five-year CD		
Congressional Bank /4, (301) 978-3290	$25,000	3.10
M.Y. Safra Bank, FSB /NR, (212) 652-7200	$5,000	3.06
First Internet Bank of Indiana /4, (888) 873-3424	$1,000	3.04

High yield jumbos - Minimum is $100,000

Bank/rank, Phone number	Yield (%)
Money market and savings account	
VirtualBank /4, (877) 998-2265	2.01
ableBanking, a division of Northeast Bank /5, (877) 505-1933	1.70
Discover Bank /5, (877) 505-4051	1.55
One-month CD	
EH National Bank /4, (888) 392-5265	0.85
M.Y. Safra Bank, FSB /NR, (212) 652-7200	0.30
USAA /NR, (800) 583-8295	0.22
Two-month CD	
VirtualBank /4, (877) 998-2265	0.15
Applied Bank /5, (800) 616-4605	0.05
Citizens Trust Bank /4, (404) 659-5959	0.01
Three-month CD	
Luana Savings Bank /5, (800) 666-2012	1.86
First Internet Bank of Indiana /4, (888) 873-3424	1.56
M.Y. Safra Bank, FSB /NR, (212) 652-7200	1.55
Six-month CD	
Luana Savings Bank /5, (800) 666-2012	2.01
First Internet Bank of Indiana /4, (888) 873-3424	1.97
My eBanc, A Division of BAC Florida Bank /4, (855) 512-0989	1.85
One-year CD	
ableBanking, a division of Northeast Bank /5, (888) 426-2253	2.50
VirtualBank /4, (877) 998-2265	2.35
TIAA Bank /3, (855) 228-6755	2.35
Two-year CD	
ableBanking, a division of Northeast Bank /5, (888) 426-2253	2.80
First Internet Bank of Indiana /4, (888) 873-3424	2.58
M.Y. Safra Bank, FSB /NR, (212) 652-7200	2.56
Five-year CD	
M.Y. Safra Bank, FSB /NR, (212) 652-7200	3.06
First Internet Bank of Indiana /4, (888) 873-3424	3.04
TIAA Bank /3, (855) 228-6755	2.90

Notes: Accounts are federally insured up to $250,000 per person effective Oct. 3, 2008. Yields are based on method of compounding and rate stated for the lowest required opening deposit to earn interest. CD figures are for fixed rates only. MMA: Allows six (6) third-party transfers per month, three (3) of which may be checks. Rates are subject to change.

Source: Bankrate.com, a publication of Bankrate, Inc., North Palm Beach, FL 33408
Internet: www.bankrate.com

MUTUAL FUNDS

Data provided by LIPPER

Notice to Readers

Mutual-fund statistics were delayed due to a production issue at the source. Prices displayed in this table reflect Monday's closing values. Up-to-date mutual-fund data can be found online at WSJMarkets.com.

Top 250 mutual-funds listings for Nasdaq-published share classes by net assets.

e-Ex-distribution. **f**-Previous day's quotation. **g**-Footnotes x and s apply. **j**-Footnotes e and s apply. **k**-Recalculated by Lipper, using updated data. **p**-Distribution costs apply, 12b-1. **r**-Redemption charge may apply. **s**-Stock split or dividend. **t**-Footnotes p and r apply. **v**-Footnotes x and e apply. **x**-Ex-dividend. **z**-Footnote x, e and s apply. **NA**-Not available due to incomplete price, performance or cost data. **NE**-Not released by Lipper; data under review. **NN**-Fund not tracked. **NS**-Fund didn't exist at start of period.

Monday, June 18, 2018

Fund	NAV	Net Chg	YTD %Ret
American Century Inv			
Ultra	49.53	+0.10	14.1
American Funds Cl A			
AmcpA p	33.92	-0.04	10.4
AMutlA p	40.85	-0.16	1.1
BalA p	27.32	-0.04	1.5
BondA p	12.51	...	-2.0
CapIBA p	60.12	-0.23	-2.7
CapWGrA	51.53	-0.24	1.9
EupacA p	54.50	-0.38	-0.2
FdInvA p	63.51	-0.17	3.5
GwthA p	55.01	+0.01	11.0
HI TrA p	10.20	...	1.0
ICAA p	40.75	-0.12	3.0
IncoA p	22.87	-0.05	-0.7
N PerA p	46.09	-0.13	6.8
NEcoA p	49.90	-0.16	11.8
NwWrldA	66.56	-0.37	-0.5
SmCpA p	60.00	+0.01	7.5
TxExA p	12.80	...	-0.6
WshA p	45.12	-0.18	3.0
Baird Funds			
AggBdInst	10.53	...	-2.1
CorBdInst	10.87	...	-2.0
BlackRock Funds A			
GlblAlloc p	19.66	...	-0.2
BlackRock Funds Inst			
EqtyDivd	22.85	-0.05	0.8
GlblAlloc	19.79	...	-0.1
StratIncOpptyIns	9.79	...	-0.2
Bridge Builder Trust			
CoreBond	9.85	-0.01	-1.9
Del Invest Instl			
Value	22.06	-0.13	3.2
Dimensional Fds			
5GlbFxdInc	10.88	...	0.1
EmgMktVa	30.07	-0.28	-3.7
EmMktCorEq	22.01	-0.25	-5.2
IntlCoreEq	14.41	-0.08	-0.9
IntlVal	19.97	-0.12	-2.4
IntSmCo	21.25	-0.08	-0.1
IntSmVa	22.18	-0.10	-3.4
US CoreEq1	24.00	-0.01	5.6
US CoreEq2	22.55	-0.01	4.8
US Small	38.81	+0.20	8.2
US SmCpVal	40.86	+0.21	7.8
US TgdVal	26.44	+0.12	6.4
USLgVa	39.17	-0.18	0.6
Dodge & Cox			
Balanced	106.54	-0.23	1.2
GblStock	13.61	-0.06	-1.8
Income	13.44	...	-1.4
Intl Stk	43.55	-0.33	-6.0
Stock	206.61	-0.65	3.0
DoubleLine Funds			
CoreFxdIncmI	NA	...	NA
TotRetBdI	10.42	+0.01	-0.5
Edgewood Growth Instituti			
EdgewoodGrInst	34.48	+0.05	16.6
Fidelity			
500IdxInst	97.31	-0.21	4.7
500IdxInstPrem	97.31	-0.21	4.7
500IdxPrem	97.31	-0.20	4.7
ExtMktIdxPrem r	67.66	+0.26	9.1
IntlIdxPrem r	42.59	-0.33	-1.3
SAIUSLgCpIndxFd	14.95	-0.03	4.7
TMktIdxF r	80.26	-0.09	5.5
TMktIdxPrem	80.25	-0.09	5.5
USBdIdxInstPrem	11.22	...	-2.0
Fidelity Advisor I			
NwInsghtI	34.60	+0.10	10.4
Fidelity Freedom			
FF2020	16.37	-0.02	1.3
FF2025	14.29	-0.02	1.5
FF2030	17.94	-0.03	2.0
Freedom2020 K	16.35	-0.02	1.3
Freedom2025 K	14.27	-0.02	1.5
Freedom2030 K	17.92	-0.03	2.0
Freedom2035 K	15.20	-0.03	2.6
Freedom2040 K	10.68	-0.02	2.7
Fidelity Invest			
Balanc	24.76	...	4.7
BluCh	101.84	+0.34	16.0
Contra	135.78	+0.54	12.6
ContraK	135.75	+0.54	12.6
CpInc r	10.18	...	2.1
DivIntl	39.57	-0.22	-1.1
GroCo	208.27	+0.41	16.6
GrowCoK	208.31	+0.41	16.6
InvGB	7.68	...	-2.0
InvGrBd	10.92	...	-1.7
LowP r	56.18	+0.02	3.0
MagIn	108.08	+0.32	8.3
OTC	12.82	+0.07	16.7
Puritn	24.43	+0.02	4.7
SrsEmrgMkt	20.48	-0.14	-4.3
SrsGroCoRetail	19.47	+0.04	17.1
SrsIntlGrw	16.31	-0.09	1.0
SrsIntlVal	10.35	-0.07	-3.2
TotalBond	10.34	...	-1.6
First Eagle Funds			
GlbA	59.05	-0.14	...
FPA Funds			
FPACres	34.93	-0.02	0.7
FrankTemp/Frank Adv			
IncomeAdv	2.30	-0.01	0.1
FrankTemp/Franklin A			
CA TF A p	7.30	+0.01	-0.8
IncomeA p	2.32	-0.01	...
RisDv A p	62.22	-0.19	2.0
FrankTemp/Franklin C			
Income C t	2.35	-0.01	-0.3
FrankTemp/Temp A			
Growth A p	27.05	-0.11	-0.8
FrankTemp/Temp Adv			
GlBondAdv p	11.55	+0.03	-0.6
Harbor Funds			
CapApInst	80.46	+0.24	15.9
IntlInst r	NA	...	NA
Harding Loevner			
IntlEq	NA	...	NA
Invesco Funds A			
EqIncA	10.95	-0.02	0.3
John Hancock Class 1			
LSGwth	16.46	-0.02	2.4
John Hancock Instl			
DispValMCI	23.61	...	1.3
JPMorgan Funds			
MdCpVal L	40.86	-0.01	1.4
JPMorgan R Class			
CoreBond	11.27	...	-1.6
CorePlusBd	8.05	...	-1.6
Lazard Instl			
EmgMktEq	17.91	-0.21	-10.5
Lord Abbett A			
ShtDurIncmA p	4.18	...	0.1
Lord Abbett F			
ShtDurIncm	4.18	...	0.1
Metropolitan West			
TotRetBd	10.36	-0.01	-1.8
TotRetBdI	10.36	...	-1.7
TRBdPlan	9.75	...	-1.6
MFS Funds Class I			
ValueI	39.77	-0.19	-2.1
MFS Funds Instl			
IntlEq	25.41	-0.20	-0.2
Oakmark Funds Invest			
EqtyInc r	32.46	-0.04	0.8
Oakmark	87.61	-0.19	3.9
OakmrkInt	27.19	-0.21	-4.8
Old Westbury Fds			
LrgCpStr	14.90	-0.04	3.0
Oppenheimer Y			
DevMktY	NA	...	NA
IntGrowY	44.07	-0.31	1.0
Parnassus Fds			
ParnEqFd	NA	...	NA
PGIM Funds Cl Z			
TotalReturnBond	NA	...	NA
PIMCO Fds Instl			
AllAsset	NA	...	NA
ShortT	NA	...	NA
TotRt	9.94	...	-2.1
PIMCO Funds A			
IncomeFd	NA	...	NA
PIMCO Funds I2			
Income	NA	...	NA
PIMCO Funds Instl			
IncomeFd	NA	...	NA
Price Funds			
BlChip	111.62	+0.20	15.9
EqInc	33.39	-0.06	0.5
EqIndex	74.72	-0.16	4.6
Growth	71.01	+0.14	13.3
HelSci	77.12	-0.36	9.6
InstlCapG	42.68	+0.10	15.6
IntlStk	18.55	-0.14	-0.6
IntlValEq	14.58	-0.09	-3.6
MCapVal	31.71	+0.05	4.3
MidCap	94.59	+0.05	8.7
N Inc	9.17	-0.01	-2.1
NHoriz	62.24	+0.20	18.4
OverS SF r	11.31	-0.08	...
R2020	22.87	-0.03	1.5
R2025	17.93	-0.03	1.9
R2030	26.54	-0.04	2.4
R2035	19.49	-0.04	2.7
R2040	28.08	-0.05	3.1
Value	37.18	-0.07	-0.4
PRIMECAP Odyssey Fds			
AggGrowth r	51.58	+0.10	16.4
Growth r	42.35	-0.03	13.7
Stock r	33.13	-0.12	3.8
Principal Investors			
DivIntlInst	13.65	-0.09	-1.8
Schwab Funds			
S&P Sel	43.12	-0.09	4.7
TIAA/CREF Funds			
BdIdxInst	10.47	-0.01	-2.1
EqIdxInst	20.71	-0.03	5.4
IntlEqIdxInst	19.97	-0.14	-1.0
Tweedy Browne Fds			
GblValue	28.69	-0.18	0.7
VANGUARD ADMIRAL			
500Adml	257.20	-0.54	4.7
BalAdml	35.42	-0.02	2.5
CAITAdml	11.61	...	-0.2
CapOpAdml r	167.79	-0.55	9.2
EMAdmr	36.67	-0.29	-3.8
EqIncAdml	76.83	-0.31	-0.2
ExplrAdml	102.32	+0.46	15.7
ExtndAdml	92.25	+0.35	9.2
GNMAAdml	10.21	...	-1.0
GrwthAdml	79.33	-0.03	9.9
HlthCareAdml r	86.58	-0.87	2.4
HYCorAdml r	5.75	...	-0.4
InfProAd	25.19	+0.04	-0.7
IntlGrAdml	102.88	-0.54	7.6
ITBondAdml	10.92	...	-2.6
ITIGradeAdml	9.38	...	-2.4
LTGradeAdml	9.74	-0.02	-6.4
MidCpAdml	200.73	+0.28	5.1
MorgAdml	102.01	+0.22	12.5
MuHYAdml	11.22	...	-0.2
MuIntAdml	13.88	...	-0.5
MuLTAdml	11.40	...	-0.7
MuLtdAdml	10.84	...	0.4
MuShtAdml	15.72	...	0.7
PrmcpAdml r	145.18	-0.58	8.7
RealEstatAdml	111.91	+0.05	-3.0
SmCapAdml	76.68	+0.29	8.7
SmGthAdml	63.77	+0.25	12.9
STBondAdml	10.23	...	-0.6
STIGradeAdml	10.45	...	-0.5
TotBdAdml	10.40	-0.01	-2.0
TotIntBdIdxAdm	21.83	+0.01	1.0
TotIntlAdmIdx r	29.91	-0.20	-1.7
TotStAdml	70.10	-0.07	5.5
TxMIn r	14.19	-0.09	-1.2
ValAdml	41.38	-0.14	0.5
WdsrIIAdml	66.99	-0.18	0.8
WellsIAdml	63.01	-0.10	-2.1
WelltnAdml	71.51	-0.20	-0.2
WndsrAdml	79.62	-0.19	1.7
VANGUARD FDS			
DivdGro	26.97	-0.13	3.5
INSTTRF2020	22.76	-0.03	1.0
INSTTRF2025	23.16	-0.04	1.3
INSTTRF2030	23.48	-0.05	1.6
INSTTRF2035	23.80	-0.06	1.8
INSTTRF2040	24.12	-0.06	2.1
INSTTRF2045	24.33	-0.07	2.2
INSTTRF2050	24.35	-0.07	2.2
IntlVal	38.90	-0.24	-2.5
LifeCon	19.86	-0.02	0.5
LifeGro	33.98	-0.08	1.9
LifeMod	27.20	-0.04	1.2
PrmcpCor	28.24	-0.12	5.0
SelValu r	30.40	+0.02	-2.8
STAR	27.26	-0.04	2.4
TgtRe2015	15.43	-0.01	0.7
TgtRe2020	31.70	-0.05	1.0
TgtRe2025	18.73	-0.03	1.2
TgtRe2030	34.15	-0.07	1.5
TgtRe2035	21.06	-0.05	1.8
TgtRe2040	36.51	-0.10	2.1
TgtRe2045	22.99	-0.07	2.2
TgtRe2050	37.00	-0.11	2.2
TgtRetInc	13.47	-0.01	0.3
TotIntBdIxInv	10.92	+0.01	1.1
WellsI	26.01	-0.04	-2.1
Welltn	41.41	-0.11	-0.2
WndsrII	37.76	-0.10	0.7
VANGUARD INDEX FDS			
500	257.15	-0.54	4.6
ExtndIstPl	227.66	+0.86	9.2
SmValAdml	59.75	+0.21	5.2
TotBd2	10.37	...	-2.1
TotIntl	17.88	-0.12	-1.7
TotSt	70.06	-0.07	5.4
VANGUARD INSTL FDS			
BalInst	35.43	-0.02	2.6
DevMktsIndInst	14.21	-0.09	-1.2
DevMktsInxInst	22.20	-0.15	-1.2
ExtndInst	92.25	+0.35	9.2
GrwthInst	79.34	-0.03	9.9
InPrSeIn	10.26	+0.01	-0.7
InstIdx	252.71	-0.54	4.7
InstPlus	252.73	-0.53	4.7
InstTStPlus	62.32	-0.06	5.5
MidCpInst	44.34	+0.06	5.1
MidCpIstPl	218.69	+0.30	5.1
SmCapInst	76.68	+0.29	8.7
SmCapIstPl	221.33	+0.82	8.7
STIGradeInst	10.45	...	-0.5
TotBdInst	10.40	-0.01	-2.0
TotBdInst2	10.37	...	-2.1
TotBdInstPl	10.40	-0.01	-2.0
TotIntBdIdxInst	32.76	+0.02	1.1
TotIntlInstIdx r	119.59	-0.82	-1.7
TotItlInstPlId r	119.62	-0.81	-1.7
TotStInst	70.11	-0.07	5.5
ValueInst	41.38	-0.14	0.5
Western Asset			
CorePlusBdI	NA	...	NA

New Highs and Lows | WSJ.com/newhighs

The following explanations apply to the New York Stock Exchange, NYSE Arca, NYSE American and Nasdaq Stock Market stocks that hit a new 52-week intraday high or low in the latest session. **% CHG**-Daily percentage change from the previous trading session.

Tuesday, June 19, 2018

Highs

Stock	Sym	52-Wk Hi/Lo	% Chg
ACI Worldwide	ACIW	26.87	1.0
AdvanceAuto	AAP	139.17	...
AgiosPharm	AGIO	98.50	1.6
Amazon.com	AMZN	1736.11	0.6
Amedisys	AMED	86.04	1.0
AmerSoftware	AMSWA	14.83	0.8
AmerCarMart	CRMT	67.95	1.5
AnchorBancorp	ANCB	26.45	-0.9
AngioDynamics	ANGO	22.18	1.2
AppFolio	APPF	67.45	0.6
AppliedIndlTechs	AIT	76.08	-0.1
Apptio	APTI	37.52	0.6
ArrayBioPharma	ARRY	19.02	8.6
ArrowheadPharm	ARWR	14.24	2.1
Astrotech	ASTC	8.15	226.2
AtriCure	ATRC	30.46	5.7
AuburnNatlBncp	AUBN	51.30	-2.8
BJsRestaurants	BJRI	60.00	0.5
BankofMarinBncp	BMRC	82.65	2.6
BaringtonHilcoUn	BHACU	13.91	33.8
BellerophonTherap	BLPH	3.09	10.3
BiohavenPharm	BHVN	44.28	1.6
BlackKnight	BKI	53.90	1.5
BlueHillsBncp	BHBK	22.40	2.5
BrinkerIntl	EAT	52.57	-0.3
CAS MedSys	CASM	2.02	2.1
CBTX	CBTX	35.00	2.7
CLPS	CLPS	12.20	-0.4
CNB FinPA	CCNE	31.94	1.3
CTS	CTS	34.83	1.5
CaladriusBiosci	CLBS	6.84	67.3
CamdenNational	CAC	47.44	2.0
CanadaGoose	GOOS	67.74	4.2
CapellaEducation	CPLA	99.30	3.1
Cardlytics	CDLX	25.56	-0.2
CassInfoSys	CASS	70.94	0.6
CentralGarden	CENT	44.54	-0.4
Cerus	CERS	7.08	0.1
ChampionsOncology	CSBR	7.10	5.1
CheniereEnHldgs	CQH	31.39	3.1
Citizens&Northern	CZNC	26.80	0.9
Codexis	CDXS	15.98	1.6
CogentComm	CCOI	55.30	1.2
Cooper-Standard	CPS	141.14	0.2
Copart	CPRT	59.54	1.0
CornerstoneOnDem	CSOD	53.25	1.9
DHT	DHT	4.59	3.2
DarlingIngred	DAR	19.92	0.3
DigiIntl	DGII	13.00	1.6
Domino's	DPZ	288.04	2.0
DriveShack	DS	7.28	1.5
DuluthHoldings	DLTH	22.07	2.2
Dunkin'	DNKN	69.61	-0.2
EllieMae	ELLI	116.08	1.3
EtnVncNextShs	EVSTC	100.02	...
EncompassHealth	EHC	67.90	0.2
EnsignGroup	ENSG	38.62	0.1
ePlus	PLUS	99.80	0.3
EquityBcshs	EQBK	44.16	0.3
EraGroup	ERA	13.83	0.3
EvansBancorp	EVBN	48.50	1.4
FBL Financial	FFG	84.95	1.3
FRP Holdings	FRPH	63.60	1.7
FidelitySouthern	LION	26.54	1.8
FirstConnBncp	FBNK	31.60	19.8
FirstDefiance	FDEF	64.72	1.1
1stSource	SRCE	56.46	1.1
Five9	FIVN	39.40	-2.3
FleetCorTech	FLT	222.88	-0.2
FoundationMed	FMI	137.20	28.5
Freshpet	FRPT	25.25	-0.8
GeneralFin	GFN	12.05	-0.4
Gevo	GEVO	24.74	53.5
Globant	GLOB	57.57	...
GluMobile	GLUU	6.75	-0.5
GooseheadIns	GSHD	27.29	6.7
Gorman-Rupp	GRC	35.25	1.4
Greenhill	GHL	28.65	-0.2
GuarFedBcsh	GFED	24.34	-0.8
HalyardHealth	HYH	61.52	-0.8
HemisphereMedia	HMTV	13.55	2.7
HomeTownBkshs	HMTA	15.79	-4.5
HomeTrustBcshs	HTBI	28.60	0.9
INTL FCStone	INTL	53.27	-0.6
iKangHealthcare	KANG	20.62	0.2
Intricon	IIN	45.80	2.6
Intuit	INTU	210.85	0.7
Invacare	IVC	20.00	-1.0
iQIYI	IQ	46.23	-3.1
JBG SMITH Prop	JBGS	38.91	-0.5
JackHenry	JKHY	133.29	0.8
Jamba	JMBA	10.80	4.6
JazzPharma	JAZZ	181.69	1.4
KirklandLakeGold	KL	20.81	2.0
LHC Group	LHCG	85.90	0.2
LancasterColony	LANC	136.43	0.8
Leaf	LFGR	10.95	6.9
LeisureAcqnUn	LACQU	10.07	0.4
LeisureAcqn	LACQ	9.67	0.4
LeoHldgsWt	LHC.WS	1.33	4.1
LibertyTripAdvA	LTRPA	17.45	0.3
LivePerson	LPSN	23.75	-0.2
MammothEnergy	TUSK	40.43	-0.1
Marcus	MCS	33.00	0.6
Medifast	MED	171.59	1.1
MeridianBiosci	VIVO	16.90	1.5
Merus	MRUS	22.02	1.1
MesaLab	MLAB	208.00	1.4
MotorolaSol	MSI	115.88	0.3
Napco Security	NSSC	15.00	11.4
NatlCineMedia	NCMI	8.19	7.6
NatlHealthcare	NHC	72.66	0.8
NatlStorage	NSA	30.09	-1.0
NaturalGrocers	NGVC	12.18	3.3
NeoGenomics	NEO	13.40	3.0
Netflix	NFLX	405.29	3.7
Neurocrine	NBIX	104.53	0.4
NewResidInvt	NRZ	18.56	1.0
NomadFoods	NOMD	18.91	1.5
Noodles	NDLS	11.60	8.4
NorthernTechsIntl	NTIC	35.70	2.9
NorwoodFin	NWFL	37.75	-0.2
OCI Partners	OCIP	11.45	4.1
OFGBancorpPfD	OFGpD	25.72	2.0
PRA Group	PRAA	41.80	0.7
PennyMacTr	PMT	19.20	0.4
PeoplesBncpOH	PEBO	39.19	1.3
PerformanceFood	PFGC	36.95	1.0
Plantronics	PLT	76.93	1.0
PointsIntl	PCOM	16.29	5.9
Pool	POOL	155.16	0.4
Premier	PINC	36.65	2.0
PrimoWater	PRMW	18.33	2.5
Puxin	NEW	35.00	4.2
Q2Holdings	QTWO	63.20	0.8
Quidel	QDEL	69.63	0.2
RBB Bancorp	RBB	33.62	-0.1
REGENXBIO	RGNX	60.60	6.2
RandolphBancorp	RNDB	17.45	2.5
ReataPharm	RETA	41.45	6.9
Regis	RGS	18.34	1.6
Rent-A-Center	RCII	14.94	1.4
SS&C Tech	SSNC	55.07	0.3
Sanfilippo	JBSS	73.60	0.5
SareptaTherap	SRPT	176.50	36.8
ScholarRock	SRRK	27.02	19.5
Senseonics	SENS	4.79	4.9
SensusHealthcare	SRTS	7.71	-1.8
SevernBancorp	SVBI	8.35	0.6
ShakeShack	SHAK	69.10	1.8
SimulationsPlus	SLP	22.10	0.2
SiteOneLandscape	SITE	92.37	0.6
SolidBiosci	SLDB	54.84	46.4
Sonic	SONC	34.99	1.5
StateAutoFin	STFC	34.31	1.2
StrayerEd	STRA	113.65	3.0
Synalloy	SYNL	21.35	1.5
Sysco	SYY	66.97	0.2
TPG RE Fin	TRTX	21.05	-0.3
Talend	TLND	63.70	0.9

Continued on B12

MARKETS DIGEST

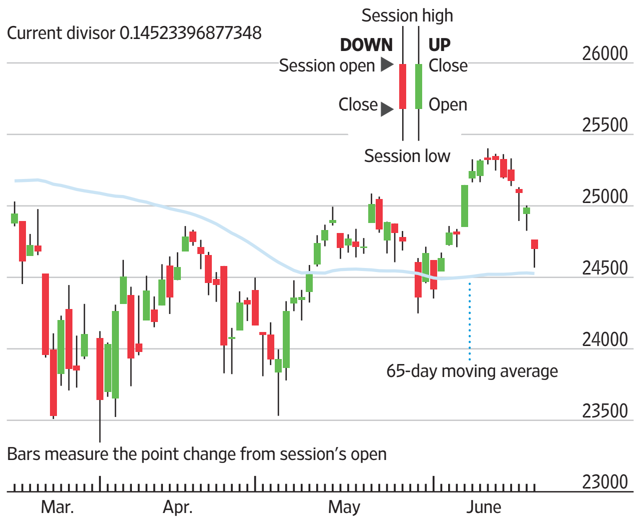
EQUITIES

Dow Jones Industrial Average

24700.21 ▼287.26, or 1.15%

High, low, open and close for each trading day of the past three months.

	Last	Year ago
Trailing P/E ratio	24.29	20.89
P/E estimate *	16.48	18.10
Dividend yield	2.21	2.31
All-time high	26616.71, 01/26/18	

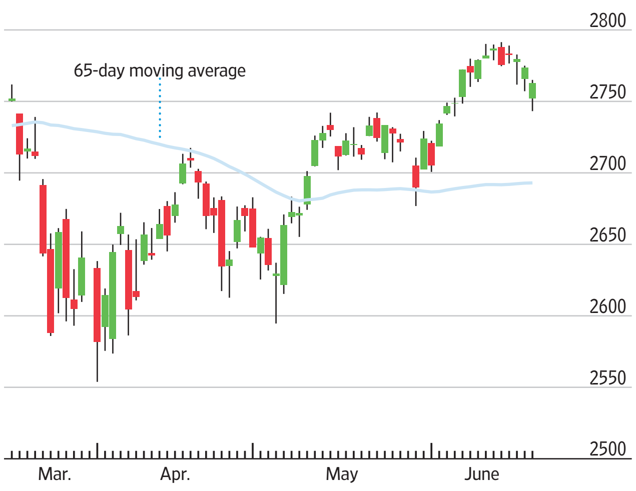


S&P 500 Index

2762.59 ▼11.16, or 0.40%

High, low, open and close for each trading day of the past three months.

	Last	Year ago
Trailing P/E ratio *	24.69	24.09
P/E estimate *	17.35	18.75
Dividend yield	1.89	1.95
All-time high	2872.87, 01/26/18	

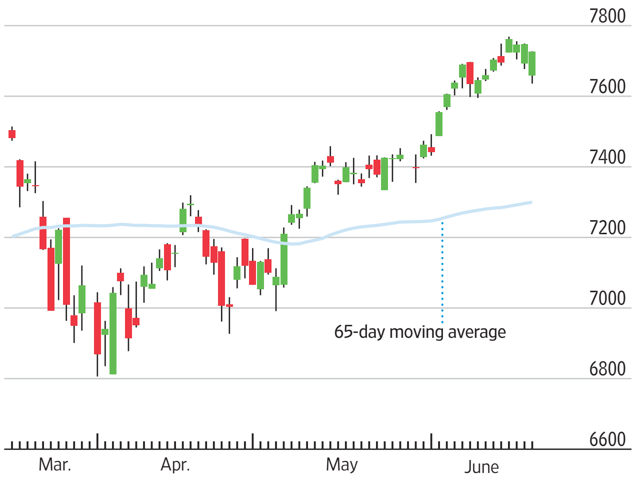


Nasdaq Composite Index

7725.59 ▼ 21.44, or 0.28%

High, low, open and close for each trading day of the past three months.

	Last	Year ago
Trailing P/E ratio	*25.73	25.97
P/E estimate *	21.05	21.05
Dividend yield	0.95	1.11
All-time high:	7761.04, 06/14/18	



*Weekly P/E data based on as-reported earnings from Birinyi Associates Inc.

Major U.S. Stock-Market Indexes

	Latest High	Latest Low	Latest Close	Net chg	% chg	52-Week High	52-Week Low	% chg	% chg YTD	% chg 3-yr. ann.
Dow Jones										
Industrial Average	24763.59	24567.75	**24700.21**	-287.26	**-1.15**	26616.71	21287.03	**15.1**	-0.1	**11.1**
Transportation Avg	10998.19	10772.62	**10863.30**	-186.55	**-1.69**	11373.38	9021.12	**16.8**	2.4	**8.9**
Utility Average	689.40	681.33	**687.96**	7.40	**1.09**	774.47	647.90	**-6.4**	-4.9	**6.5**
Total Stock Market	28848.97	28607.26	**28828.34**	-107.82	**-0.37**	29630.47	24958.26	**14.3**	4.2	**9.2**
Barron's 400	755.30	746.66	**754.94**	-2.48	**-0.33**	758.12	629.56	**17.6**	6.2	**9.1**
Nasdaq Stock Market										
Nasdaq Composite	7727.41	7635.73	**7725.59**	-21.44	**-0.28**	7761.04	6089.46	**24.8**	11.9	**14.7**
Nasdaq 100	7229.99	7138.02	**7228.04**	-23.36	**-0.32**	7279.59	5596.96	**26.2**	13.0	**17.0**
S&P										
500 Index	2765.05	2743.19	**2762.59**	-11.16	**-0.40**	2872.87	2409.75	**13.4**	3.3	**9.4**
MidCap 400	1995.18	1970.01	**1991.39**	-3.79	**-0.19**	2003.97	1691.67	**14.1**	4.8	**8.9**
SmallCap 600	1045.55	1032.13	**1045.13**	-0.32	**-0.03**	1045.45	817.25	**23.4**	11.6	**12.4**
Other Indexes										
Russell 2000	1694.00	1672.66	**1693.45**	0.99	**0.06**	1693.45	1356.90	**20.7**	10.3	**9.6**
NYSE Composite	12708.63	12569.95	**12638.98**	-69.66	**-0.55**	13637.02	11696.28	**7.7**	-1.3	**4.6**
Value Line	582.95	575.79	**581.02**	-1.93	**-0.33**	589.69	503.24	**12.1**	3.3	**4.2**
NYSE Arca Biotech	4935.22	4856.78	**4935.05**	53.30	**1.09**	4939.86	3787.17	**29.5**	16.9	**5.3**
NYSE Arca Pharma	531.91	526.80	**530.83**	-0.31	**-0.06**	593.12	514.66	**-0.9**	-2.6	**-3.1**
KBW Bank	108.03	106.72	**107.87**	0.02	**0.02**	116.52	89.71	**15.1**	1.1	**11.3**
PHLX§ Gold/Silver	82.20	81.33	**81.67**	-0.71	**-0.86**	93.26	76.42	**3.3**	-4.2	**7.0**
PHLX§ Oil Service	150.64	148.56	**150.48**	-0.85	**-0.56**	170.18	117.79	**13.8**	0.6	**-9.6**
PHLX§ Semiconductor	1392.43	1370.86	**1391.58**	-16.32	**-1.16**	1445.90	1020.51	**29.5**	11.1	**24.4**
Cboe Volatility	14.68	13.21	**13.35**	1.04	**8.45**	37.32	9.14	**22.9**	20.9	**-1.5**

§Nasdaq PHLX

Sources: SIX Financial Information; WSJ Market Data Group

Late Trading

Most-active and biggest movers among NYSE, NYSE Arca, NYSE Amer. and Nasdaq issues from 4 p.m. to 6:30 p.m. ET as reported by electronic trading services, securities dealers and regional exchanges. Minimum share price of $2 and minimum after-hours volume of 50,000 shares.

Most-active issues in late trading

Company	Symbol	Volume (000)	After Hours Last	Net chg	% chg	High	Low
SPDR S&P 500	SPY	21,203.5	275.36	-0.14	**-0.05**	276.56	274.48
AT&T	T	7,038.2	32.39	...	**unch.**	32.40	32.19
iShares MSCI Emg Markets	EEM	5,434.6	43.91	0.01	**0.02**	43.97	43.88
Bank of America	BAC	5,149.5	29.27	0.01	**0.03**	29.40	28.98
FleetCor Technologies	FLT	5,114.0	220.08	...	**unch.**	220.60	218.43
General Electric	GE	4,511.0	12.77	-0.18	**-1.39**	13.20	12.67
Vanguard Real Estate ETF	VNQ	3,857.8	78.90	...	**unch.**	79.88	78.85
Oracle	ORCL	3,642.7	44.56	-1.71	**-3.70**	48.40	44.03

Percentage gainers...

Company	Symbol	Volume (000)	Last	Net chg	% chg	High	Low
Vaalco Energy	EGY	53.4	2.83	0.31	**12.30**	2.85	2.56
Synaptics	SYNA	142.8	54.30	5.46	**11.18**	55.00	48.84
Wingstop	WING	50.8	53.77	3.39	**6.73**	53.77	49.95
Convergys Corp	CVG	437.0	26.49	1.17	**4.62**	28.00	25.28
Huntsman	HUN	279.3	32.55	1.40	**4.49**	32.55	31.05

...And losers

Company	Symbol	Volume (000)	Last	Net chg	% chg	High	Low
La-Z-Boy	LZB	99.8	30.80	-2.45	**-7.37**	34.90	29.51
Tempur Sealy	TPX	54.5	50.00	-2.42	**-4.62**	52.45	50.00
Mallinckrodt	MNK	160.5	19.29	-0.89	**-4.41**	20.18	19.29
Akorn	AKRX	587.8	15.21	-0.69	**-4.34**	15.90	15.21
Achaogen	AKAO	66.8	11.71	-0.50	**-4.10**	12.23	11.71

Trading Diary

Volume, Advancers, Decliners

	NYSE	NYSE Amer.
Total volume*	978,243,218	11,383,957
Adv. volume*	412,486,462	3,625,178
Decl. volume*	545,275,384	7,218,346
Issues traded	3,079	322
Advances	1,261	106
Declines	1,686	193
Unchanged	132	23
New highs	59	4
New lows	83	7
Closing tick	62	90
Closing Arms†	1.03	0.93
Block trades*	7,459	142
	Nasdaq	**NYSE Arca**
Total volume*	2,220,230,414	285,608,578
Adv. volume*	873,956,324	83,930,566
Decl. volume*	1,281,327,579	199,366,894
Issues traded	3,093	1,338
Advances	1,265	366
Declines	1,696	951
Unchanged	132	21
New highs	142	29
New lows	52	79
Closing tick	361	16
Closing Arms†	1.09	0.92
Block trades*	7,956	1,430

* Primary market NYSE, NYSE American NYSE Arca only.
†(TRIN) A comparison of the number of advancing and declining issues with the volume of shares rising and falling. An Arms of less than 1 indicates buying demand; above 1 indicates selling pressure.

International Stock Indexes

Region/Country	Index	Close	Latest Net chg	Latest % chg	YTD % chg
World	**The Global Dow**	**3002.11**	–24.84	**–0.82**	–2.7
	DJ Global Index	**395.67**	–3.32	**–0.83**	–0.4
	DJ Global ex U.S.	**254.76**	–3.33	**–1.29**	–4.5
Americas	**DJ Americas**	**660.23**	–2.65	**–0.40**	2.8
Brazil	**Sao Paulo Bovespa**	**71394.34**	1579.61	**2.26**	–6.6
Canada	**S&P/TSX Comp**	**16316.53**	–67.10	**–0.41**	0.7
Mexico	**S&P/BMV IPC**	**46488.38**	–172.49	**–0.37**	–5.8
Chile	**Santiago IPSA**	**4023.57**	–9.11	**–0.23**	–4.4
EMEA	**Stoxx Europe 600**	**383.21**	–2.70	**–0.70**	–1.5
Eurozone	**Euro Stoxx**	**383.02**	–3.32	**–0.86**	–0.6
Belgium	**Bel-20**	**3745.80**	–17.16	**–0.46**	–5.8
Denmark	**OMX Copenhagen**	**888.81**	–5.76	**–0.64**	–4.1
France	**CAC 40**	**5390.63**	–59.85	**–1.10**	1.5
Germany	**DAX**	**12677.97**	–156.14	**–1.22**	–1.9
Israel	**Tel Aviv**	**1524.90**	–7.80	**–0.51**	1.0
Italy	**FTSE MIB**	**22084.33**	–14.94	**–0.07**	1.1
Netherlands	**AEX**	**554.57**	–5.11	**–0.91**	1.8
Russia	**RTS Index**	**1096.92**	–3.71	**–0.34**	–5.0
South Africa	**FTSE/JSE All-Share**	**56253.31**	–983.53	**–1.72**	–5.5
Spain	**IBEX 35**	**9755.40**	–14.00	**–0.14**	–2.9
Sweden	**OMX Stockholm**	**577.05**	–0.22	**–0.04**	1.5
Switzerland	**Swiss Market**	**8463.41**	–56.16	**–0.66**	–9.8
Turkey	**BIST 100**	**94436.87**	1393.59	**1.50**	–18.1
U.K.	**FTSE 100**	**7603.85**	–27.48	**–0.36**	–1.1
U.K.	**FTSE 250**	**20835.78**	–163.82	**–0.78**	0.5
Asia-Pacific					
Australia	**S&P/ASX 200**	**6102.10**	–2.00	**–0.03**	0.6
China	**Shanghai Composite**	**2907.82**	–114.08	**–3.78**	–12.1
Hong Kong	**Hang Seng**	**29468.15**	–841.34	**–2.78**	–1.5
India	**S&P BSE Sensex**	**35286.74**	–261.52	**–0.74**	3.6
Japan	**Nikkei Stock Avg**	**22278.48**	–401.85	**–1.77**	–2.1
Singapore	**Straits Times**	**3301.35**	–22.69	**–0.68**	–3.0
South Korea	**Kospi**	**2340.11**	–36.13	**–1.52**	–5.2
Taiwan	**TAIEX**	**10904.19**	–183.28	**–1.65**	2.5
Thailand	**SET**	**1639.54**	–40.14	**–2.39**	–6.5

Sources: SIX Financial Information; WSJ Market Data Group

Percentage Gainers...

Company	Symbol	Latest Session Close	Net chg	% chg	52-Week High	Low	% chg
Caladrius Biosciences	CLBS	6.61	2.66	**67.34**	6.84	2.63	**50.2**
Gevo	GEVO	19.50	6.80	**53.54**	24.74	3.23	**57.3**
Solid Biosciences	SLDB	43.00	13.62	**46.36**	54.84	6.83	**...**
Sarepta Therapeutics	SRPT	143.93	38.69	**36.76**	176.50	32.36	**329.5**
Neptune Techs Biores	NEPT	3.23	0.78	**31.84**	3.59	0.70	**280.0**
Foundation Medicine	FMI	136.75	30.30	**28.46**	137.20	31.70	**241.4**
Apollo Medical Holdings	AMEH	24.34	4.21	**20.91**	30.00	5.50	**131.6**
First Connecticut Bncp	FBNK	31.15	5.15	**19.81**	31.60	23.25	**21.7**
Scholar Rock Holding	SRRK	25.60	4.17	**19.46**	27.02	14.00	**...**
Celsion	CLSN	3.32	0.54	**19.42**	6.06	1.24	**45.0**
Spero Therapeutics	SPRO	13.50	2.11	**18.53**	19.00	9.66	**...**
RumbleON Cl B	RMBL	5.99	0.87	**16.99**	10.00	3.53	**-14.4**
Evolus	EOLS	32.66	4.40	**15.57**	39.50	6.75	**...**
Catalyst Biosciences	CBIO	10.46	1.35	**14.82**	37.00	3.11	**142.1**
Art's Way Mfg	ARTW	3.10	0.35	**12.73**	5.45	2.00	**5.1**

Percentage Losers

Company	Symbol	Latest Session Close	Net chg	% chg	52-Week High	Low	% chg
PTC Therapeutics	PTCT	33.24	-14.64	**-30.58**	52.95	14.56	**95.3**
WAVE Life Sciences	WVE	40.48	-9.98	**-19.77**	55.95	15.15	**96.5**
XTL Biopharmaceutical ADR	XTLB	1.80	-0.33	**-15.49**	4.14	1.55	**-35.7**
Axovant Sciences	AXON	2.90	-0.52	**-15.20**	27.98	1.02	**-87.5**
PagSeguro Digital	PAGS	27.40	-4.70	**-14.64**	39.97	26.78	**...**
Yangtze River Port	YRIV	10.10	-1.63	**-13.90**	25.47	2.61	**-24.3**
ObsEva	OBSV	15.39	-2.48	**-13.88**	20.35	5.00	**200.0**
Green Brick Partners	GRBK	10.65	-1.53	**-12.53**	12.50	8.90	**-4.1**
Genius Brands Intl	GNUS	2.75	-0.38	**-12.14**	4.37	2.01	**-23.0**
Tellurian	TELL	9.56	-1.32	**-12.13**	13.74	6.45	**-7.0**
HUYA ADR	HUYA	42.72	-5.85	**-12.04**	50.82	15.25	**...**
ZK International Group	ZKIN	5.58	-0.75	**-11.90**	16.00	5.03	**...**
Genprex	GNPX	6.90	-0.90	**-11.54**	19.45	3.84	**...**
Mogo Finance Technology	MOGO	2.88	-0.37	**-11.38**	6.85	2.21	**-6.6**
Athersys	ATHX	2.06	-0.25	**-10.82**	3.09	1.29	**37.3**

Most Active Stocks

Company	Symbol	Volume (000)	% chg from 65-day avg	Latest Session Close	% chg	52-Week High	Low
iShares MSCI Emg Markets	EEM	**117,210**	75.0	43.90	**-1.10**	52.08	40.92
Advanced Micro Devices	AMD	**91,816**	58.2	16.69	**-2.45**	17.34	9.04
AT&T	T	**80,262**	124.4	32.39	**0.62**	39.80	31.17
SPDR S&P 500	SPY	**76,239**	-12.5	275.50	**-0.38**	286.63	239.96
General Electric	GE	**73,014**	6.6	12.95	**-1.89**	28.72	12.73
Bank of America	BAC	**60,245**	-11.5	29.26	**-0.48**	33.05	22.73
Snap	SNAP	**59,279**	113.4	13.31	**-5.27**	21.22	10.50
iQIYI ADR	IQ	**57,821**	308.1	42.58	**-3.07**	46.23	15.30
iPath S&P 500 VIX ST Fut	VXX	**50,495**	54.3	32.79	**4.96**	56.64	25.59
Finl Select Sector SPDR	XLF	**49,430**	-12.3	27.35	**-0.26**	30.33	23.79

* Volumes of 100,000 shares or more are rounded to the nearest thousand

Volume Movers

Ranked by change from 65-day average*

Company	Symbol	Volume (000)	% chg from 65-day avg	Latest Session Close	% chg	52-Week High	Low
First Connecticut Bncp	FBNK	3,476	**15196**	31.15	**19.81**	31.60	23.25
Direxion Dev Mk Bear 3x	DPK	410	**6174**	12.84	**3.09**	16.35	10.08
Innovation NextGen Proto	KOIN	272	**3378**	25.18	**-1.32**	25.80	22.20
Provident Bancorp	PVBC	205	**3214**	26.45	**4.96**	27.37	19.75
Gevo	GEVO	17,026	**2976**	19.50	**53.54**	24.74	3.23
Cotiviti Holdings	COTV	11,870	**2838**	43.99	**10.28**	45.97	30.84
Telecom Italia ADR	TI.A	1,191	**2674**	6.81	**1.04**	9.60	6.27
Xtrkrs Jpn JPX-Nikkei 400	JPN	1,652	**2445**	28.90	**-1.70**	31.67	25.97
FleetCor Technologies	FLT	14,693	**2112**	220.08	**-0.16**	222.88	138.43
Yatra Online	YTRA	3,300	**1980**	7.21	**6.66**	12.85	5.63

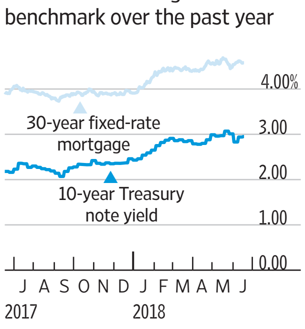
* Common stocks priced at $2 a share or more with an average volume over 65 trading days of at least 5,000 shares †Has traded fewer than 65 days

CREDIT MARKETS

Consumer Rates and Returns to Investor

U.S. consumer rates

A consumer rate against its benchmark over the past year



Selected rates

30-year mortgage, Rate

Bankrate.com avg†:	**4.58%**
Sebonic Financial	**4.24%**
Charlotte, NC	877-721-6763
LendingHome Funding Corporation	**4.25%**
San Francisco, CA	415-367-4333
RealMortgage Inc	**4.25%**
Carlsbad, CA	888-443-8902
Texas Trust Home Loans	**4.25%**
Irving, TX	214-245-3937
Vankeef Financial LLC	**4.25%**
Lake Mary, FL	855-731-5134

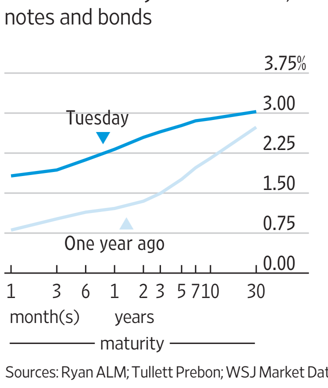
Interest rate	Yield/Rate (%) Last	Week ago	52-Week Range (%) Low	High	3-yr chg (pct pts)
Federal-funds rate target	**1.75-2.00**	1.50-1.75	1.00	1.75	**1.75**
Prime rate*	**5.00**	4.75	4.25	5.00	**1.75**
Libor, 3-month	**2.33**	2.34	1.29	2.37	**2.05**
Money market, annual yield	**0.52**	0.47	0.25	0.52	**0.16**
Five-year CD, annual yield	**1.73**	1.72	1.38	1.73	**0.26**
30-year mortgage, fixed†	**4.58**	4.62	3.73	4.69	**0.47**
15-year mortgage, fixed†	**4.05**	4.10	2.99	4.14	**0.76**
Jumbo mortgages, $424,100-plus†	**4.75**	4.80	4.21	4.96	**0.37**
Five-year adj mortgage (ARM)†	**4.52**	4.47	3.22	4.78	**1.22**
New-car loan, 48-month	**4.21**	4.18	2.85	4.28	**1.22**

Bankrate.com rates based on survey of over 4,800 online banks. *Base rate posted by 70% of the nation's largest banks.† Excludes closing costs.

Sources: SIX Financial Information; WSJ Market Data Group; Bankrate.com

Treasury yield curve

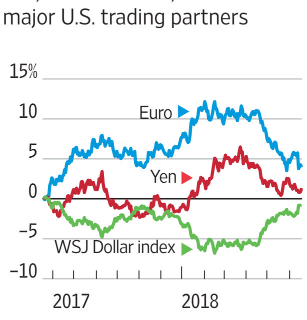
Yield to maturity of current bills, notes and bonds



Sources: Ryan ALM; Tullett Prebon; WSJ Market Data Group

Forex Race

Yen, euro vs. dollar; dollar vs. major U.S. trading partners



Corporate Borrowing Rates and Yields

Bond total return index	Close	Yield (%) Last	Week ago	52-Week High	Low	Total Return (%) 52-wk	3-yr
Treasury, Ryan ALM	1436.885	**2.789**	2.831	2.945	1.818	**–2.009**	0.958
10-yr Treasury, Ryan ALM	1677.284	**2.893**	2.959	3.109	2.058	**–4.184**	0.131
DJ Corporate	369.285	**3.922**	3.918	3.995	2.879	**–1.748**	2.837
Aggregate, Barclays Capital	1908.510	**3.320**	3.350	3.430	2.380	**–0.928**	1.544
High Yield 100, Merrill Lynch	2877.770	**5.853**	5.866	6.319	4.948	**2.485**	3.961
Fixed-Rate MBS, Barclays	1963.460	**3.470**	3.490	3.580	2.660	**–0.478**	1.271
Muni Master, Merrill	520.474	**2.460**	2.473	2.653	1.736	**0.669**	2.417
EMBI Global, J.P. Morgan	758.552	**6.822**	6.677	6.822	5.279	**–3.651**	3.929

Sources: J.P. Morgan; Ryan ALM; S&P Dow Jones Indices; Barclays Capital; Merrill Lynch

CURRENCIES & COMMODITIES

Currencies

U.S.-dollar foreign-exchange rates in late New York trading

Country/currency	Tues in US$	Tues per US$	US$ vs, YTD chg (%)
Americas			
Argentina peso	.0360	27.7555	**49.2**
Brazil real	.2669	3.7469	**13.1**
Canada dollar	.7526	1.3287	**5.7**
Chile peso	.001562	640.10	**4.0**
Ecuador US dollar	1	1	**unch**
Mexico peso	.0487	20.5245	**4.3**
Uruguay peso	.03162	31.6300	**9.8**
Venezuela b. fuerte	.00001379	900.0001	**772489.0**
Asia-Pacific			
Australian dollar	.7383	1.3545	**5.8**
China yuan	.1542	6.4850	**–0.3**
Hong Kong dollar	.1274	7.8496	**0.5**
India rupee	.01464	68.310	**7.0**
Indonesia rupiah	.0000718	13933	**3.3**
Japan yen	.009086	110.06	**–2.3**
Kazakhstan tenge	.002930	341.28	**2.6**
Macau pataca	.1237	8.0866	**0.5**
Malaysia ringgit	.2498	4.0035	**–1.4**
New Zealand dollar	.6903	1.4486	**2.8**
Pakistan rupee	.00824	121.300	**9.6**
Philippines peso	.0188	53.320	**6.7**
Singapore dollar	.7370	1.3568	**1.5**
South Korea won	.0008994	1111.89	**4.2**
Sri Lanka rupee	.0062500	160.00	**4.2**
Taiwan dollar	.03313	30.188	**1.8**
Thailand baht	.03054	32.740	**0.5**
Vietnam dong	.00004376	22854	**0.6**
Europe			
Czech Rep. koruna	.04484	22.301	**4.8**
Denmark krone	.1555	6.4320	**3.7**
Euro area euro	1.1589	.8629	**3.6**
Hungary forint	.003594	278.26	**7.4**
Iceland krona	.009287	107.68	**4.0**
Norway krone	.1222	8.1862	**–0.3**
Poland zloty	.2687	3.7218	**7.0**
Russia ruble	.01565	63.882	**10.8**
Sweden krona	.1124	8.8938	**8.6**
Switzerland franc	1.0059	.9941	**2.0**
Turkey lira	.2106	4.7485	**25.1**
Ukraine hryvnia	.0378	26.4455	**–6.0**
UK pound	1.3173	.7591	**2.6**
Middle East/Africa			
Bahrain dinar	2.6459	.3780	**0.2**
Egypt pound	.0559	17.8795	**0.6**
Israel shekel	.2754	3.6309	**4.4**
Kuwait dinar	3.3072	.3024	**0.3**
Oman sul rial	2.5974	.3850	**0.01**
Qatar rial	.2749	3.638	**–0.3**
Saudi Arabia riyal	.2666	3.7504	**unch**
South Africa rand	.0727	13.7517	**11.2**

	Close	Net Chg	% Chg	YTD % Chg
WSJ Dollar Index	88.23	0.21	0.23	**2.62**

Sources: Tullett Prebon, WSJ Market Data Group

Commodities

	Close	Tuesday Net chg	Tuesday % Chg	52-Week High	52-Week Low	52-Week % Chg	YTD % chg
DJ Commodity	**631.88**	-7.66	**-1.20**	667.35	532.01	**17.69**	1.04
TR/CC CRB Index	**193.82**	-2.36	**-1.20**	206.38	166.50	**14.24**	-0.02
Crude oil, $ per barrel	**65.07**	-0.78	**-1.18**	72.24	42.53	**50.52**	7.70
Natural gas, $/MMBtu	**2.900**	-0.051	**-1.73**	3.63	2.55	**-0.24**	-1.79
Gold, $ per troy oz.	**1275.60**	-0.60	**-0.05**	1362.40	1208.60	**2.79**	-2.35

COMMODITIES

WSJ.com/commodities

Futures Contracts

Metal & Petroleum Futures

	Open	High	hi lo	Low	Settle	Chg	Open interest
Copper-High (CMX)-25,000 lbs.; $ per lb.							
June	3.0435	3.0610		3.0435	**3.0465**	−0.0570	290
Sept	3.1465	3.1555		3.0600	**3.0700**	−0.0590	97,102
Gold (CMX)-100 troy oz.; $ per troy oz.							
June	1278.70	1281.80	▼	1269.90	**1275.60**	−0.60	260
Aug	1280.70	1286.80	▼	1272.60	**1278.60**	−1.50	331,239
Oct	1287.80	1292.40	▼	1278.60	**1284.40**	−1.60	12,065
Dec	1294.00	1298.50	▼	1284.90	**1290.70**	−1.60	93,047
Feb'19	1303.70	1304.50	▼	1294.20	**1297.00**	−1.60	15,125
Dec	...	...		...	**1329.20**	−1.90	4,271
Palladium (NYM) - 50 troy oz.; $ per troy oz.							
June	985.00	985.00		978.00	**970.30**	−24.60	21
Sept	985.60	986.70		959.00	**960.30**	−22.60	22,527
Dec	978.10	978.10		955.90	**955.00**	−23.60	1,199
Platinum (NYM)-50 troy oz.; $ per troy oz.							
July	885.00	886.40	▼	862.20	**864.90**	−19.00	56,686
Oct	889.00	890.30	▼	866.40	**868.70**	−19.20	29,917
Silver (CMX)-5,000 troy oz.; $ per troy oz.							
June	16.305	16.330		16.300	**16.303**	−0.109	16
July	16.470	16.550		16.240	**16.323**	−0.117	102,705
Crude Oil, Light Sweet (NYM)-1,000 bbls.; $ per bbl.							
July	65.88	65.90		64.39	**65.07**	−0.78	67,455
Aug	65.73	65.74		64.23	**64.90**	−0.79	440,468
Sept	65.30	65.31		63.88	**64.56**	−0.72	265,154
Oct	64.83	64.83		63.46	**64.13**	−0.68	204,072
Dec	64.19	64.25		63.01	**63.72**	−0.58	290,667
Dec'19	60.65	60.93		59.81	**60.54**	−0.41	188,595
NY Harbor ULSD (NYM)-42,000 gal.; $ per gal.							
July	2.1326	2.1339		2.1061	**2.1218**	−.0098	65,478
Aug	2.1348	2.1360		2.1088	**2.1238**	−.0099	91,191
Gasoline-NY RBOB (NYM)-42,000 gal.; $ per gal.							
July	2.0531	2.0531		2.0250	**2.0379**	−.0167	77,962
Aug	2.0421	2.0422		2.0150	**2.0271**	−.0169	115,134
Natural Gas (NYM)-10,000 MMBtu.; $ per MMBtu.							
July	2.952	2.955		2.887	**2.900**	−.051	109,074
Aug	2.954	2.956		2.891	**2.904**	−.047	182,168
Sept	2.934	2.934		2.871	**2.884**	−.048	166,385
Oct	2.945	2.946		2.883	**2.895**	−.049	172,157
March'19	3.049	3.055		2.990	**3.001**	−.055	115,056
April	2.679	2.680		2.630	**2.639**	−.038	115,493

Agriculture Futures

	Open	High	hi lo	Low	Settle	Chg	Open interest
Corn (CBT)-5,000 bu.; cents per bu.							
July	355.75	357.75	▼	338.75	**353.75**	−2.25	407,909
Dec	377.25	379.00	▼	360.00	**375.50**	−1.75	641,622
Oats (CBT)-5,000 bu.; cents per bu.							
July	233.50	237.00		228.50	**235.00**	1.75	2,026
Dec	238.75	239.25	▼	234.25	**238.50**	−.25	2,214
Soybeans (CBT)-5,000 bu.; cents per bu.							
July	905.00	905.75	▼	841.50	**889.00**	−19.50	229,759
Nov	928.25	929.00	▼	864.50	**911.00**	−20.50	363,741
Soybean Meal (CBT)-100 tons; $ per ton.							
July	334.80	337.00		320.30	**334.50**	−1.00	95,584
Dec	342.20	342.60		326.50	**340.30**	−2.10	162,296
Soybean Oil (CBT)-60,000 lbs.; cents per lb.							
July	29.48	29.59	▼	27.79	**28.85**	−.72	113,599
Dec	30.30	30.37	▼	28.50	**29.58**	−.77	202,422
Rough Rice (CBT)-2,000 cwt.; $ per cwt.							
July	1274.50	1281.00		1220.00	**1221.00**	−53.50	3,936
Sept	1033.00	1055.00	▼	1024.00	**1052.00**	25.00	5,707
Wheat (CBT)-5,000 bu.; cents per bu.							
July	489.50	490.50		467.50	**477.75**	−12.25	94,998
Sept	501.00	501.25		480.00	**489.50**	−12.00	158,935
Wheat (KC)-5,000 bu.; cents per bu.							
July	499.25	500.50		471.75	**483.00**	−16.50	59,643
Sept	515.00	516.50		487.75	**499.00**	−16.00	103,261
Wheat (MPLS)-5,000 bu.; cents per bu.							
July	563.00	563.75	▼	541.75	**549.50**	−14.25	13,550
Sept	572.00	573.50	▼	554.75	**560.50**	−11.50	22,902
Cattle-Feeder (CME)-50,000 lbs.; cents per lb.							
Aug	147.900	149.925		146.950	**149.625**	.650	23,427
Sept	148.225	150.075		147.250	**149.900**	.775	6,079
Cattle-Live (CME)-40,000 lbs.; cents per lb.							
June	108.000	109.150		106.725	**108.525**	.225	7,312
Aug	104.700	106.650		103.300	**106.425**	1.250	149,374
Hogs-Lean (CME)-40,000 lbs.; cents per lb.							
July	82.600	82.925		81.500	**81.875**	−1.850	34,460
Aug	78.200	78.575		76.875	**77.725**	−1.700	74,580
Lumber (CME)-110,000 bd. ft., $ per 1,000 bd. ft.							
July	539.20	543.20		528.20	**528.20**	−15.00	3,469
Sept	523.30	527.20		513.90	**513.90**	−15.00	2,103

	Open	High	hi lo	Low	Settle	Chg	Open interest
Milk (CME)-200,000 lbs., cents per lb.							
June	15.35	15.35		15.32	**15.32**	−.01	3,068
July	15.24	15.30		15.05	**15.12**	−.07	3,803
Cocoa (ICE-US)-10 metric tons; $ per ton.							
July	2,478	2,505		2,433	**2,468**	−41	208
Sept	2,469	2,494		2,426	**2,453**	−23	102,872
Coffee (ICE-US)-37,500 lbs.; cents per lb.							
July	114.30	114.35	▼	112.65	**114.10**	−.35	16,274
Sept	116.45	116.65	▼	114.95	**116.40**	−.30	145,213
Sugar-World (ICE-US)-112,000 lbs.; cents per lb.							
July	12.00	12.00		11.70	**11.84**	−.15	115,822
Oct	12.24	12.27		11.97	**12.13**	−.15	460,188
Sugar-Domestic (ICE-US)-112,000 lbs.; cents per lb.							
Sept	25.92	26.00		25.92	**26.00**	.47	2,920
Nov	26.00	26.15		26.00	**26.08**	.17	1,479
Cotton (ICE-US)-50,000 lbs.; cents per lb.							
July	87.40	88.15		83.32	**83.32**	−4.00	15,695
Dec	87.51	88.30		83.77	**83.82**	−3.95	195,814
Orange Juice (ICE-US)-15,000 lbs.; cents per lb.							
July	157.90	157.90		156.00	**156.90**	−1.10	4,476
Sept	160.15	160.45		158.60	**159.35**	−1.20	9,031

Interest Rate Futures

	Open	High	hi lo	Low	Settle	Chg	Open interest
Treasury Bonds (CBT)-$100,000; pts 32nds of 100%							
June	144-200	145-180		144-200	**144-300**	17.0	4,627
Sept	143-250	144-250		143-230	**144-030**	17.0	808,044
Treasury Notes (CBT)-$100,000; pts 32nds of 100%							
June	119-305	120-155		119-305	**120-045**	7.5	11,358
Sept	119-215	120-060		119-210	**119-270**	8.0	3,418,762
5 Yr. Treasury Notes (CBT)-$100,000; pts 32nds of 100%							
June	113-222	113-250		113-220	**113-215**	4.7	36,900
Sept	113-092	113-200		113-090	**113-125**	4.7	3,700,585
2 Yr. Treasury Notes (CBT)-$200,000; pts 32nds of 100%							
June	106-010	106-030		106-010	**106-010**	.5	7,779
Sept	105-270	105-307		105-267	**105-275**	.7	1,796,452
30 Day Federal Funds (CBT)-$5,000,000; 100 - daily avg.							
June	98.185	98.185		98.183	**98.183**	...	168,037
July	98.090	98.095		98.085	**98.090**	...	258,486
10 Yr. Del. Int. Rate Swaps (CBT)-$100,000; pts 32nds of 100%							
Sept	95.734	95.734	▲	95.422	**95.484**	.266	31,866
1 Month Libor (CME)-$3,000,000; pts of 100%							
July	...	...		...	**97.9050**	...	4,162
Eurodollar (CME)-$1,000,000; pts of 100%							
July	97.6600	97.6600		97.6500	**97.6525**	−.0075	153,507
Dec	97.3400	97.3850		97.3400	**97.3450**	.0100	1,851,189
March'19	97.2050	97.2650		97.2050	**97.2150**	.0150	1,389,872
Dec	96.9650	97.0550		96.9650	**96.9950**	.0300	1,878,337

Currency Futures

	Open	High	hi lo	Low	Settle	Chg	Open interest
Japanese Yen (CME)-¥12,500,000; $ per 100¥							
July	.9062	.9145		.9062	**.9103**	.0035	533
Sept	.9100	.9187		.9100	**.9142**	.0036	149,735
Canadian Dollar (CME)-CAD 100,000; $ per CAD							
June	.7576	.7577	▼	.7524	**.7531**	−.0036	47,201
Sept	.7587	.7589	▼	.7536	**.7542**	−.0037	134,416
British Pound (CME)-£62,500; $ per £							
July	1.3263	1.3285	▼	1.3172	**1.3184**	−.0074	2,194
Sept	1.3298	1.3329	▼	1.3204	**1.3221**	−.0075	159,813
Swiss Franc (CME)-CHF 125,000; $ per CHF							
Sept	1.0122	1.0161		1.0100	**1.0129**	−.0001	93,012
Australian Dollar (CME)-AUD 100,000; $ per AUD							
July	.7404	.7423	▼	.7353	**.7377**	−.0038	482
Aug	.7410	.7424	▼	.7351	**.7378**	−.0039	249
Sept	.7424	.7429	▼	.7346	**.7378**	−.0040	132,426
Dec	.7411	.7426	▼	.7353	**.7384**	−.0041	498
Mexican Peso (CME)-MXN 500,000; $ per MXN							
Sept	.04796	.04811		.04758	**.04800**	.00008	156,123
Euro (CME)-€125,000; $ per €							
July	1.1645	1.1668	▼	1.1556	**1.1599**	−.0041	5,780
Sept	1.1701	1.1724	▼	1.1610	**1.1653**	−.0043	460,251

Index Futures

	Open	High	hi lo	Low	Settle	Chg	Open interest
Mini DJ Industrial Average (CBT)-$5 x index							
Sept	25001	25017		24569	**24715**	−301	84,489
Dec	25008	25022	▲	24587	**24727**	−303	453
S&P 500 Index (CME)-$250 x index							
Sept	2774.40	2774.40		2736.50	**2766.20**	−13.50	46,956
Mini S&P 500 (CME)-$50 x index							
Sept	2778.25	2780.25		2735.75	**2766.25**	−13.50	2,595,978
Dec	2783.00	2784.25		2740.50	**2770.00**	−14.00	44,548
Mini S&P Midcap 400 (CME)-$100 x index							
Sept	2001.10	2002.10		1973.70	**1997.10**	−3.00	84,857
Mini Nasdaq 100 (CME)-$20 x index							
Sept	7275.0	7279.0	▲	7157.5	**7252.3**	−23.8	221,680
Dec	7299.5	7305.3	▲	7189.0	**7280.5**	−24.0	1,707
Mini Russell 2000 (ICE-US)-$100 x index							
Sept	1698.50	1699.80	▲	1675.60	**1698.80**	−.80	554,378
Mini Russell 1000 (ICE-US)-$100 x index							
Sept	1533.90	1539.40		1523.60	**1538.60**	−5.40	10,495
U.S. Dollar Index (ICE-US)-$1,000 x index							
Sept	94.35	94.95	▲	94.18	**94.73**	.27	45,959
Dec	93.80	94.52	▲	93.76	**94.28**	.28	1,290

Source: SIX Financial Information

Cash Prices | WSJ.com/commodities

Tuesday, June 19, 2018

These prices reflect buying and selling of a variety of actual or "physical" commodities in the marketplace—separate from the futures price on an exchange, which reflects what the commodity might be worth in future months.

	Tuesday
Energy	
Propane,tet,Mont Belvieu-g	0.8553
Butane,normal,Mont Belvieu-g	1.0038
NaturalGas,HenryHub-i	2.900
NaturalGas,TranscoZone3-i	2.850
NaturalGas,TranscoZone6NY-i	2.670
NaturalGas,PanhandleEast-i	2.250
NaturalGas,Opal-i	2.300
NaturalGas,MarcellusNE PA-i	2.220
NaturalGas,HaynesvilleN.LA-i	2.790
Coal,C.Aplc.,12500Btu,1.2SO2-r,w	64.150
Coal,PwdrRvrBsn,8800Btu,0.8SO2-r,w	12.400
Metals	
Gold, per troy oz	
Engelhard industrial	1277.62
Engelhard fabricated	1373.44
Handy & Harman base	1276.15
Handy & Harman fabricated	1416.52
LBMA Gold Price AM	*1281.25
LBMA Gold Price PM	*1281.55
Krugerrand,wholesale-e	1329.74
Maple Leaf-e	1342.53
American Eagle-e	1342.53
Mexican peso-e	1549.61
Austria crown-e	1256.28
Austria phil-e	1342.53
Silver, troy oz.	
Engelhard industrial	16.3500
Engelhard fabricated	19.6200
Handy & Harman base	16.3800
Handy & Harman fabricated	20.4750
LBMA spot price	*£12.5300
(U.S.$ equivalent)	*16.6050
Coins,wholesale $1,000 face-a	12060
Other metals	
LBMA Platinum Price PM	*884.0
Platinum,Engelhard industrial	874.0
Platinum,Engelhard fabricated	974.0
Palladium,Engelhard industrial	987.0
Palladium,Engelhard fabricated	1087.0
Aluminum, LME, $ per metric ton	*2220.5
Copper,Comex spot	3.0465
Iron Ore, 62% Fe CFR China-s	n.a.
Shredded Scrap, US Midwest-s,m	n.a.
Steel, HRC USA, FOB Midwest Mill-s	n.a.
Fibers and Textiles	
Burlap,10-oz,40-inch NY yd-n,w	0.5600
Cotton,1 1/16 std lw-mdMphs-u	0.8332
Cotlook 'A' Index-t	*98.85
Hides,hvy native steers piece fob-u	59.500
Wool,64s,staple,Terr del-u,w	n.a.
Grains and Feeds	
Barley,top-quality Mnpls-u	n.a.
Bran,wheat middlings, KC-u,w	63
Corn,No. 2 yellow,Cent IL-bp,u	3.2600
Corn gluten feed,Midwest-u,w	118.9
Corn gluten meal,Midwest-u,w	458.2
Cottonseed meal-u,w	255
Hominy feed,Cent IL-u,w	102
Meat-bonemeal,50% pro Mnpls-u,w	283
Oats,No.2 milling,Mnpls-u	2.8250
Rice, Long Grain Milled, No. 2 AR-u,w	25.75
Sorghum,(Milo) No.2 Gulf-u	7.3750
SoybeanMeal,Cent IL,rail,ton48%-u	345.00
Soybeans,No.1 yllw IL-bp,u	8.5650
Wheat,Spring14%-pro Mnpls-u	6.9950
Wheat,No.2 soft red,St.Louis-bp,u	4.9750
Wheat - Hard - KC (USDA) $ per bu-u	5.1300
Wheat,No.1soft white,Portld,OR-u	6.0150
Food	
Beef,carcass equiv. index	
choice 1-3,600-900 lbs.-u	189.34
select 1-3,600-900 lbs.-u	169.41
Broilers, National comp wghtd-u,w	1.2003
Butter,AA Chicago	2.3100
Cheddar cheese,bbl,Chicago	132.50
Cheddar cheese,blk,Chicago	156.75
Milk,Nonfat dry,Chicago lb.	75.25
Cocoa,Ivory Coast-w	n.a.
Coffee,Brazilian,Comp	1.1367
Coffee,Colombian, NY	1.3742
Eggs,large white,Chicago-u	0.9150
Flour,hard winter KC	16.10
Hams,17-20 lbs,Mid-US fob-u	0.58
Hogs,Iowa-So. Minnesota-u	80.29
Pork bellies,12-14 lb MidUS-u	n.a.
Pork loins,13-19 lb MidUS-u	1.0609
Steers,Tex.-Okla. Choice-u	n.a.
Steers,feeder,Okla. City-u,w	165.75
Fats and Oils	
Corn oil,crude wet/dry mill-u,w	29.5000
Grease,choice white,Chicago-h	0.2625
Lard,Chicago-u	0.3300
Soybean oil,crude;Centl IL-u	0.2720
Tallow,bleach;Chicago-h	0.2675
Tallow,edible,Chicago-u	0.3000

KEY TO CODES: A=ask; B=bid; BP=country elevator bids to producers; C=corrected; E=Manfra,Tordella & Brooks; G=ICE; H=Hurley Brokerage; I=Natural Gas Intelligence; M=monthly; N=nominal; n.a.=not quoted or not available; R=SNL Energy; S=Platts-TSI; T=Cotlook Limited; U=USDA; W=weekly, Z=not quoted. *Data as of 6/18

Source: WSJ Market Data Group

Bonds | WSJ.com/bonds

Tracking Bond Benchmarks

Return on investment and spreads over Treasurys and/or yields paid to investors compared with 52-week highs and lows for different types of bonds

Total return close	YTD total return (%)	Index	Yield (%) Latest	Low	High
Broad Market Bloomberg Barclays					
1908.51	-1.9	U.S. Aggregate	3.320	2.380	3.430
U.S. Corporate Indexes Bloomberg Barclays					
2707.54	-3.2	U.S. Corporate	4.010	3.030	4.070
2575.62	-1.7	Intermediate	3.700	2.530	3.760
3679.43	-6.5	Long term	4.660	3.990	4.750
555.61	-2.2	Double-A-rated	3.420	2.470	3.500
697.77	-3.2	Triple-B-rated	4.310	3.340	4.370
High Yield Bonds Merrill Lynch					
420.03	0.6	High Yield Constrained	6.201	5.373	6.417
435.04	3.5	Triple-C-rated	9.709	9.597	11.091
2877.77	0.6	High Yield 100	5.853	4.948	6.319
376.92	-0.5	Global High Yield Constrained	5.950	4.934	6.001
304.25	-0.7	Europe High Yield Constrained	3.247	1.897	3.387
U.S Agency Bloomberg Barclays					
1626.71	-0.7	U.S Agency	2.790	1.690	2.870
1457.70	-0.3	10-20 years	2.700	1.510	2.760
3296.17	-2.7	20-plus years	3.330	2.730	3.550
2403.51	-2.4	Yankee	3.720	2.610	3.760

Total return close	YTD total return (%)	Index	Yield (%) Latest	Low	High
Mortgage-Backed Bloomberg Barclays					
1963.46	-1.3	Mortgage-Backed	3.470	2.660	3.580
1931.92	-1.1	Ginnie Mae (GNMA)	3.420	2.630	3.540
1151.13	-1.3	Fannie mae (FNMA)	3.480	2.670	3.590
1772.11	-1.4	Freddie Mac (FHLMC)	3.500	2.680	3.610
520.47	-0.3	Muni Master	2.460	1.736	2.653
362.10	-0.9	7-12 year	2.543	1.744	2.702
409.29	-0.7	12-22 year	2.843	2.213	3.004
397.05	-0.8	22-plus year	3.226	2.716	3.411
Global Government J.P. Morgan†					
542.62	-0.3	Global Government	1.580	1.300	1.680
760.68	0.8	Canada	2.130	1.610	2.450
372.13	0.4	EMU§	1.182	0.956	1.362
718.04	1.1	France	0.810	0.690	1.040
511.72	0.9	Germany	0.460	0.340	0.740
290.78	0.7	Japan	0.360	0.350	0.460
565.72	0.9	Netherlands	0.550	0.470	0.830
933.07	0.2	U.K.	1.560	1.340	1.830
758.55	-6.1	Emerging Markets **	6.822	5.279	6.822

*Constrained indexes limit individual issuer concentrations to 2%; the High Yield 100 are the 100 largest bonds
† In local currency § Euro-zone bonds
** EMBI Global Index

Sources: Merrill Lynch; Bloomberg Barclays; J.P.Morgan

Global Government Bonds: Mapping Yields

Yields and spreads over or under U.S. Treasurys on benchmark two-year and 10-year government bonds in selected other countries; arrows indicate whether the yield rose(▲) or fell (▼) in the latest session

Coupon (%)	Country/ Maturity, in years	Yield (%) Latest	Previous	Month ago	Year ago	Spread Under/Over U.S. Treasurys, in basis points Latest	Prev	Year ago
2.500	**U.S.** 2	2.549 ▲	2.549	2.545	1.360			
2.875	10	2.893 ▼	2.919	3.059	2.192			
4.500	**Australia** 2	2.017 ▲	2.013	2.052	1.686	-53.2	-53.6	32.6
2.250	10	2.634 ▼	2.681	2.913	2.417	-26.0	-23.8	22.5
0.000	**France** 2	-0.543 ▼	-0.529	-0.484	-0.481	-309.3	-307.8	-184.1
0.750	10	0.648 ▼	0.668	0.834	0.633	-224.6	-225.1	-155.9
0.000	**Germany** 2	-0.635 ▼	-0.631	-0.582	-0.672	-318.5	-318.1	-203.2
0.500	10	0.375 ▼	0.400	0.581	0.282	-251.8	-251.9	-190.9
0.350	**Italy** 2	0.593 ▲	0.537	0.083	-0.308	-195.6	-201.3	-166.8
2.000	10	2.544 ▼	2.546	2.221	1.954	-35.0	-37.4	-23.8
0.100	**Japan** 2	-0.135 ▼	-0.134	-0.134	-0.117	-268.4	-268.3	-147.7
0.100	10	0.028 ▼	0.036	0.062	0.056	-286.5	-288.3	-213.6
1.400	**Spain** 2	-0.313 ▲	-0.317	-0.306	-0.315	-286.2	-286.6	-167.5
1.400	10	1.241 ▼	1.255	1.426	1.443	-165.3	-166.4	-74.9
2.000	**U.K.** 2	0.712 ▼	0.725	0.814	0.182	-183.7	-182.5	-117.9
4.250	10	1.282 ▼	1.324	1.501	1.033	-161.1	-159.5	-115.9

Source: Tullett Prebon

Borrowing Benchmarks | WSJ.com/bonds

Money Rates

June 19, 2018

Key annual interest rates paid to borrow or lend money in U.S. and international markets. Rates below are a guide to general levels but don't always represent actual transactions.

Inflation

	May index level	Chg From (%) April '18	May '17
U.S. consumer price index			
All items	251.588	0.42	2.8
Core	257.469	0.17	2.2

International rates

	Latest	Week ago	52-Week High	Low
Prime rates				
U.S.	5.00	4.75	5.00	4.25
Canada	3.45	3.45	3.45	2.70
Japan	1.475	1.475	1.475	1.475
Policy Rates				
Euro zone	0.00	0.00	0.00	0.00
Switzerland	0.50	0.50	0.50	0.50
Britain	0.50	0.50	0.50	0.25
Australia	1.50	1.50	1.50	1.50
Overnight repurchase				
U.S.	1.95	1.73	2.18	1.01

U.S. government rates

	Latest	Week ago	52-Week High	Low
Discount				
	2.50	2.25	2.50	1.75
Federal funds				
Effective rate	1.9400	1.7300	1.9400	1.0700
High	2.0625	1.9500	2.1000	1.3125
Low	1.8700	1.6700	1.9000	0.9700
Bid	1.8900	1.6800	1.9200	1.0500
Offer	1.9300	1.7100	1.9300	1.0700
Treasury bill auction				
4 weeks	1.815	1.790	1.815	0.850
13 weeks	1.900	1.910	1.910	1.000
26 weeks	2.075	2.075	2.080	1.105

Secondary market

	Latest	Week ago	52-Week High	Low
Fannie Mae				
30-year mortgage yields				
30 days	4.180	4.251	4.344	3.253
60 days	4.204	4.278	4.371	3.281

Other short-term rates

	Latest	Week ago	52-Week high	low
Call money				
	3.75	3.50	3.75	3.00
Commercial paper (AA financial)				
90 days	2.18	2.20	2.31	1.14
Libor				
One month	2.08788	2.05725	2.08788	1.21556
Three month	2.33025	2.33563	2.36906	1.28722
Six month	2.49500	2.49875	2.52375	1.43961
One year	2.76250	2.76469	2.78031	1.69511
Euro Libor				
One month	-0.399	-0.401	-0.397	-0.420
Three month	-0.363	-0.350	-0.349	-0.389
Six month	-0.306	-0.305	-0.296	-0.339
One year	-0.235	-0.228	-0.180	-0.263
Euro interbank offered rate (Euribor)				
One month	-0.370	-0.371	-0.366	-0.374
Three month	-0.323	-0.321	-0.321	-0.332
Six month	-0.268	-0.267	-0.267	-0.279
One year	-0.181	-0.181	-0.151	-0.194

	Latest	Value Traded	52-Week High	Low
DTCC GCF Repo Index				
Treasury	1.930	22.200	2.068	1.013
MBS	1.941	108.670	1.994	1.030

	Settle	Change	Open Interest	Implied Rate
DTCC GCF Repo Index Futures				
Treasury Jun	98.080	0.002	873	1.920
Treasury Jly	97.975	0.005	829	2.025
Treasury Aug	97.980	0.005	1289	2.020

Notes on data:

U.S. prime rate is the base rate on corporate loans posted by at least 70% of the 10 largest U.S. banks, and is effective June 14, 2018. **Other prime rates** aren't directly comparable; lending practices vary widely by location; **Discount rate** is effective June 14, 2018. **DTCC GCF Repo Index** is Depository Trust & Clearing Corp.'s weighted average for overnight trades in applicable CUSIPs. Value traded is in billions of U.S. dollars. **Federal-funds rates** are Tullett Prebon rates as of 5:30 p.m. ET. **Futures on the DTCC GCF Repo Index** are traded on NYSE Liffe US.

Sources: Federal Reserve; Bureau of Labor Statistics; DTCC; SIX Financial Information; Tullett Prebon Information, Ltd.

Exchange-Traded Portfolios | WSJ.com/ETFresearch

Largest 100 exchange-traded funds, latest session

Tuesday, June 19, 2018

ETF	Symbol	Closing Price	Chg (%)	YTD (%)
AlerianMLPETF	AMLP	10.28	-0.48	-4.7
CnsmrDiscSelSector	XLY	111.78	-0.13	13.3
CnsStapleSelSector	XLP	51.06	0.53	-10.2
EnSelectSectorSPDR	XLE	74.74	-0.23	3.4
FinSelSectorSPDR	XLF	27.35	-0.26	-2.0
FT DJ Internet	FDN	143.47	-0.31	30.6
HealthCareSelSect	XLV	84.86	0.26	2.6
IndSelSectorSPDR	XLI	73.23	-2.11	-3.2
InvscQQQI	QQQ	176.00	-0.28	13.0
InvscS&P500EW	RSP	103.28	-0.41	2.2
InvscSrLoan	BKLN	22.95	-0.22	-0.4
iSh1-3YCreditBond	CSJ	103.66	0.08	-0.8
iSh3-7YTreasuryBd	IEI	119.70	0.14	-2.0
iShCoreMSCIEAFE	IEFA	63.88	-0.85	-3.3
iShCoreMSCIEmgMk	IEMG	53.13	-1.19	-6.6
iShCoreMSCITotInt	IXUS	60.52	-1.00	-4.1
iShCoreS&P500	IVV	278.67	-0.37	3.7
iShCoreS&P MC	IJH	199.52	-0.15	5.1
iShCoreS&P SC	IJR	85.97	-0.09	11.9
iShS&PTotlUSStkMkt	ITOT	63.89	-0.37	4.5
iShCoreUSAggBd	AGG	106.01	0.10	-3.0
iShSelectDividend	DVY	98.73	0.10	0.2
iShEdgeMSCIMinEAFE	EFAV	71.30	-0.67	-2.3
iShEdgeMSCIMinUSA	USMV	53.60	-0.15	1.6
iShEdgeMSCIUSAMom	MTUM	113.40	-0.66	10.0
iShFloatingRateBd	FLOT	50.96	0.02	0.3
iShGoldTr	IAU	12.23	-0.24	-2.2
iShiBoxx$InvGrCpBd	LQD	114.59	0.05	-5.7
iShiBoxx$HYCpBd	HYG	85.99	-0.14	-1.5
iShJPMUSDEmgBd	EMB	106.18	-0.03	-8.5
iShMBSETF	MBB	103.91	0.19	-2.5
iShMSCI ACWI	ACWI	72.01	-0.69	-0.1
iShMSCIBrazil	EWZ	32.72	2.13	-19.1
iShMSCI EAFE	EFA	67.52	-0.92	-4.0
iShMSCI EAFE SC	SCZ	63.71	-0.89	-1.2
iShMSCIEmgMarkets	EEM	43.90	-1.10	-6.8
iShMSCIEurozone	EZU	41.66	-0.87	-4.0
iShMSCIJapan	EWJ	58.79	-1.06	-1.9
iShNasdaqBiotech	IBB	112.04	1.46	4.9
iShNatlMuniBd	MUB	108.93	0.10	-1.6
iShRussell1000Gwth	IWF	146.97	-0.56	9.1
iShRussell1000	IWB	154.52	-0.38	4.0
iShRussell1000Val	IWD	122.66	-0.23	-1.4
iShRussell2000Gwth	IWO	212.53	-0.13	13.8
iShRussell2000	IWM	168.61	0.01	10.6
iShRussell2000Val	IWN	134.69	0.27	7.1
iShRussell3000	IWV	165.22	-0.36	4.5
iShRussellMid-Cap	IWR	216.14	-0.44	3.8
iShRussellMCValue	IWS	89.28	-0.23	0.1
iShS&PMC400Growth	IJK	231.37	-0.28	7.2
iShS&P500Growth	IVW	166.74	-0.52	9.1
iShS&P500Value	IVE	111.77	-0.22	-2.2
iShUSPfdStk	PFF	37.58	0.11	-1.3
iShShortTreaBd	SHV	110.36	0.02	0.1
iShTIPSBondETF	TIP	112.35	0.16	-1.5
iSh1-3YTreasuryBd	SHY	83.29	0.04	-0.7
iSh7-10YTreasuryBd	IEF	102.14	0.26	-3.2
iShRussellMCGrowth	IWP	130.85	-0.71	8.5
PIMCOEnhShMaturity	MINT	101.51	0.01	-0.0
SPDR BlmBarcHYBd	JNK	35.88	-0.14	-2.3
SPDR Gold	GLD	120.80	-0.26	-2.3
SchwabIntEquity	SCHF	33.28	-0.95	-2.3
SchwabUS BrdMkt	SCHB	67.42	-0.38	4.5
SchwabUS Div	SCHD	50.35	-0.26	-1.6
SchwabUS LC	SCHX	66.35	-0.41	4.0
SchwabUS SC	SCHA	75.86	0.01	8.8
SPDR DJIA Tr	DIA	246.88	-1.14	-0.2
SPDR S&PMdCpTr	MDY	362.14	-0.14	4.8
SPDR S&P 500	SPY	275.50	-0.38	3.2
SPDR S&P Div	SDY	92.93	-0.18	-1.6
TechSelectSector	XLK	71.43	-0.52	11.7
UtilitiesSelSector	XLU	50.19	0.99	-4.7
VanEckGoldMiner	GDX	22.05	-0.99	-5.1
VangdInfoTech	VGT	188.01	-0.69	14.1
VangdSC Val	VBR	138.98	-0.09	4.7
VangdSC Grwth	VBK	181.04	-0.19	12.6
VangdDivApp	VIG	103.67	-0.58	1.6
VangdFTSEDevMk	VEA	43.67	-1.09	-2.7
VangdFTSE EM	VWO	43.19	-1.14	-5.9
VangdFTSE Europe	VGK	57.61	-0.83	-2.6
VangdFinls	VFH	69.94	-0.17	-0.1
VangdFTSEAWxUS	VEU	52.87	-1.03	-3.4
VangdGrowth	VUG	153.28	-0.55	9.0
VangdHiDiv	VYM	84.65	-0.22	-1.1
VangdIntermBd	BIV	80.75	0.20	-3.7
VangdIntrCorpBd	VCIT	83.45	0.10	-4.5
VangdLC	VV	127.38	-0.42	3.9
VangdMC	VO	161.35	-0.47	4.2
VangdMC Val	VOE	112.25	-0.34	0.6
VangdRealEst	VNQ	78.90	-0.10	-4.9
VangdS&P500	VOO	254.25	-0.38	3.7
VangdST Bond	BSV	78.14	0.08	-1.2
VangdSTCpBd	VCSH	78.04	0.06	-1.6
VangdSC	VB	159.80	-0.17	8.1
VangdTotalBd	BND	79.05	0.16	-3.1
VangdTotIntlBd	BNDX	54.70	0.37	0.6
VangdTotIntlStk	VXUS	55.05	-1.04	-3.1
VangdTotalStk	VTI	143.51	-0.33	4.6
VangdTotlWrld	VT	74.78	-0.68	0.7
VangdValue	VTV	105.83	-0.24	-0.5

Corporate Debt

Price moves by a company's debt in the credit markets sometimes mirror and sometimes anticipate, moves in that same company's share price.

Investment-grade spreads that tightened the most...

Issuer	Symbol	Coupon (%)	Maturity	Spread*, in basis points Current	One-day change	Last week	Stock Performance Close ($)	% chg
Wells Fargo	WFC	6.605	Oct. 1, '25	144	–21	n.a.	55.08	...
Apple	AAPL	2.850	May 6, '21	16	–13	26	185.69	–1.62
Viacom	VIA	4.375	March 15, '43	256	–7	255	34.40	–0.86
Anglo American Capital	AALLN	3.750	April 10, '22	111	–6	117	...	...
Anadarko Petroleum	APC	4.850	March 15, '21	90	–6	90	69.08	–0.80
Bayer US Finance	BAYNGR	3.375	Oct. 8, '24	127	–6	n.a.	...	...
BPCE	BPCEGP	2.750	Dec. 2, '21	95	–5	87	...	...
Cooper US	ETN	3.875	Dec. 15, '20	65	–5	68	...	...

...And spreads that widened the most

Issuer	Symbol	Coupon (%)	Maturity	Spread*, in basis points Current	One-day change	Last week	Stock Performance Close ($)	% chg
Pacific Gas And Electric	PCG	5.800	March 1, '37	231	26	179	...	...
KeyCorp	KEY	2.900	Sept. 15, '20	76	20	73	20.57	0.64
General Mills	GIS	3.200	April 16, '21	67	19	70	44.98	0.56
BNP Paribas	BNP	6.750	March 14, '49	319	17	325	...	...
ONEOK	OKE	4.950	July 13, '47	208	17	188	68.79	0.39
HSBC Holdings	HSBC	6.000	May 22, '49	367	16	350	48.09	–0.87
Oracle	ORCL	2.950	Nov. 15, '24	83	15	n.a.	46.27	–0.54
Phillips 66 Partners	PSXP	3.750	March 1, '28	169	15	153	51.19	–0.89

High-yield issues with the biggest price increases...

Issuer	Symbol	Coupon (%)	Maturity	Bond Price as % of face value Current	One-day change	Last week	Stock Performance Close ($)	% chg
Navios Maritime Holdings	NM	7.375	Jan. 15, '22	77.950	1.95	75.500	0.91	1.42
Bacardi	BACARD	5.300	May 15, '48	96.052	0.99	93.978	...	...
Coty	COTY	6.500	April 15, '26	97.750	0.75	97.125	14.46	2.05
Six Flags Entertainment	SIX	4.875	July 31, '24	98.717	0.72	n.a.	71.98	–0.08
Diamond Offshore Drilling	DO	7.875	Aug. 15, '25	103.905	0.69	103.750	17.99	–2.81
Allison Transmission	ALSN	5.000	Oct. 1, '24	100.250	0.63	n.a.	41.55	–0.46
Platform Specialty Products	PAH	5.875	Dec. 1, '25	99.125	0.63	97.875	11.86	–0.42
Wyndham Destinations	WYN	3.900	March 1, '23	94.750	0.55	93.250	...	...

...And with the biggest price decreases

Issuer	Symbol	Coupon (%)	Maturity	Bond Price as % of face value Current	One-day change	Last week	Stock Performance Close ($)	% chg
TRU Taj	TOY	12.000	Aug. 15, '21	82.500	–4.50	86.000	...	...
Acosta	ACOSTA	7.750	Oct. 1, '22	57.000	–3.50	60.000	...	...
Windstream Services	WIN	8.750	Dec. 15, '24	65.250	–2.81	69.000	7.22	1.98
APTIM	CSVCAC	7.750	June 15, '25	82.250	–2.27	84.500	...	...
PHI	PHII	5.250	March 15, '19	95.500	–2.00	95.000	11.10	...
Parker Drilling	PKD	7.500	Aug. 1, '20	83.000	–1.88	88.625	0.35	0.17
Sanchez Energy	SN	7.750	June 15, '21	82.250	–1.50	84.750	3.99	–1.24
Ultra Resources	UPL	6.875	April 15, '22	71.500	–1.44	73.563	...	...

*Estimated spread over 2-year, 3-year, 5-year, 10-year or 30-year hot-run Treasury; 100 basis points=one percentage pt.; change in spread shown is for Z-spread.
Note: Data are for the most active issue of bonds with maturities of two years or more

Sources: MarketAxess Corporate BondTicker; WSJ Market Data Group

PayPal to Buy Payments Provider

The $400 million purchase of fintech firm Hyperwallet will shore up its defenses

By Peter Rudegeair

PayPal Holdings Inc. said it agreed to acquire financial-technology company **Hyperwallet Systems** Inc. for about $400 million, a deal that augments its offerings to businesses for managing and processing their online and mobile payments.

Founded in 2000, Hyperwallet helps individuals and small firms receive payments for goods and services that they sell on online marketplaces, including Amazon.com Inc.'s Australian business and Expedia Group Inc.'s vacation-home rental site HomeAway.

The company, which counts private-equity firm Primus Capital Partners as a major shareholder, can disburse payments in more than 200 countries through a variety of forms, including debit cards and transfers into bank or PayPal accounts.

BRIAN ACH/GETTY IMAGES FOR PAYPAL

Decoration from a New York pop-up store PayPal opened in June

PayPal executives have previously identified both dealmaking and supporting commerce that happens over online marketplaces as two of the company's biggest drivers of growth in coming years. Although its shares are up 60% over the past year and its market capitalization recently topped $100 billion, PayPal is facing increased competition from banks, startups and established tech companies such as Amazon and Apple Inc.

In May, the San Jose, Calif.-based company agreed to buy European payment-terminal maker iZettle AB for roughly $2.2 billion, the largest acquisition in PayPal's nearly 20-year history. At an investor day shortly after the deal was announced, John Rainey, PayPal's chief financial officer, laid out plans to spend between $1 billion and $3 billion annually on acquisitions.

PayPal already manages payments for some of the largest online marketplaces, including Uber Technologies Inc. and Airbnb Inc., through its Braintree unit, and executives hope that acquiring Hyperwallet will make it more attractive to prospective customers. Around half of global online retail sales occurred on marketplaces in 2017, according to Internet Retailer, a trade magazine.

"We see an explosion of marketplaces," said Bill Ready, PayPal's chief operating officer, in an interview. "We want to serve them with a full operating system for commerce."

Hyperwallet Chief Executive Brent Warrington and around 300 employees will join PayPal's ranks after the deal closes. Mr. Warrington said in a news release that selling to PayPal was an "outstanding opportunity to supercharge Hyperwallet's growth."

Mr. Ready said that what distinguishes PayPal from other payments companies that cater to marketplaces is that it can connect those businesses to the more than 200 million consumers globally who have PayPal accounts.

"The thing we uniquely do that no one else is doing is bringing both buyers and sellers to the equation," Mr. Ready said.

KKR Weighs Sale Of Its European Telecom Operator

By Ben Dummett and Will Louch

KKR & Co. is exploring the sale of European telecommunications operator United Group BV in a transaction that could value the company at up to €3 billion ($3.47 billion), including debt, according to people familiar with the matter.

The auction comes amid a flurry of deal activity in Europe's communications and broadcasting sector, with companies such as wireless giant **Vodafone Group** PLC buying assets across Europe to offer packages of cable, internet, wireless and landline phone services to win more customers.

Meanwhile, a potential bidding war for Britain's **Sky** PLC between **Comcast** Corp. and **21st Century Fox** Inc. shows the value of telecom operators owning sports and other programming to distribute through their networks.

Fox and News Corp, which owns The Wall Street Journal, share common ownership.

Based in Amsterdam, United Group serves southeast Europe, describing itself as the largest alternative telecom provider in the countries that comprised the former Yugoslavia.

Created in 2007 from the combination of SBB, Telemach Slovenia and Telemach Bosnia, its cable-and-satellite telecommunications business offers television, fixed-line and mobile-phone services across Serbia, Bosnia & Herzegovina, Montenegro and Slovenia. United Group also provides pay-TV and fixed-line telephony services over the internet to the former Yugoslav regions.

Its content business includes original content and pay-TV channels offering entertainment, news and sports, according to the company's website.

United Group's regional focus on content and connectivity fits with the deal making playing out among some of the larger telecom operators in Europe. Still, the relatively small market of southeast Europe means the business may not attract a lot of attention from bigger industry players, some bankers suggested.

It is, however, more likely to generate significant interest from buyout firms because of the company's strong management team, breadth of offerings and subscriber growth, some bankers said.

At the end of March, United Group's network passed 1.79 million homes, and the company had 3.62 million customers, according to the company's website.

That is up from the 1.89 million customers it served when KKR acquired a majority stake in the company in March 2014 for an undisclosed amount.

United Group's annual revenue totaled €539.7 million for the period ended March 31, according to the company's website.

BETTMANN ARCHIVE/GETTY IMAGES

General Electric stoves on assembly lines in 1945. GE, once the most valuable U.S. company, was an original member of the Dow.

Walgreens Replaces GE on Dow

Continued from page B1

"the DJIA will be more representative of the consumer and health care sectors of the U.S. economy," said David Blitzer, chairman of the index committee at **S&P Dow Jones Indices**, the company behind the Dow. "Today's change to the DJIA will make the index a better measure of the economy and the stock market."

GE shares have tumbled 55% over the past 52 weeks, erasing more than $100 billion in wealth, as the company has switched leaders, slashed its dividend payment and pursued a restructuring that could result in a breakup of the struggling conglomerate. It is the cheapest stock of all 30 Dow components.

"We are focused on executing against the plan we've laid out to improve GE's performance," a GE spokeswoman said. "Today's announcement does nothing to change those commitments or our focus in creating in a stronger, simpler GE."

Shares of GE fell 1.4% in after hours trading. While investors don't expect the company's departure from the Dow to be a long-term drag on its share price, some said its exit was a potent symbol of how far the company's elevated status has fallen.

GE's market capitalization peaked at $594 billion in 2000, making it the most valued U.S. company. It has shrunk over the years. Under former CEO Jeff Immelt, the company shed its NBCUniversal media business and sold off most of its **GE Capital** arm.

More recently, the Boston-based company struck a deal to sell its century-old railroad business, part of a plan to shed $20 billion worth of assets by the end of next year. It is also looking to sell its century-old lighting business.

Investors are waiting for a major portfolio update from CEO John Flannery, who took over last summer and continues to preach that "everything is on the table." Mr. Flannery has also been slashing jobs and cutting costs as GE struggles with slack sales in its big Power business, which sells turbines for power plants.

GE's decline has left it with a market value of $113 billion, but it wasn't the smallest index. GE's market cap and annual revenue are still larger than Dow member **United Technologies** Corp.

Walgreens ended Tuesday's session with a market value of $64 billion.

Component stocks of the Dow are selected by the index committee, a group that includes editors of The Wall Street Journal, which is published by Dow Jones & Co., a part of **News Corp**.

The shake-up won't affect the value of the Dow, which fell 1.15% Tuesday and is down 0.1% this year. The index has surged to dozens of records in the past several years, most recently in January.

—Akane Otani contributed to this article.

Lehman Claimants Get Cash-Out Offer

By Andrew Scurria

Deutsche Bank AG wants to buy out Lehman Brothers Inc. claimants as the defunct brokerage firm's liquidation draws to a close.

Deutsche Bank's London branch beat out five other bidders competing to make a cash offer to holders of unsecured claims against the Lehman Brothers bankruptcy estate, according to court papers filed Monday by liquidating trustee James Giddens.

Mr. Giddens is nearing the conclusion of a decadelong wind-down of Lehman Brothers, the brokerage unit of Lehman Brothers Holdings Inc.

He is planning to make a $170 million distribution, his sixth payout to creditors, which would bring recoveries on unsecured claims to 39.75 cents on the dollar from 39 cents.

Priority creditors have already been paid in full.

Only one dispute around unsecured claims remains outstanding: one from hundreds of former employees who say they are owed $265 million in deferred compensation. They are appealing U.S. Bankruptcy Judge Shelley C. Chapman's ruling last year wiping out their claims.

But resolving the appeal could take "substantial time," Mr. Giddens said, holding up a final distribution to unsecured claim holders. For those who want a quicker payout, the trustee has set up a process for holders to sell their remaining claims to one purchaser, allowing them to cash out of the Lehman Brothers liquidation.

Deutsche Bank has offered to pay participating claim holders 1.5 cents on the dollar, the highest among six bidders, in exchange for their interests in the bankruptcy estate, according to Monday's court filing.

New Banking Regulator Pursues Feedback From the Industry

By Ryan Tracy

WASHINGTON—The new leader of a key U.S. bank regulator said the agency needs to be more responsive to the industry's concerns and wants to review how regulators enforce "living will" requirements for big banks.

Federal Deposit Insurance Corp. Chairman Jelena McWilliams, in her first public remarks since being sworn in less than two weeks ago, avoided staking out specific policy positions but declared that her agency has an "open door policy where we solicit feedback on what's working and what's not" in the U.S. banking rule book.

"You don't want banks to be able to do just about anything," Ms. McWilliams said Tuesday at a conference hosted by two bank trade groups when asked about her regulatory approach.

On the other hand, the former Federal Reserve official, congressional staffer and top lawyer at Fifth Third Bancorp suggested she wouldn't view bankers with as much skepticism as regulators during the Obama administration.

"I've never met a banker who said, 'I actually want to be a bad banker. I really want to harm my consumers,'" said Ms. McWilliams. "I actually think that most entities are very good at trying to comply, trying to do the best they can, and the regulators' job is actually to make sure that the regulations we promulgate give them a clear path" and don't overburden the industry.

Ms. McWilliams arrives at the FDIC as the Trump administration's deregulatory push is speeding up, and the agency will play a key role in discussions about regulations such as the Volcker rule, which bars banks from speculative trading, and bank-capital and liquidity rules.

She also sketched out her own priorities. The FDIC plays an important role in evaluating new bank charters, and Ms. McWilliams said the agency needs to process them more quickly. "We can't just sit on those applications," she said, adding that she wants to create a tool for tracking how long the agency takes to respond.

Ms. McWilliams said she wants to solicit feedback on how regulators evaluate the "living will" plans that big banks must file proving they could fail without causing a panic. "I think in the aggregate the living-will process has made the system better," she said, but added that regulators have "more work to do" to make their expectations about the bankruptcy plans clear. She said she is open to discussing policies about how much cash banks must keep on hand to be ready to execute the plans.

Ms. McWilliams said she was open to discussing changes to the rating system regulators use to grade banks.

She said she views "with some suspicion" international bodies that negotiate uniform banking standards.

JACQUELYN MARTIN/ASSOCIATED PRESS

Jelena McWilliams, the FDIC's new chairman, aims to make sure that banking regulations don't overburden the industry.

New Highs and Lows | WSJ.com/newhighs

Continued From Page B9

Stock	Sym	52-Wk Hi/Lo	% Chg
TapImmune	TPIV	13.55	-8.4
TetraTech	TTEK	58.20	0.5
TexasRoadhouse	TXRH	67.17	1.5
TierReit	TIER	23.44	...
Trex	TREX	65.47	1.2
TriNet	TNET	57.02	0.4
TripAdvisor	TRIP	60.12	-0.3
Triple-S Mgmt	GTS	41.10	5.8
Trupanion	TRUP	40.34	1.2
21stCenturyFoxA	FOXA	45.06	0.3
TylerTech	TYL	238.57	0.1
US Foods	USFD	37.71	0.9
US PhysTherapy	USPH	99.10	-0.5
UtdCmtyFnl	UCFC	11.55	1.8
UnumTherapeutics	UMRX	15.65	8.7
UtahMedProducts	UTMD	116.62	0.3
Vectren	VVC	71.40	...
Verastem	VSTM	8.81	1.0
Veritex	VBTX	33.08	1.0
VinceHolding	VNCE	16.60	3.0
Virtusa	VRTU	54.21	-0.4
WGLHoldings	WGL	88.68	0.1
WSFS Financial	WSFS	55.50	0.8
WhiteMtnIns	WTM	933.70	1.0
Williams-Sonoma	WSM	63.60	-0.1
Wix.com	WIX	107.00	0.5
WolverineWwide	WWW	36.90	0.1
WorldAcceptance	WRLD	123.02	2.3
WW Ent	WWE	66.15	3.5
Zogenix	ZGNX	48.28	-0.8

Lows

Stock	Sym	52-Wk Hi/Lo	% Chg
AchieveLifeSci	ACHV	3.30	-4.8
AffiliatedMgrs	AMG	150.55	0.7
Agenus	AGEN	2.53	-6.3
AlgonquinPwr	AQN	9.48	...
AlioGold	ALO	1.35	-0.7
AlumofChina	ACH	11.62	-3.5
AtlasFinancial	AFH	9.61	-0.8
AtossaGenetics	ATOS	2.30	6.4
AurynResources	AUG	1.05	...
AutolivWi	ALVw	114.28	-3.4
BCE	BCE	40.52	-1.0
BCommunications	BCOM	9.50	-2.6
BkNovaScotia	BNS	56.88	-1.0
BasicEnergySvcs	BAS	11.91	-1.4
BlockHR	HRB	23.28	1.9
CDTI AdvMat	CDTI	0.50	-19.8
CellcomIsrael	CEL	5.91	1.0
CharahSolutions	CHRA	10.45	-4.0
ChinaMobile	CHL	44.09	-0.5
ClearOne	CLRO	3.80	1.3
Coca-Cola Femsa	KOF	54.56	-1.2
CerveceriasUnid	CCU	24.37	0.1
Cummins	CMI	139.13	-1.9
CytoriTherap	CYTX	1.65	-5.7
DBV Tech	DBVT	20.00	-1.3
DHX Media	DHXM	2.15	...
DarioHealthWt	DRIOW	0.12	-30.9
DropCar	DCAR	1.21	-5.9
EXFO	EXFO	3.20	-4.5
FC GlblRealty	FCRE	0.60	-6.0
FirstRepBkPfdE	FRCpE	25.54	-0.2
FivePoint	FPH	10.25	...
GGP PfdA	GGPpA	23.63	0.3
GeneralDynamics	GD	190.53	-2.7
GlobusMaritime	GLBS	0.56	-4.5
GoldenMinerals	AUMN	0.35	-4.2
GpoSupervielle	SUPV	13.00	3.8
HanwhaQCELLS	HQCL	6.08	-1.1
IRSA Prop	IRCP	27.55	...
iBio	IBIO	1.08	-7.7
InVivoTherap	NVIV	4.39	-4.6
JMU	JMU	0.40	-6.8
JaguarHealth	JAGX	1.55	-4.8
LG Display	LPL	8.85	-1.9
LeggMason	LM	35.05	0.5
LloydsBanking	LYG	3.23	...
Manpower	MAN	89.32	-1.0
Mechel	MTL	3.10	-2.5
MitsubishiUFJ	MUFG	5.77	-1.0
MtnProvDiamonds	MPVD	2.30	-2.4
NCS Multistage	NCSM	12.57	...
NaborsIndsPfdA	NBRpA	44.20	0.4
NantKwest	NK	2.79	-8.2
NaturalGasSvcs	NGS	21.70	-0.2
NomuraHoldings	NMR	4.90	-1.2
Novartis	NVS	73.21	-0.7
Owens-Illinois	OI	17.07	-2.3
PLDT	PHI	23.21	-1.5
Quarterhill	QTRH	1.14	-5.3
RPC	RES	13.78	-1.5
RandgoldRscs	GOLD	74.12	-0.7
RestorationRob	HAIR	2.61	-6.4
scPharm	SCPH	5.25	-6.1
SimonPropPfdJ	SPGpJ	66.50	-1.0
Soligenix	SNGX	1.38	-10.3
SonomaPharm	SNOA	2.46	0.4
StellarBiotech	SBOT	1.68	-3.4
Telefonica	TEF	8.50	-0.2
Tintri	TNTR	0.16	-25.4
TowerSemi	TSEM	21.93	-2.8
Transalta	TAC	4.85	-1.4
TransportadGas	TGS	13.83	3.7
UBS Group	UBS	15.03	-0.8
US Xpress	USX	15.00	-6.1
UnivDisplay	OLED	85.20	-1.7
Vedanta	VEDL	13.01	-2.5
VenatorMaterials	VNTR	16.46	-5.9
Vodafone	VOD	24.26	0.1
WABCO	WBC	118.63	-1.8
WorkhorseGroup	WKHS	1.98	-8.3
Xerox	XRX	26.96	1.1
XinyuanRealEst	XIN	4.68	0.6
YintechInvt	YIN	7.60	-3.3
Yirendai	YRD	21.86	-3.4
YogaWorks	YOGA	1.80	-3.7
YoungevityIntl	YGYI	3.33	-4.9
ZK Intl	ZKIN	5.03	-11.9

Dividend Changes

Dividend announcements from June 19.

Company	Symbol	Yld %	Amount New/Old	Frq	Payable / Record
Increased					
AG Mortgage Invt Trust	MITT	10.2	.50/.475	Q	Jul31/Jun29
Shoe Carnival	SCVL	1.0	.08/.075	Q	Jul23/Jul09
Foreign					
Blue Cap Reinsurance	BCRH	11.1	.30	Q	Jul13/Jun29
Tsakos Energy Navigation	TNP	5.5	.05	Q	Aug08/Aug02

KEY: A: annual; M: monthly; Q: quarterly; r: revised; SA: semiannual; S2:1: stock split and ratio; SO: spin-off.

Higher Supply Weighs on Oil Prices

By Benjamin Parkin And Sarah McFarlane

Oil prices dropped as trade tensions and expectations of growing production threatened to upset the global supply-and-demand balance.

COMMODITIES

West Texas Intermediate futures declined 1.2% to $65.07 a barrel at the New York Mercantile Exchange.

Brent crude, the global oil benchmark, fell 0.3% to $75.08 a barrel on London's ICE Futures exchange.

Global markets dropped on Tuesday after President Donald Trump said he was looking to extend duties on Chinese imports to $200 billion of goods, a sharp escalation of a recent trade dispute.

China last week said it planned duties against U.S. crude oil, among other imports, itself a response to U.S. tariffs announced earlier.

Traders were betting that the escalating dispute could threaten growth, global oil demand and a crucial market for American crude.

"We're seeing a reemergence of concerns about global trade," said Gene McGillian, vice president of research at Tradition Energy. "The record production that we're seeing in the U.S. would have trouble making it onto the global market."

Oil prices have whipsawed in recent sessions as traders prepare for a meeting of the Organization of the Petroleum Exporting Countries and its allies this Friday in Vienna, at which the global cartel is widely expected to sanction increased production.

Expectations have ranged between an increase of 300,000 barrels a day of oil production at the low end—which some traders see as supportive to prices—up to 1.5 million barrels a day.

$65.07

Cost of a barrel of U.S. crude, down 1.2% from Monday

A concern for traders, Mr. McGillian said, was that global supply from OPEC and others could increase as trade tensions start to stymie demand.

There are only a few producers who are able to increase output, including Saudi Arabia, Russia, the U.A.E. and Kuwait, which could mean other producers resist any production increase for fear it would send prices lower.

"There might be more intense discussions, but I guess in the end they will come up with a consensus decision for a small production increase in the short term," said Giovanni Staunovo, commodities analyst at UBS Wealth Management.

Brent prices have fallen 5.9% since peaking at about $80 a barrel in May after OPEC-led cuts helped drain global inventories, prompting Mr. Trump to blame the cartel for making oil prices "artificially very high."

"Investors are still trying to understand if the fall of the past few weeks could be considered as an inversion or—as it seems so far—just as a correction," said Carlo Alberto De Casa, chief analyst at ActivTrades.

A rebel attack on Libyan ports has shut down nearly half of the country's output, Mustafa Sanallah, head of the country's **National Oil** Corp., said Tuesday.

The supply disruption is helping to underpin prices, analysts said.

On Wednesday, investors will watch for official government data on weekly U.S. crude-oil inventories from the Energy Information Administration. Analysts are expecting a decline in stockpiles of both crude oil and gasoline.

The American Petroleum Institute, an industry group, said late Tuesday that its own data for the week showed a 3-million-barrel decrease in crude supplies, a 2.1-million-barrel increase in gasoline stocks and a 757,000-barrel rise in distillate inventories, according to a market participant.

Treasurys Advance As Unease Lingers

By Akane Otani

U.S. government-bond prices strengthened as rising tensions between the U.S. and China drove investors into the safety of sovereign debt.

CREDIT MARKETS

The yield on the 10-year Treasury note settled at 2.893% Tuesday, compared with 2.926% Monday. Yields fall as bond prices rise.

Yields slid overnight with U.S. stock futures as investors parsed the latest escalation in the conflict between the U.S. and China over trade policy. President Donald Trump asked his administration Monday to draw up a list of an additional $200 billion of Chinese goods that the U.S. could hit with tariffs, upping the ante after he approved tariffs on about $50 billion of Chinese goods last week.

Many investors and analysts fear tit-for-tat trade policies could ultimately dent economic growth, something that has kept global markets on edge in recent months and helped stall a climb in bond yields.

"The fear from here is a continued back and forth, escalating trade penalties on both sides with a further negative impact on growth," said Lindsey Piegza, chief economist at Stifel, in a research note.

Treasury yields then held on to their declines after data from the Commerce Department came in mixed, showing U.S. housing starts rebounding at the fastest pace since 2007, but residential building permits falling more than expected.

Strong economic data typically dull investor demand for Treasurys, which investors tend to be drawn to when the global growth outlook looks uncertain.

AUCTION RESULTS

Here are the results of Tuesday's Treasury auctions. All bids are awarded at a single price at the market-clearing yield. Rates are determined by the difference between that price and the face value.

FOUR-WEEK BILLS

Applications	$110,730,683,100
Accepted bids	$35,000,053,100
" noncompetitively	$767,644,100
" foreign noncompetitively	$0
Auction price (rate)	99.858833 (1.815%)
Coupon equivalent	1.843%
Bids at clearing yield accepted	12.62%
Cusip number	912796MK2

The bills, dated June 21, 2018, mature on July 19, 2018.

52-WEEK BILLS

Applications	$88,609,597,200
Accepted bids	$26,000,161,200
" noncompetitively	$541,487,200
" foreign noncompetitively	$101,700,000
Auction price (rate)	97.699722 (2.275%)
Coupon equivalent	2.347%
Bids at clearing yield accepted	10.52%
Cusip number	912796QM4

The bills, dated June 21, 2018, mature on June 20, 2019.

Spat Hits Global Markets

Continued from page B1

sions come as optimism about the outlook for world-wide economic growth is waning and political risk is perceived to be rising once again around the globe.

Economic data have softened in Europe and China while economists have remained relatively bullish about U.S. growth. The Federal Reserve Bank of Atlanta in May bumped up its forecast for second-quarter gross domestic product to 4.7%, retail sales surged last month and consumer spending continues to tick higher. But many now fear that those expecting a reconciliation between the U.S. and China could find themselves caught off guard.

A first round of U.S. tariffs is due to be implemented on July 6, and there is likely to be additional volatility in debt, equity and commodities markets between now and then, analysts said.

"We think the risk of a trade war is becoming much higher at this stage. In particular, the risk of misjudgment on both sides looks high," said Haibin Zhu, chief China economist at JPMorgan Chase.

The latest retrenchment in the markets took place after President Donald Trump called Monday for his administration to identify $200 billion in Chinese goods for a fresh round of tariffs, upping the ante after he had approved tariffs on $50 billion of goods Friday. Chinese officials have pledged to impose tariffs on hundreds of U.S. goods, something investors worry could dent profits, especially among U.S. auto makers, farmers and industrial firms.

Shares of industrial heavyweights that investors fear could take a hit under tighter trade policies tumbled, with **Caterpillar** Inc., **Boeing** Inc. and **Deere** and Co. losing more than 3% apiece.

Commodities prices also were stung, with soybean prices sliding 2.2% to their lowest level in more than two years on Tuesday and front-month copper for June delivery falling 1.8% for its fourth consecutive loss.

The trade tensions also pressured the Chinese yuan: It was down 0.3% against the U.S. dollar in offshore trading late Tuesday in New York, hovering around the lowest level since January.

"It's mainly the trade war that has created such panic in the market because the latest developments have surpassed the expectations of many people in China," said Zhang Gang, senior analyst at Central China Securities.

Some investors still hold out hope that Mr. Trump's latest call to expand tariffs will shape up to be more of a bargaining tool than a move toward cutting off trade relations altogether.

James Bianco, head of Chicago-based advisory firm Bianco Research, last week described the conflict between the U.S. and China as "watching sausage being made": a "nasty and ugly" process. Mr. Bianco said Tuesday that after the latest volley of threats between the U.S. and China, that appeared true "more so than ever."

For now, the White House is convinced it holds the upper hand and can eventually force China to concede and agree to better trade terms, Mr. Bianco said. It is a strategy that he thinks can work. "We've noticed that when Trump uses this blunt instrument, the power of the U.S., he gets what he wants," he said, adding he believes recent market action indicates that most investors have kept their cool.

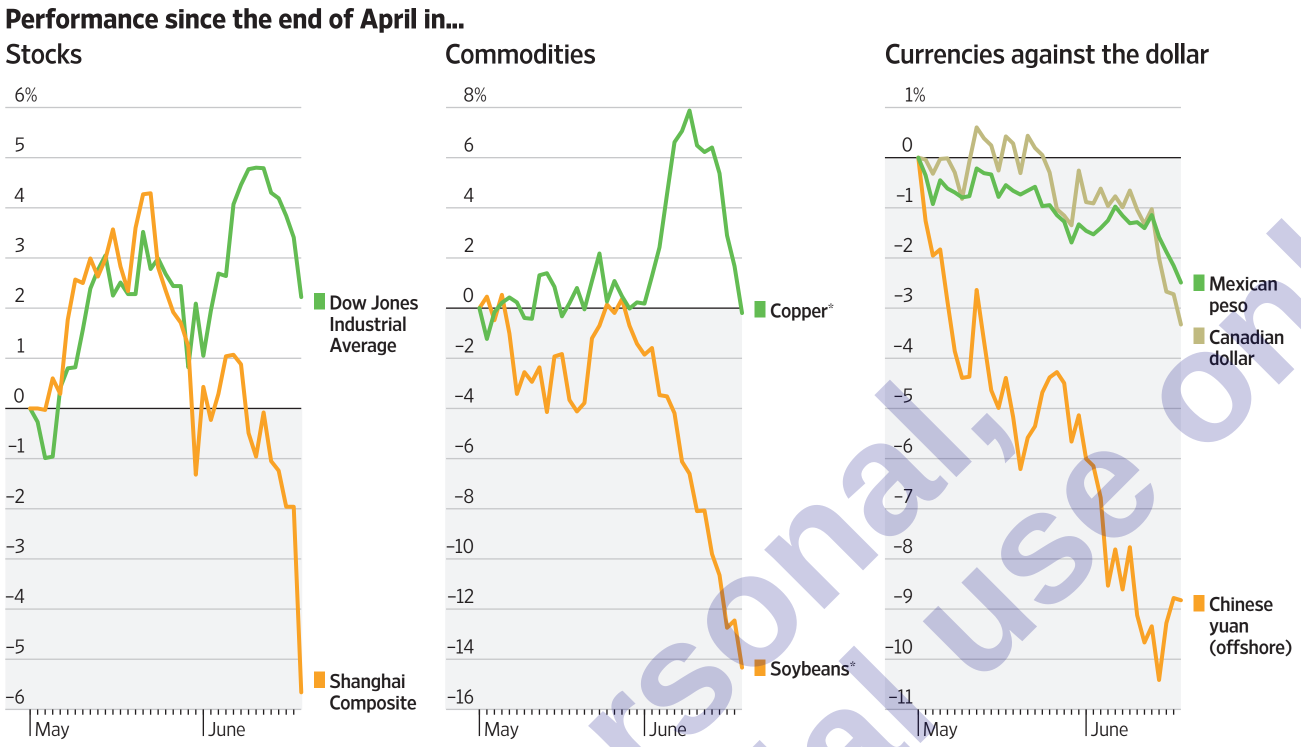
Yet others are less optimistic, warning that the rise in trade tensions comes at a particularly inopportune time. The outlook for global growth has softened in recent months, while the dollar has appreciated, which some investors fear could send further ripples through indebted emerging-market economies.

The risk of policies being put in place that dent global economy has risen over the past week, said Craig Birk, executive vice president of portfolio management at Personal Capital. "As threats increase and deadlines draw nearer, it increases the chances of miscalculation."

The selloff was more muted in Asia early Wednesday. The Shanghai Composite was down 0.4%, the Shenzhen Composite was down 0.3% and Japan's Nikkei Stock Average was down 0.3%.

Mounting Concern

Trade tensions between the U.S. and China are weighing on stocks, commodities and foreign currencies.



*Front-month contract

Sources: SIX (stocks, commodities); Tullett Prebon (currencies)

THE WALL STREET JOURNAL.

Opaque Pricing Puts the Brakes on Market for Hot Metals

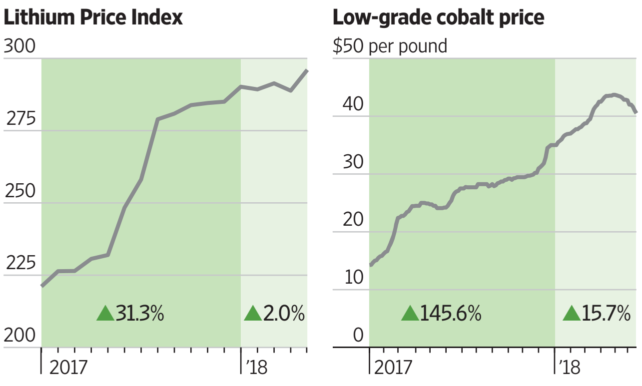
By Amrith Ramkumar

SEBASTIAN WILLNOW/PICTURE-ALLIANCE/DPA/ASSOCIATED PRESS

Reliable pricing for cobalt and lithium, used in electric-car batteries, is hard to come by.

Losing Steam

Unlike most commodities, some car-battery metals don't have actively traded futures contracts. Industry data show prices have stagnated after surging last year.



*Price index based on eight different lithium carbonate/hydroxide grades

Sources: Benchmark Mineral Intelligence (lithium); Metal Bulletin (cobalt)

THE WALL STREET JOURNAL.

Investors in two of the hottest commodities in recent years face a vexing problem: Reliable prices for lithium and cobalt are every bit as rare as large deposits of the valuable ores.

Interest in the materials has soared on expectations that demand will rise as they are used in a rapidly expanding number of electric-car batteries. The market for the two metals has already jumped to as much as $10 billion from about $4 billion two years ago, according to estimates. Analysts project that figure could double again by 2025.

But unlike most other commodities, lithium and cobalt don't have actively traded futures contracts tied to them. That means many investors are forced to rely on costly services that give price estimates, market participants say. But analysts say even those figures can differ from the privately negotiated prices used by large miners and Chinese battery manufacturers, deals that make up a significant chunk of the market.

That is bad news for a nascent market that is already prone to rapid price swings. The Global X Lithium & Battery Tech ETF is down 16% this year after a 59% surge in 2017. Supply and demand projections for lithium and cobalt can move significantly because they are tied to how quickly consumers will adopt electric cars, a trend that skeptics say is largely built on hype given the history of disrupting long-entrenched habits like driving.

All this raises the risk of unexpected volatility in prices. While investors are starved for growth and returns after years of low interest rates, the opacity in metal prices and fickle market sentiment are keeping some away even as large companies like **SoftBank Group** Corp. and **Tesla** Inc. make investments. It is why asset-management firm **Fiera Capital** Corp. hasn't invested in producers of the metals, said Nick Page, a portfolio adviser for Fiera's European division.

"The market is quite opaque," he said. "It's difficult to take any comfort from all of the different forecasts, which makes it more risky."

Analysts say the situation benefits the biggest players in commodities, like Swiss trading firm **Glencore** PLC, the world's largest cobalt supplier, and global chemical companies Sociedad Quimica y Minera de Chile SA and U.S.-based **FMC** Corp. and **Albemarle** Corp. Those firms have existing relationships with refiners and battery makers concentrated in China, the industry's dominant player.

While it is true that in other assets big players also tend to have information advantages, it is especially dangerous for small producers and investors in markets like lithium and cobalt that are defined by largely speculative bets on supply and demand. That risk could limit investment in the industry, some analysts said.

"Without going to China to see all the demand for battery materials, it's really hard to get a handle on it," said Mathew Lazarus, managing member at New York-based hedge fund Red Hook Asset Management LLC, which owns shares of several lithium producers. "That's the gating item, that investors have to take a leap of faith that there's going to be all this demand when we can't see it."

Finding dependable prices is more challenging for the materials than other commodities because they have to be refined into chemicals like cobalt sulfate or lithium hydroxide, adding to the complexity because of the multitude of chemical grades and varying prices for them.

Even the London Metal Exchange has struggled to launch contracts for lithium and cobalt with standardized and transparent pricing. Some market participants use the LME's physical cobalt metal contract as a proxy, and the exchange said last October that it was looking into cash-based contracts for lithium, cobalt and nickel compounds.

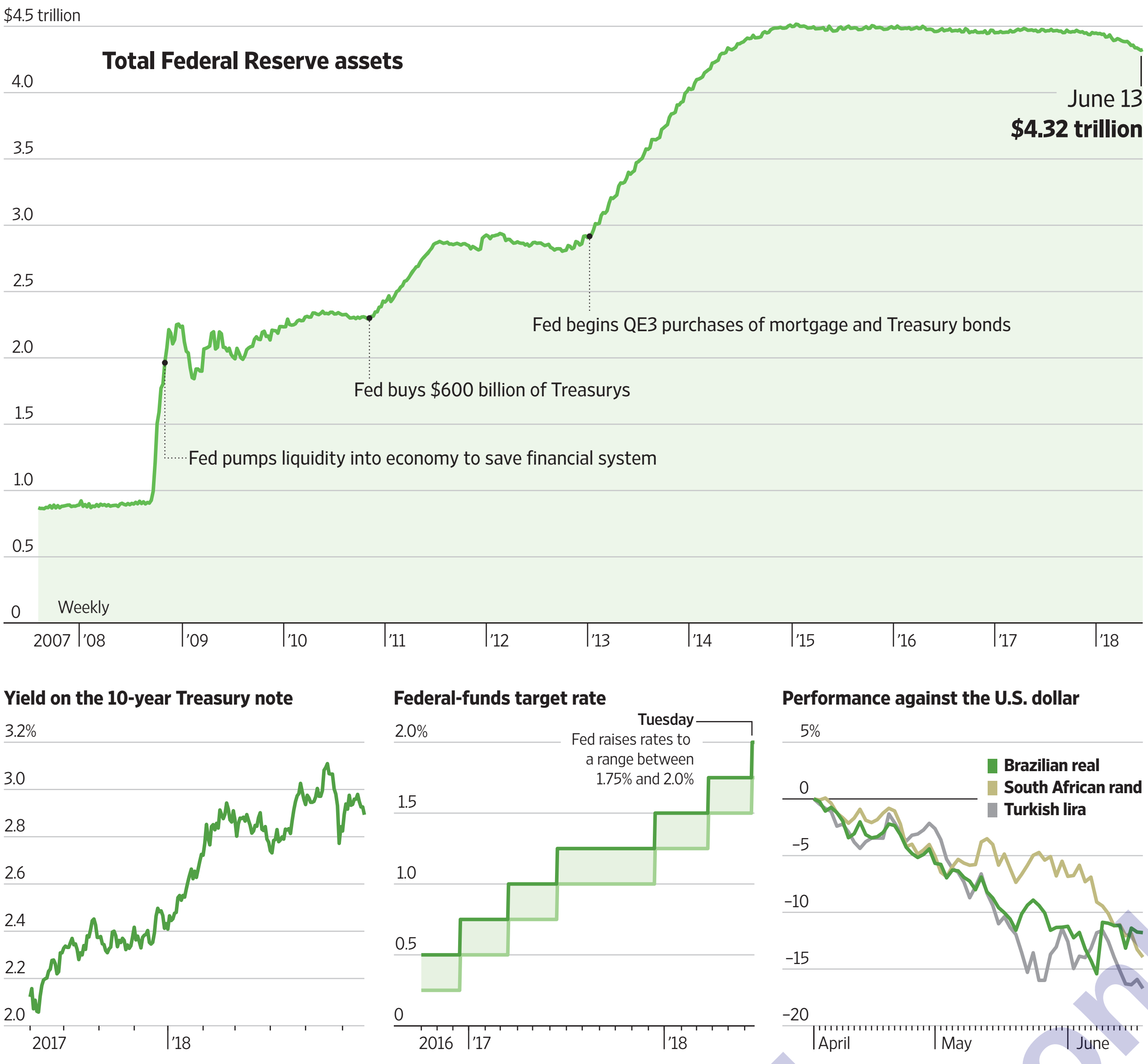
But an LME spokeswoman confirmed to The Wall Street Journal that some of these efforts have been abandoned because of a lack of demand for some chemical compound contracts. The exchange is still working on a cobalt contract using cash and a lithium contract, the spokeswoman said.

MARKETS

Fed's Tightening Has Investors on Edge

As the central bank pares bondholdings, riskier assets globally hasten their slide

By Daniel Kruger



Sources: Federal Reserve (Fed's assets); Ryan ALM (yield); FactSet (Fed's target rate); Tullett Prebon (currency)

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The Federal Reserve's move to trim the size of its bondholdings has exacerbated recent declines in prices for risky assets around the world, investors say.

The central bank has scaled back its mountain of Treasury and mortgage debt by $111.9 billion since the policy was announced in September.

More than half the reduction has taken place since the end of March, and the process of withdrawing money from the economy is scheduled to reach $50 billion a month in October.

The Fed's balance sheet swelled to $4.5 trillion in the wake of the financial crisis as the central bank bought government and mortgage debt in hope of kick-starting growth.

Now, with the U.S. economy on firmer ground and unemployment at its lowest levels in decades, the Fed is removing that stimulus by allowing some of its holdings to mature without reinvesting the proceeds.

Some analysts and investors said the moves heightened volatility that spread through government bond markets earlier this month due to economic problems in countries such as Brazil, South Africa and Turkey. Currencies of those countries have declined against the dollar by roughly 12%, 13% and 16%, respectively, since the end of March.

In turn, worries about those countries fueled demand for safer assets including Treasury debt.

"The markets are more discerning" about what kinds of risks are acceptable, said Robert Tipp, chief investment strategist at PGIM Fixed Income. The disruptions from the shrinking of the Fed's balance sheet "are going to be felt in proportion to" the weakness of each market, he said.

An added worry is that besides balance-sheet actions, the Fed also has been raising short-term rates. Some investors believe it is natural for assets at relatively elevated valuations, such as stocks, to come under pressure when the Fed is in tightening mode. That is especially true as the economic expansion enters its ninth year.

Several investors expect the shift away from risky global assets to become more pronounced over time as the Fed reinvests in less and less debt. Meanwhile, the European Central Bank said last week that it would stop buying bonds outright in December, although it will reinvest proceeds of bonds that mature in its portfolio.

Shrinking the Fed's balance sheet will reduce foreign purchases of emerging-markets stocks and bonds by about $70 billion combined in 2018 and 2019, according to estimates from researchers with the International Monetary Fund. That is a contrast to average annual inflows of $240 billion since 2010.

Those inflows occurred as the Fed was expanding its balance sheet, which encouraged investors to take on more risk.

Now that the trend is going the other way, the effect of the Fed's move to shrink its holdings has caught the attention of some foreign policy makers. These include the heads of the central banks of Indonesia and India. Indonesia raised interest rates twice in May, in part to support its currency against a rising U.S. dollar, while India raised rates in June. Bank of India Governor Urjit Patel urged the Fed to slow down.

Mr. Patel said in an opinion piece in the Financial Times early this month that the Fed's balance-sheet reduction was making it harder for emerging markets to handle a dollar liquidity squeeze. This is being driven largely by U.S. fiscal policy—namely, the increase in Treasury debt issuance to cover widening federal budget deficits. At the same time the deficit is rising, the Fed is shrinking the supply of dollars, contributing to a shortage.

Some analysts blame recent volatility on the dollar's rise. Many investors had bet on the U.S. currency declining in value against the euro, furthering a trend seen in 2017. That hasn't worked as planned this year, compelling investors to reverse trades as Europe's growth has lagged behind the U.S.

Tighter policy from the Fed has been "ultimately the most important factor," in the performance of global markets, said Holly MacDonald, chief investment strategist at Bessemer Trust, which is overweight U.S. securities. "Right now there's not a whole lot of compelling opportunities in global fixed income."

As the Fed continues to shrink its bond portfolio, "this is probably the biggest risk," Ms. MacDonald said. Investors are looking over their shoulders because shrinking liquidity helps intensify market spasms.

"It's underlying the backdrop of the volatility we're seeing this year," she added.

HEARD ON THE STREET

Email: heard@wsj.com FINANCIAL ANALYSIS & COMMENTARY **WSJ.com/Heard**

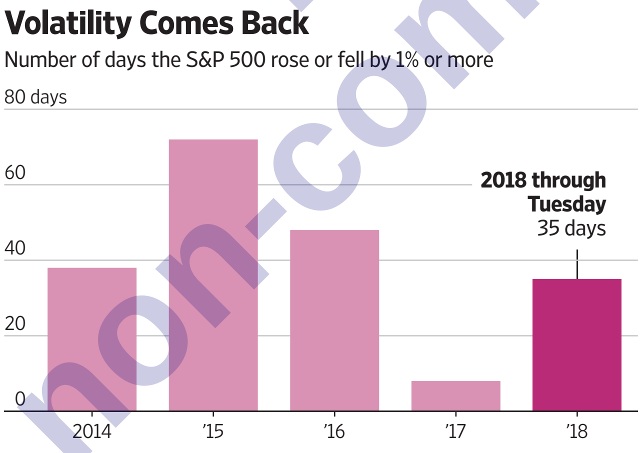
Stock Investors Lower Their Aim

Volatility has returned with a vengeance. Tuesday was no exception, with stocks down sharply on renewed worries about President Donald Trump's trade feud with China. Yet for all the excitement, prices are back where they were in early January. Investors should be pleased to have gotten off so easily.

Stocks have some things going for them right now, of course. Corporate tax cuts boosted profits. Analysts polled by FactSet estimate second-quarter earnings for companies in the S&P 500 will be up by 19% from a year earlier. Economic growth appears to have picked up, too.

But investors had already priced much of that in. What they hadn't anticipated were other risks. Chief among them are a Federal Reserve that is showing little timidity about raising rates, slowing growth overseas and the multiple trade skirmishes.

The Fed has raised rates by a quarter point twice already this year and policy makers are leaning toward



Source: FactSet

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raising them two more times in 2018. Futures markets now put the chances of two more increases at 51%. Compare that with the start of the year when the chances of four total rate increases were estimated at just 10%.

And with faster inflation and unemployment on course to drop from an already low 3.8%, the Fed will likely to have to keep lifting rates in 2019. That has helped push the yield on the 10-year Treasury note to 2.88% from 2.41%. It might be higher still if it weren't for something else: Economists' growth forecasts for most other major economies have fallen since the start of the year. That makes for slower global demand growth at U.S. multinationals' overseas operations. Compounding the problem, stronger relative growth in the U.S. has boosted the dollar, lowering the dollar value of the goods and services that U.S. companies sell abroad.

One particular area of economic concern is China, which in the past counter`d weakening global growth with stimulus. Now it is reining in risky funding practices and damping its own growth as a result. Meanwhile, China's leaders are showing no sign of taking Mr. Trump's actions lying down. How that might affect U.S. companies is a wild card.

The trade troubles, along with the Fed's moves and weaker global outlook, have led investors to lower their expectations. The S&P 500 now trades at 16.6 times expected earnings, according to FactSet, versus 18.2 times at the start of the year. That compares with a five-year average of 16.2, yet those were five years in which interest rates were significantly lower.

The stock market's ability to absorb body blows therefore looks more limited at a time when the punches keep on coming.

—Justin Lahart

OVERHEARD

The definition of "shopping mall" is changing. Consider American Dream Miami, set to become the largest shopping and leisure venue in the country.

Unlike Mall of America in Minnesota, opened in 1992, which American Dream Miami is set to overtake, the one in Florida doesn't even have the world "mall" in its name.

And no wonder: Originally planned to have about 3.5 million square feet of retail and 1.5 million of entertainment space, that ratio is now going to be the inverse. Online competition from the likes of **Amazon.com** has squeezed traditional mall retailers.

But things you can't do from the comfort of your living room, or anywhere else in Florida for that matter, include ice climbing and skiing. American Dream also will have a plexiglass submarine. If it descends low enough, riders may even catch a glimpse of retailers' share prices.

The Other Yield Curve To Watch

Escalating trade tensions have helped push the U.S. Treasury yield curve to its flattest in more than a decade. This flattening is watched closely by investors as an indicator of economic trouble ahead. But another curve deserves attention, too—and it is getting steeper.

That is the corporate-bond spread curve, which measures how much extra compensation investors are demanding to take credit risk at different time horizons. The U.S. curve has steepened, as spreads versus Treasurys have widened more on long-maturity bonds than they have on short-maturity bonds.

Investors now get 1.7 percentage points more yield than Treasurys for corporate debt maturing in 10 years or more, versus 0.68 point for one-to-three-year debt, according to ICE BofAML indexes. Three months ago, the gap was roughly one-fifth tighter.

The message this sends is that while investors have become more uncertain about the longer-term outlook, they are relaxed about the near term.

For now, the credit curve seems likely to only get steeper, in particular because companies have issued a lot of risky long-dated debt. The size of the U.S. triple-B-rated 10-year-plus index has surged to $878 billion from $235 billion 10 years ago.

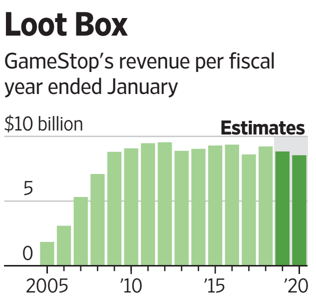
The danger point is a combination of wider credit spreads and a flatter credit curve, which would signal deeper concerns about company balance sheets. The good news is this isn't something corporate-bond investors are betting on—yet.

—Richard Barley

GameStop Ought to Find a New Game to Keep Playing

As a veteran of the video-game business, **GameStop** knows well the value of extra lives. The company needs to play its remaining few wisely.

The retailer confirmed Tuesday that it is holding "exploratory discussions with third parties" about a potential deal. This followed a report by Reuters that one of those parties was **Sycamore Partners**, a private-equity firm that specializes in struggling retailers. The news has boosted GameStop's stock price nearly 13% over the past two days, though the shares remain down 12% for the year and were recently trading at



Sources: the company (historical); Factset (estimates)

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their lowest level since 2005.

GameStop, in other words, is priced to sell. So it makes sense that buyers are taking a look. It also makes sense for the company to consider its options. GameStop's growth has been essentially flat over the past five years as the rise of digital downloads has crimped demand for the new and used game disks that have typically accounted for a majority of its sales. It helps greatly that GameStop also is a popular hub for gaming products that can't be downloaded, like consoles, controllers and headsets.

According to FactSet, it has a free cash-flow yield of 20%, which is among the highest in retail and makes GameStop an attractive target for private-equity buyers. And the company may be seeking a new path given the recent shake-ups in its top ranks following the departure of CEO Paul Raines last year due to health complications. His successor, Mike Mauler, quickly fired two top executives before he himself resigned in May, citing "personal reasons," after just three months on the job. Shane Kim, a board member who once ran the games business for Microsoft's Xbox division, is running GameStop on an interim basis. Mr. Raines died in March.

Considering the fate of many retailers exposed to digital disruption, GameStop deserves credit for playing its hand well. The company has enjoyed a recent bout of sales growth, thanks mainly to the popular Switch console from Nintendo and its associated games. The company has even capitalized on the free-to-play phenomenon called "Fortnite," which has sparked demand for gaming headsets.

But deft management of a declining business doesn't pay off in public markets, where investors demand growth. Especially for a retailer running more than 7,200 stores. For public investors, GameStop's proven ability to survive simply hasn't been good enough. Thriving may require switching to a new game.

—Dan Gallagher

JOURNAL REPORT

INNOVATIONS IN FINANCE

THE WALL STREET JOURNAL. | Wednesday, June 20, 2018 | R1

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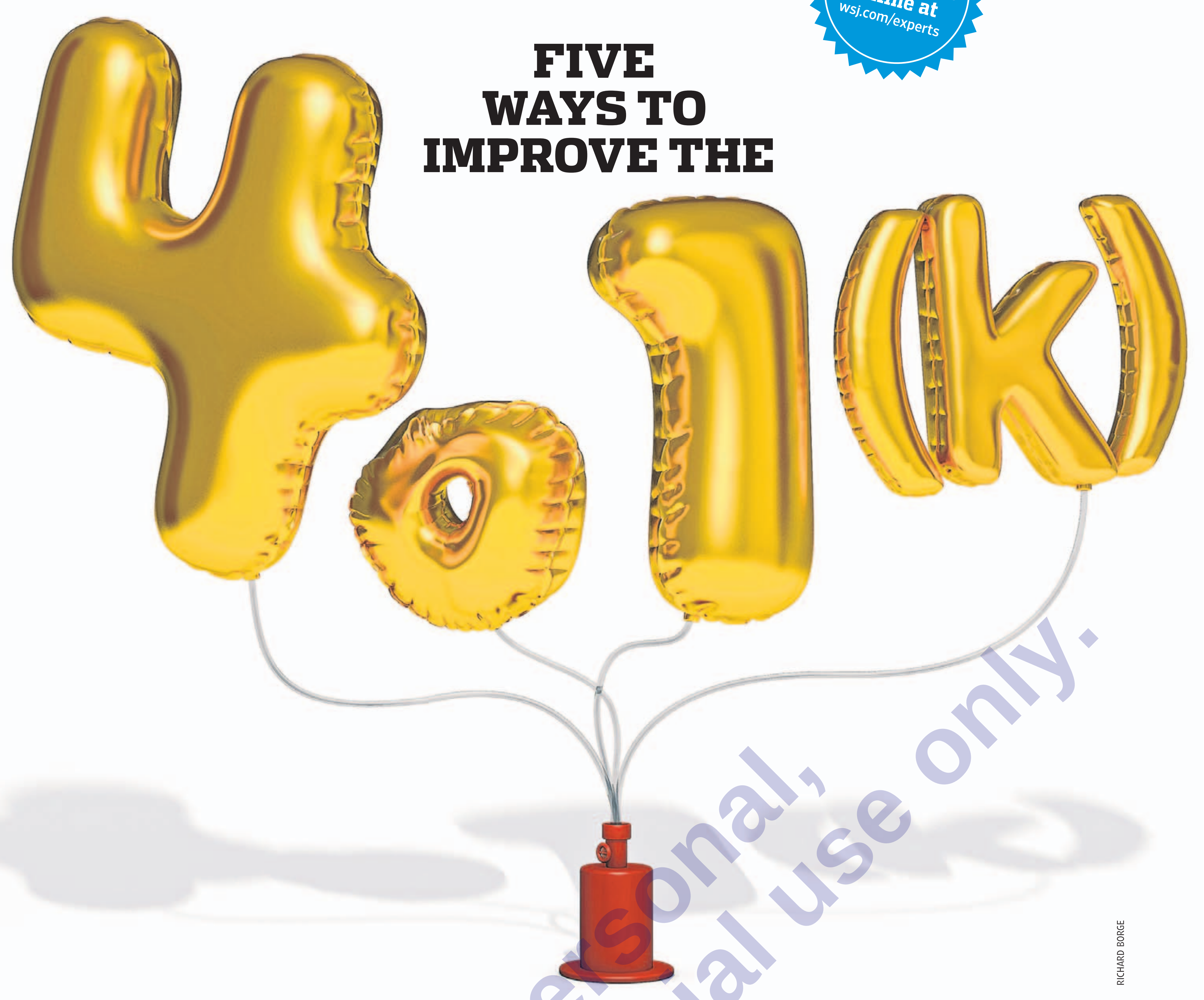
FIVE WAYS TO IMPROVE THE 401(k)



RICHARD BORGE

BY ANNE TERGESEN

LOVE IT OR HATE IT, THE 401(K) IS HERE TO STAY. But it is going to change in dramatic ways in the years ahead.

Even fans say the 401(k), the backbone of the nation's retirement-savings system, could do a better job of creating retirement security. At any given time, only about half of private-sector workers are participating in one of these plans. Of those, many save too little or treat their nest eggs like rainy-day funds.

"A lot more can be done with the current system to optimize it," says Lori Lucas, president of the nonprofit Employee Benefit Research Institute.

As the 401(k) turns 40, proposals are proliferating to help account owners replicate the pension benefits their 401(k)s were originally designed to supplement. What has happened instead is that 401(k)s ended up replacing pensions.

Recommendations include making it easier for 401(k) plans to use annuities to automate the way workers take money out of these plans, and using 401(k)s to dispense customized financial advice on everything from employee benefits to debt repayment. Some predict the 401(k) will morph into an umbrella account that allows employees to save not just for retirement, but also for college, emergencies and health-care expenses.

What follows are several approaches to improving the system. While some face obstacles—including the need for regulatory changes—others could be implemented today. They may reshape the way Americans save for retirement.

1. RAISE THE DEFAULT SAVINGS RATE

When Congress authorized the 401(k) in 1978, employees were left on their own to make saving and investment decisions.

But as many made costly mistakes, regulators grew concerned, says J. Mark Iwry, who oversaw retirement policy in the U.S. Treasury Department during the Clinton and Obama administrations. In 1998, Treasury approved automatically enrolling employees in diversified investments within 401(k) accounts, while giving employees the right to choose different investments or contribution levels or to opt out of those accounts entirely. In 2006, Congress expanded on that with legislation.

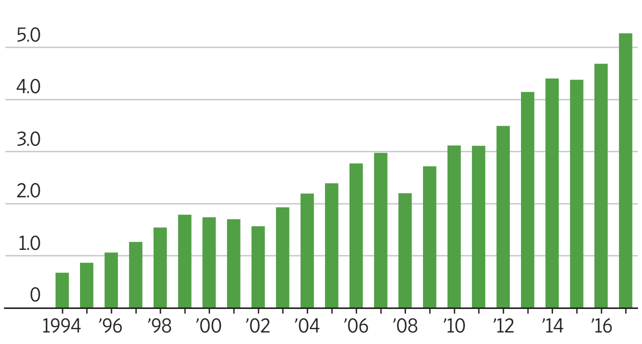
Too many people don't save enough for their retirement—if they save at all. It doesn't have to be that way

The result "transformed the system," says Ms. Lucas. EBRI research indicates that when employees are left to their own devices, the average middle-income 401(k)-eligible worker between ages 25 and 29 can be expected to save five times his or her final salary by age 65. But under the automatic enrollment system that has become common since 2006, that average rises to 6.7 times—or closer to the 8 to 12 times many financial advisers recommend, says Ms. Lucas.

The key to increasing savings now, she says, is to raise default contribution rates under automatic enrollment. Today, more than 40% of companies with 401(k) plans set initial contribution rates under automatic enrollment at 3% of salary, according to Vanguard Group. Many gradually raise the level to 10%, often to coincide with raises, unless an employee chooses otherwise. If contributions to 401(k) plans start at 6% and rise to 15% of pay over time, middle-income employees could reach nine times final pay in savings by retirement, Ms. Lucas says.

Scrimping and Saving

Total 401(k) assets



Sources: Investment Company Institute, Department of Labor

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2. EXPAND ACCESS TO PLANS

For years, policy makers have tried to make retirement-savings plans attractive to small businesses, many of which have no plan at all. But their efforts—including SEP Individual Retirement Accounts and Simple IRAs—haven't filled the coverage gap that affects some one-half of private-sector employees, many of whom work for small companies.

One bipartisan bill in Congress would allow more employers to band together to offer 401(k) plans. By joining a so-called multiple-employer plan, or MEP, small companies can spread 401(k) administrative costs over more participants, lowering the fees employees pay.

The arrangement also shifts some of the administrative burden and fiduciary responsibility from employers to an MEP administrator, says Lew Minsky, president of the Defined Contribution Institutional Investment Association, a research and advocacy organization.

MEPs are allowed now, but only for businesses in the same industry. The bill would loosen those restrictions and insulate companies in MEPs from penalties if other members violate the rules—for example, by failing to funnel employee contributions to the plan on schedule.

Many predict the bill will pass in 2019.

3. REDUCE 401(K) LEAKAGE

When leaving a company, about 30% to 40% of people elect to cash out of their 401(k) accounts, paying taxes and often a 10% penalty rather than leaving the money in the account or transferring it to another tax-advantaged retirement plan.

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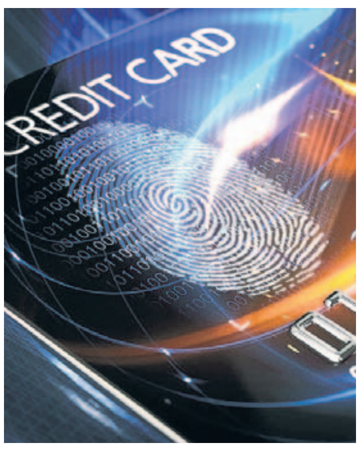
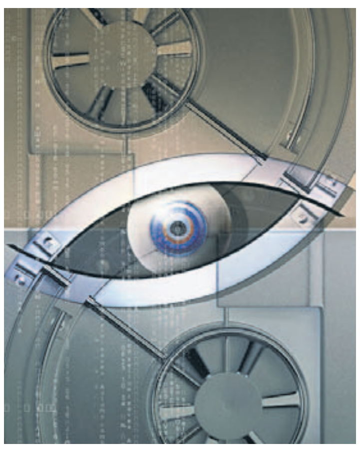
INSIDE





The Tricky Task of Undoing Negative Rates

The longer countries wait to raise interest rates, the more damage it may do

BY BRIAN BLACKSTONE

EUROPE HAS finally emerged from its debt crisis with healthy economic growth, but it can't shake one relic of its troubled times: negative interest rates.

The policy was tried by Sweden briefly in 2009 and 2010 but eventually was implemented by Denmark, the eurozone, Switzerland and Sweden again over the subsequent five years before landing in Japan two years ago. Negative rates—where the central bank charges commercial banks for money held at the central bank—helped safeguard economic recoveries by lowering borrowing costs across fixed-income markets and, in some cases, boosting exports via weaker exchange rates.

None of these economies seems willing to be the first to lift rates above zero for fear of derailing their recoveries. The European Central Bank said on Thursday that it probably won't touch its rates until at least summer 2019.

But the longer the banks wait, the greater risk there is of damaging side effects—such as squeezing bank profits or fueling housing bubbles.

'An effective instrument'

When central banks want to stimulate growth and inflation, they typically set official interest rates below inflation, which in turn favors borrowing over saving. When inflation stays superlow, as it has for the past decade, policy rates might have to go below zero.

The U.S. never went down the negative-interest-rate path, in part because deflation—a dangerous decline in the overall price level—never emerged as the serious threat that it was in Europe. And Europe's economies are heavily intertwined, so when the European Central Bank eases policy, its neighbors in Switzerland and Scandinavia often follow suit.

Another reason is Europe relies more on banks for private-sector loans than the U.S., which depends more on capital markets, and negative rates work primarily through banks.

The policy has had mostly positive results in Europe, though they appear more mixed in Japan. Since 2014, countries deploying negative rates have avoided recession and, recently, generally shown signs of healthy growth.

"I think they have been an effective instrument" by depressing long-term yields that spurred growth and inflation, says Stefan Gerlach, chief economist at **EFG Bank** and Ireland's deputy central-bank governor when the ECB cut its deposit rate below zero in June 2014.

Meanwhile, the darker scenarios of negative rates—such as cash hoarding and evaporating bank profits—didn't materialize. Banks haven't passed negative rates on to retail depositors, instead eating the cost themselves or charging higher fees in other areas, such as mortgages.

"As much as we worried about Y2K, and that wasn't a problem, it's the same with negative interest rates," says Karsten Junius, chief economist at **Bank J. Safra Sarasin**.

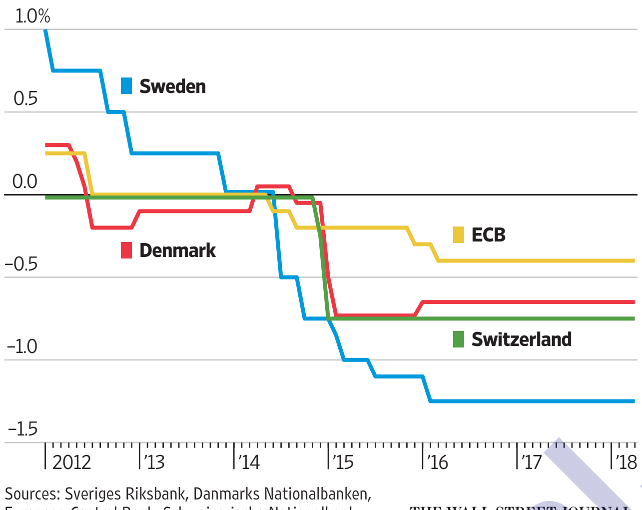
The eurozone's deposit rate has been minus 0.4% since early 2016, but European countries outside the zone have made the most aggressive use of negative rates. Switzerland's deposit rate has been minus 0.75% since early 2015, for instance, while Sweden's is minus 1.25%, and its repo rate is negative too. Japan's, meanwhile, is minus 0.1%.

Economies with rates below zero seem reluctant to reverse them for fear of derailing recoveries.

RALPH ORLOWSKI/BLOOMBERG NEWS

Going Negative

Central banks in Europe slashed deposit rates during the euro debt crisis, eventually turning them negative.



Sources: Sveriges Riksbank, Danmarks Nationalbanken, European Central Bank, Schweizerische Nationalbank

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But each tool was designed to fit different economies. In export-sensitive Switzerland and Denmark, where exchange rates are paramount, banks were exempted from the negative rates up to a certain amount of deposits. That centered their effects on currencies and blunted the effect on the banking system somewhat.

In the eurozone and Japan, negative rates are used alongside large-scale bond purchases and commitments to keep rates low for a long time, giving the policies' broader economic impact. "You have to think about the whole package," says Mr. Gerlach.

No cure-all

Yet negative rates are far from a cure-all, and the longer they last, the greater damage they might do. European banks have underperformed their U.S. peers since the policy became widespread. Swiss financial institutions have paid more than five billion francs ($5 billion) to the **Swiss National Bank** since 2015 because of negative rates. The total bill for Danish banks—which have faced a deposit rate as low as 0.75%—has been about 2.5 billion kroner ($400 million). Swiss bankers, particularly at **UBS Group**, were highly critical of negative rates two years ago, though they haven't been as vocal about them more recently.

The impact of negative rates is especially big for regional banks in Japan because they depend largely on lending, unlike major banks that have sought revenue from commission income or overseas businesses. "Downward pressures from the negative-rate policy on rates and profits are expected to continue for a while," Koji Fujiwara, chairman of the Japanese Bankers Association, said on May 17.

Bank of Japan Governor Haruhiko Kuroda acknowledges that the negative-rate policy has squeezed banks' profits, but says it also benefits banks by helping to boost inflation and economic growth.

Other effects of negative rates may not be apparent for some time, such as impact on pension funds, which depend on positive rates for returns on safe, short-term assets.

Then there is the effect of negative rates on increased borrowing to buy homes. Of 15 cities world-wide identified by UBS as having housing markets that are overvalued or at risk of a bubble, eight were in countries with negative policy rates.

Still, central banks deploying negative rates seem in no hurry to raise them. Switzerland, Sweden and Denmark are widely expected to wait until the ECB starts raising rates before lifting their own. The ECB isn't expected by analysts to do so until well into next year, meaning it could be years before rates are positive again across the Continent.

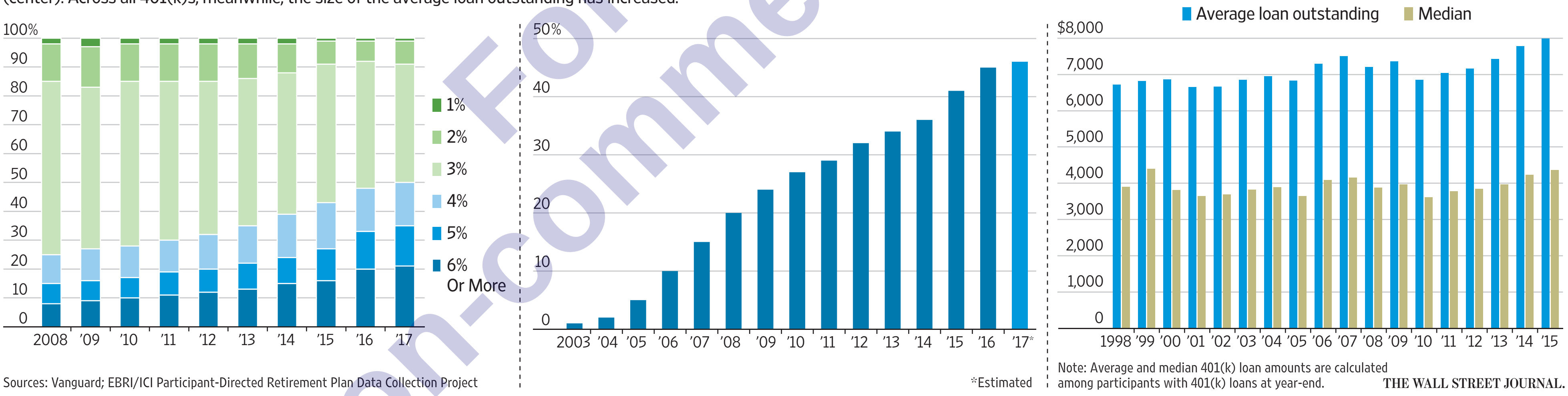
If there is a recession or shock to the economy, these central banks might have to tinker more by lowering rates even further or by eliminating exemptions, which would test the limits of how negative rates can go before inflicting bigger damage to banks.

"It would be nice if central banks have the possibility to reload before the next recession," says Jean-Pierre Danthine, who was vice chairman of the Swiss National Bank when it adopted negative rates in late 2014.

Mr. Blackstone is a Wall Street Journal reporter in Zurich. Email him at brian.blackstone@wsj.com. Megumi Fujikawa, a Journal reporter in Japan, contributed to this article.

More Encouragement, But More Borrowing

Employers offering Vanguard 401(k)s have increased their auto-enrollment default savings rates (on left) in recent years to encourage more saving, and more Vanguard 401(k) plans are using automatic enrollment (center). Across all 401(k)s, meanwhile, the size of the average loan outstanding has increased.



Sources: Vanguard; EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

*Estimated

Note: Average and median 401(k) loan amounts are calculated among participants with 401(k) loans at year-end.

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How to Improve 401(k)s and Boost Retirement Savings

Continued from the prior page

Tapping retirement funds early—through cash-outs, 401(k) loans and withdrawals for financial hardships—threatens to reduce the wealth in U.S. retirement accounts by about 25% when the lost annual savings are compounded over 30 years, according to an analysis by economists at Boston College's Center for Retirement Research.

One problem: "We are not making it easy for people to transfer money from an old employer's plan to a new employer's plan," says Brigitte Madrian, an economist at Harvard University. "It can take reams of paperwork and up to two months," Prof. Madrian says. "Getting a cash distribution is easier, which creates an incentive for people to cash out their balances and spend it."

One proposal that would help prevent such leakage out of retirement savings is to create a retirement account that follows workers from job to job, much like Social Security.

Under this plan, when an employee joins a company, he or she would simply provide the employer with a retirement account number. If the employer has a 401(k) plan, it would treat the employee's account like a 401(k). It would automatically enroll the employee and if it offers a matching contribution, it would provide one.

The worker would then be allowed to contribute up to $18,500 a year to the account, or $24,500 for those 50 or older, under current 401(k) limits.

Employers that don't have a 401(k) plan would be required to automatically enroll the new employee and treat the account like an IRA. In that case the limit on the employee's new contributions would be much lower—$5,500 to $6,500 a year, depending on the worker's age.

The employee would be permitted to opt out of either arrangement.

Both the 401(k) and the IRA would put employees into target-date funds, which shift money from stocks to bonds as employees age. The system would randomly assign employees to a financial-services company, such as Fidelity Investments or Vanguard—although workers would be free to choose their own.

A company with 20% of the market would receive 20% of the random enrollments, says David John, a senior strategic policy adviser at AARP, the advocacy group for older Americans, and a co-author of the proposal.

Another way money leaks out of retirement savings is when employees lose track of accounts from previous jobs. To address that problem, **Retirement Clearinghouse** LLC has a service for corporate clients that locates employees' old 401(k)s and IRAs. The company is seeking approval from the U.S. Labor Department to automatically consolidate small accounts—moving a worker's old retirement savings accounts into a new employer's 401(k) plan—unless the employee responds to a notification by opting out. Retirement Clearinghouse Chief Executive Spencer Williams says he expects to receive the green light as soon as this summer.

The governments of Norway and Denmark sponsor websites their citizens can use to track and consolidate retirement accounts, says Mr. John, who says the U.K. is working on something similar.

4. SAVE FOR THINGS ASIDE FROM RETIREMENT

In an effort to reduce workers' stress, some companies are trying to help employees get their financial lives in order. Many sponsor educational seminars. Some offer one-on-one consultations with financial planners.

As automated "robo" advice improves, more companies are likely to provide customized financial planning to employees that incorporates everything from selecting a health-insurance plan to saving for a down payment on a house, says Alison Borland, head of defined-contribution business at 401(k) record-keeper Alight Solutions LLC.

Academics and policy experts, including Prof. Madrian and Mr. Iwry, are exploring ways companies could go further, by helping employees build rainy-day funds. According to the Federal Reserve, 44% of adults in the U.S. lack the money to cover a $400 emergency.

The most logical approach would involve changing regulations to allow employers to automatically enroll workers in both a 401(k) and a savings account at a bank, says Prof. Madrian.

A portion of an employee's 401(k) contributions—say, half—would go into the emergency account until the balance reaches a specific threshold, such as three to six months' pay. Employees would be free to opt out.

"When people have emergencies they often go to their 401(k)," says Prof. Madrian. "When they open the 401(k) cookie jar, there are a lot of cookies and the temptation is to take out more money than they need."

An emergency account, the professor says, "creates a psychological separation by labeling one account with a smaller cookie jar for emergencies."

If the concept works, it may open the door for employers to eventually offer a "life account" that would allow employees to save for multiple goals, including retirement, emergencies, college and health-related expenses, says Ms. Borland.

5. MAKE RETIREMENT SAVINGS LAST

With automated savings now common, the next step, retirement experts say, is to automate the way participants withdraw money from 401(k) plans.

The bill in Congress that covers MEPs would also encourage 401(k)-style plans to offer annuities, which help participants transform their balances into a lifetime stream of income. Though commonly offered by traditional pension plans, annuities are not often used in 401(k) plans, in part because employers worry that if they pick an insurance company that ends up going bust, the 401(k) participants will sue the employer. Annuities are also unpopular with participants because they can tie up an investor's money and tend to have higher fees than mutual funds.

To encourage more employers to take the plunge, the bill gives employers that follow certain procedures some protection from future lawsuits when selecting an annuity provider.

Mr. Iwry favors using reasonably priced annuities in place of bonds in target-date funds in 401(k)s and encouraging employers to put their matching contributions into annuities. Employees, he says, can be given the opportunity to opt out at any point before retirement.

Ms. Tergesen is a reporter for The Wall Street Journal in New York. Email: anne.tergesen@wsj.com.

Credit Cards May Be Getting a New Touch

Visa and Mastercard test credit and debit cards with fingerprint sensors for added security

BY ANNAMARIA ANDRIOTIS

RYAN ETTER

EVERYONE KNOWS the future of payments is digital. Trouble is, Americans just don't want to give up plastic.

Tech companies, banks and fintech startups have all tried to wean consumers off physical cards. Attempts have included digital wallets and various apps. So far, though, these efforts seem to be solutions in search of a problem, as people still find plastic cards incredibly easy to use.

So, card companies are now considering steps that would try to bolster the security of plastic through the use of fingerprint-enabled cards. **Visa** Inc. and **Mastercard** Inc. are in the early stages of adding fingerprint sensors to cards, a move they believe will help lower fraudulent purchases in stores.

Prints match

Here's how it works. When consumers activate their cards, they place a finger on a fingerprint sensor on the card. A template of the print is then stored on the card's chip, which is usually located above the card number. When cardholders use the card to pay at a store's checkout terminal, technology in the card's chip checks the print to make sure it matches the print stored on the card.

The move is the latest in a string of security features that card networks have rolled out to lessen fraud. Proponents of the technology say that if swindlers steal or replicate the fingerprint card, the purchases they try to make in store won't be approved because their fingerprint won't match the template. They say the cards can also improve consumer convenience, including lessening the chances of consumers' legitimate in-store card transactions being flagged as fraudulent and getting rejected.

Card analysts say that banks' appetite for these cards is limited, however, in large part because of the hefty costs they incurred reissuing U.S. consumers' debit and credit cards with security chips over the past few years. Those costs exceeded $1 billion, according to bank executives, and required consumers to get used to a new method of inserting rather than swiping their cards.

Banks are resistant to replacing cards again when the benefits to consumers aren't significant, says Kevin Morrison, senior payments analyst at research firm Aite Group.

Still, it is possible that the fingerprints could catch on after a few years when many cards reach their expiration dates and need to be reissued. Mastercard says it is looking for banks to issue fingerprint cards in the U.S. The company ran two pilots in South Africa last year and another one in Bulgaria. Other pilots are under way in Europe and in Kuwait. A Mastercard spokesman declined to disclose how many of these cards were issued. He also declined to say in which country the current European pilot is taking place.

Several U.S. banks have expressed interest in issuing the cards for corporate use and for affluent consumers with high credit limits who travel abroad often, says Bob Reany, Mastercard's executive vice president of identity solutions.

Privacy question

But the efforts aren't yet resonating with many consumers. First off, there is the privacy question of whether they want to add their fingerprint to card transactions. Then, there are practical limitations: The safety feature doesn't help with online shopping, an increasingly popular way to purchase goods and services.

Also, U.S. consumers have little financial need for the cards. When credit cards are fraudulently used, cardholders usually don't pay a dime. Technically, credit-card users can be on the hook for $50 of fraudulent purchases, but most issuers waive that charge.

Similar protections are in place with debit cards if consumers report unauthorized use quickly. Card executives say these protections create little incentive for consumers to get accustomed to new types of security features.

Visa's fingerprint pilot in the U.S. ran earlier this year and involved a debit card issued by **Mountain America Credit Union**. Just 130 people signed up for it.

Asking 'Why?'

"Consumers are asking, 'Why am I doing this?' " says Mark Nelsen, Visa's senior vice president of identity and risk products. "They're not totally sure what the value proposition is."

Card executives are also mixed on whether consumers' fingerprints with these cards will become vulnerable to hacks. Some say such hacking isn't possible because the fingerprints don't leave the card during the purchase process and aren't stored in a centralized database.

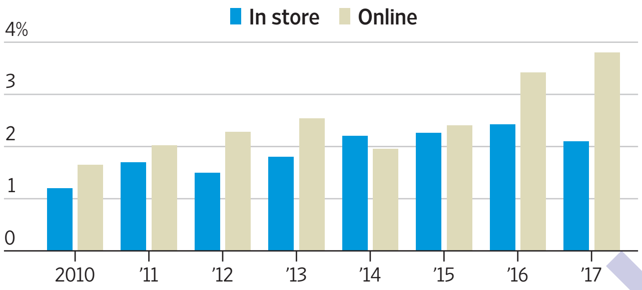
Others say that is a rosy outlook.

"Anytime you introduce a new security feature…it's just a matter of time until the bad guys figure out a way to compromise that," says Aite's Mr. Morrison.

Ms. Andriotis is a reporter for The Wall Street Journal in New York. She can be reached at ***annamaria.andriotis@wsj.com****.*

Digital Domain

The percentage of U.S. consumers whose credit, debit or prepaid cards were fraudulently used in a store—prime candidates for cards with fingerprint sensors—declined slightly last year.



Source: Javelin Strategy & Research

THE WALL STREET JOURNAL.

Is Bitcoin the Future, or an Echo of a Failed Past?

Digital currencies remind some of the spread of private money in the early 19th century

BY PAUL VIGNA

In the early 19th century, private banks stepped in to help meet demand for currency, which led to volatile exchange rates.

FOR MOST OF its 10-year history, the digital currency bitcoin has been viewed by some people as the future of money.

Lately, to get some insight into what the future might hold, some are focusing on how bitcoin compares with currencies of the past.

In the early days of the United States, before the dollar was king, most paper money was issued not by the federal government, but by private banks. That system fell out of favor after the Civil War, as the government asserted its role in currency management.

The cryptocurrency revolution that started during the global financial crisis has started to change perceptions, giving new credence to the idea that private money could complement, or in some cases replace, government currencies.

Not that anyone expects that to happen on a grand scale soon. Bitcoin's use as a currency is still more theoretical than actual, and other cryptocurrencies are even farther from the mainstream. Most of the activity around bitcoin and the others revolves around trading them, not buying things.

Real-world uses

But there are some real-world uses for bitcoin. A smattering of small businesses accept it. Online travel sites Expedia and CheapAir.com accept it. In Japan, businesses like electronics retailer Yamada Denki accept it. There are even two Montessori Schools in New York City that accept bitcoin.

"The current situation could be described as a drift" back toward private money, said James Bullard, president of the Federal Reserve Bank of St. Louis, at a presentation for cryptocurrency investors in New York last month.

Study of the topic is growing more timely after last year's rally in bitcoin and other cryptocurrencies brought throngs of new investors to the sector. As of late May, more than 1,600 virtual currencies and coins had been launched, according to tracking site CoinMarketCap.

Private money usually proliferates when many people see a lack of credible alternatives. In the early 19th century, private money flourished as U.S. banks created their own currencies to meet demand in a rapidly expanding nation whose federal government was still relatively weak. In frontier encampments, lumber companies would issue company-backed "scrip." Oil and railroad companies issued their own money, too.

Today, the demand for cryptocurrencies is being driven partly by pure speculation, and partly by technological developments that make them a faster, cheaper alternative to official currencies for making payments. But there are more-dramatic factors at work as well: In countries that have suffered rampant inflation or other economic crises, some people have turned to private money as a more-reliable alternative to official currencies ravaged by the actions of their governments.

Indeed, bitcoin first appeared in late 2008, at the height of the global financial crisis, appealing to people who felt government institutions around the world were failing. "Clearly when people have any insecurity about government plans, they flock to other assets," says Emin Gün Sirer, an associate professor of computer science at Cornell University. Traditionally, gold has provided that perceived haven. Now, for many people, it's cryptocurrencies instead.

In other words, some people believe that technology and algorithms will do a better job of managing currencies than governments will.

Troubling echoes

The historical record, though, shows that private money tends to create as many problems as it solves. In one way, bitcoin is a clear improvement over pre-Civil War private money: The amount of new money created is known in advance, programmed right into bitcoin's code, and the total number of bitcoins that can be created is capped at 21 million. The program also is designed to make counterfeiting impossible. In the 19th century, nobody knew exactly how much currency was in circulation, and counterfeiting was a nagging problem.

On the other hand, there are troubling similarities to the old days: All the new currencies popping up can create confusion and conditions ripe for fraud. While bitcoin has become more widely accepted, boosting its potential to become a viable international currency, its $130 billion market value now represents only about 40% of the overall cryptocurrency market's value, according to CoinMarketCap. About 700 new currencies have come out of nowhere in the past year alone. That proliferation has added to bitcoin's already volatile nature, making it difficult to put a value on the currency that even approaches the stability of the dollar and the world's other major currencies.

As Mr. Bullard described in his May 14 speech, in the 19th century, "the profusion of privately issued currency created an unsatisfactory system" in which users were frustrated by the chaos and unpredictability of volatile exchange rates. Moreover, mismanagement of their currencies led many of the issuing banks to collapse, rendering their currencies worthless.

'Wrong direction'

Today, because there are so many cryptocurrencies, they "may unwittingly be pushing in the wrong direction in trying to solve an important social problem," said Mr. Bullard.

Users of bitcoin have seen both the benefits and the pitfalls. **Tunga**, a Kampala, Uganda-based staffing service that connects freelance tech developers in Africa with companies around the world, started experimenting with bitcoin in 2015 because it found dealing in traditional currencies across borders too slow and expensive.

The firm started using a bitcoin-based payments network in 2015. Initially, its freelancers were getting paid in minutes rather than days, and because of that speed and the relative stability of bitcoin's value at the time, fluctuating exchange rates weren't a problem, says Bart Leijssenaar, Tunga's chief marketing officer.

That changed in 2017, though. Bitcoin's price spiked, then started falling back to earth. The network couldn't handle the increased traffic smoothly. Suddenly, transactions were taking much longer to settle, and the value of payments was becoming subject to bitcoin's volatile exchange rates.

Eventually, Tunga returned to more-traditional currencies. "The potential is very big," Mr. Leijssenaar says of bitcoin, "but it has to be stable for this to really work."

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EXPERTS' VOICES | TED JENKIN

What Market Swings Can Teach You About Your Risk Tolerance

The Dow Jones Industrial Average goes up 300 points. The next day, there are reports of a trade war and it goes down 700 points. The day after that, there's a piece of good economic news and the Dow is up 400 points.

Investors aren't sure if recent volatility is a short-term hiccup or if it's the new normal for the stock market. But one thing is certain: The market's performance this year is teaching investors a lot about their appetite and tolerance for risk.

Consider this hypothetical question: The market goes down 10% in three months and then 5% more the next three months. As a result, you do which of the following?

- Put your money in gold.
- Get as much money as you can and buy more of what you own.
- Take 50% of your money out and leave 50% in your investments.
- Call your adviser every week asking when is this going to end.

In a simulation exercise we are confident about exactly how much investment risk we are willing to take for a given reward. The problem is that there is a difference between how we act when we are relaxed and how we act under pressure. Unfortunately, questions don't really tell us how we would react when markets are in a roller-coaster state. So, they don't really tell us what our tolerance is for risk.

That means fear, not greed, is the driver of your real risk tolerance. It's when the roller coaster hits its first large drop you will really know whether or not you are up for the ride.

So how did you react to the recent swings? You likely didn't react the way you thought you would in a hypothetical question. And that should give you some insight into how risky you really are willing to be with your investments.

—Mr. Jenkin is the co-CEO and founder of oXYGen Financial

The Experts are industry and thought leaders who write on topics of their expertise. You can read this full blog post and others at **WSJ.com/Experts.**

Social Investing Has New Message

Bond managers see it as a crucial ingredient of risk management

BY MATT WIRZ

ISTOCKPHOTO/GETTY IMAGES

ONCE A FRINGE concept, environmental-, social- and governance-based investing has hit the mainstream.

A weighty-sounding proclamation by JPMorgan Chase & Co. in a recent report trumpeting the arrival of so-called ESG investing may sound like rhetoric from Occupy Wall Street: "Civil society is calling on the financial-services industry to advance sustainable development goals," the report said.

But the many banks, investment firms and financial-data providers scrambling to roll out new ESG-branded products—particularly in bond markets—are also trying to get out a less-lofty message. Investing by ethical and environmental standards is no longer mainly about making the world a better place, they say. It's about making more money by avoiding losses.

"The driver has moved from an ethical and moral dimension to 'this makes for good risk management,' " says My-Linh Ngo, an ESG analyst for BlueBay Asset Management, a London-based investment firm that manages about $60 billion of bond portfolios. "This is what gives you 'alpha,' " or better performance than a standardized benchmark, she says.

Investors who incorporated ESG risks into their analysis of all bonds could reduce losses over time.

Changing climate

Also referred to as socially responsible investing, or SRI, this approach began in earnest in stock markets in the 1990s, but spread to bonds in recent years, spurred in part by new European regulations in response to climate change and the financial crisis.

ESG also offers the promise of new revenue streams for investment firms, banks and the data providers that cater to them. Growing numbers of investors, especially millennials and European institutions, want investment options that align with their ethical and social goals—excluding firearms manufacturers, for example, or focusing on renewable-energy companies, analysts say.

Bond-buying giants, including **BlackRock** Inc., Pacific Investment Management Co. and Franklin Templeton Investments, all unveiled ESG initiatives in the past 18 months, as did midsize investment firms Neuberger Berman Group LLC and **Eaton Vance** Corp. Bond-index operators MSCI and Bloomberg Barclays have teamed up to offer an ESG variant of the widely followed Bloomberg Barclays Aggregate bond indexes.

Bond managers have always evaluated corporate governance and social stability, among other more qualitative aspects of the borrowers they lend to. The difference that the ESG lens brings is an application of a systematic evaluation of such variables to every investment decision.

Lacking ratings

For now, the frenzy to adopt ESG seems to have outpaced the market capabilities to actually apply the concept. Indeed, there is still no consensus on how to measure variables like social impact and good governance or how to incorporate them in the decision to buy or sell an individual bond. Credit-rating firms, the de facto arbiters of bond quality for many institutions, don't yet provide ESG ratings or guidance on how to do so.

"We have yet to see a credit-rating agency publish a transparent and detailed methodology for analyzing ESG considerations as part of their credit analysis," Jonathan Bailey, Neuberger Berman's head of ESG investing, wrote in December.

Ultimately, though, incorporation of ESG into debt markets is inevitable, he says. "It's just an evolution of good investing."

That evolution got a big push some two years ago, when a critical mass of European pension funds, insurers and other institutional investors began only awarding new business to money managers with ESG capabilities, analysts and fund managers say. Investment firms that hadn't yet hired ESG specialists began doing so and offering ESG bond funds.

As ESG spread in the financial industry, a new idea began to take hold: Investors who incorporated environmental, social and governance risks into their analysis of all bonds could reduce losses over time.

Grading companies on executive governance could help fund managers sidestep the bonds of a pharmaceutical company ripe for regulatory blowback over price gouging or opioid pushing. Measuring the political support of governments when comparing countries with similar economic strength and debt profiles might allow fund managers to pick which bonds would perform better over time.

Critics of such ideas say that while some ESG characteristics can be quantified, allowing analysts to compare different bonds uniformly, others are qualitative and poorly suited to such evaluations. Variables like gender composition of a corporate board and youth unemployment can easily be assigned a number, but the susceptibility of a political leader to corruption or a corporation's tolerance for dissent in middle management is harder to reduce to a figure.

That challenge is an opportunity for analysts and fund managers to prove their worth, says Franklin Templeton global bond fund manager Michael Hasenstab, who in February announced the creation of an index that quantifies ESG inputs and distills them into a single numerical score. Franklin's country analysts feed the index with data by assigning scores of 1 to 10 to a range of ESG variables and forecasting how they expect the scores to change in the medium term.

"What is really interesting is the one- to three-year forecast," Mr. Hasenstab says.

Mr. Wirz is a Wall Street Journal reporter in New York. He can be reached at matt.wirz@wsj.com.

The Future Robo Adviser: Smart and Ethical

Well, maybe. But thanks to artificial intelligence, some think it's possible.

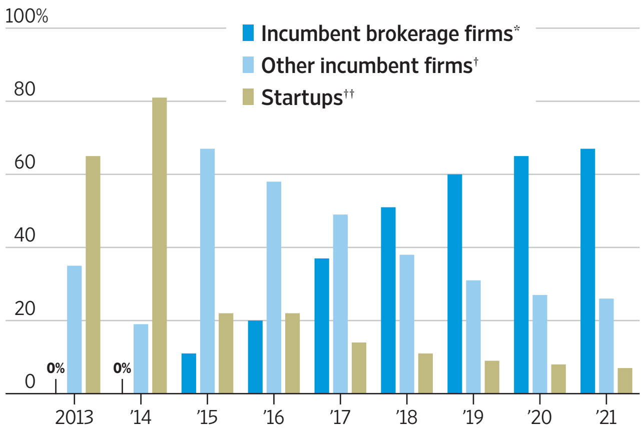
BY LISA BEILFUSS

BUCK ENNIS/CRAIN'S NEW YORK BUSINESS

Vasant Dhar, a Stern School of Business professor, runs a robo adviser for institutional investors.

Trading Places

Shares of assets managed by digital advisers of different kinds of companies. Companies for 2017 and beyond are projections.



*Such companies as Fidelity Investments, Merrill Edge, Schwab, TD Ameritrade, E-Trade
†Such as Vanguard Group, Edelman, eSavant ††Such as Betterment, Wealthfront, Blooom
Sources: Aite Group, Securities and Exchange Commission THE WALL STREET JOURNAL.

TODAY'S ROBO ADVISERS are expected to get a lot smarter. Tomorrow's might even have a conscience.

So say those who study the use of artificial intelligence in finance—though a digital wealth adviser with morals is likely still a long way off.

The robot advisers of today use algorithms to provide low-cost, automated portfolio-management services to investors seeking discount advice. These easy-to-use tools have grown swiftly: Assets under the control of digital wealth managers are on track to surpass $1 trillion by 2020 after ballooning by triple digits annually since 2013, according to research firm Aite Group.

With their low fees and small minimum-balance requirements, robos have been a boon to middle-income investors, enabling them to access a service once reserved mainly for the affluent. But beyond recommending low-fee index funds based on factors such as an investor's age, income and risk tolerance, and rebalancing portfolios as needed, the tools are limited in what they do.

Critics say not only are robots incapable of providing the kind of personalized, sophisticated financial-planning guidance that human wealth managers can deliver, they don't understand right or wrong. So while robo advisers are required to put clients' interests first when spitting out portfolio recommendations, they can't truly act as fiduciaries, some observers say.

"A robot has no consciousness, no ethics," says Vasant Dhar, a professor of information systems at New York University's Stern School of Business who runs a robo adviser for institutional investors. For a robo to qualify as a fiduciary, "you'd have to have a machine that has a strong moral code and understands the implications" of violating it, such as a regulatory fine or lawsuit, he says.

Growing smarter

AI specialists say technology could help robo advisers develop some of the traits that differentiate human advisers from their robotic rivals. To get there, AI would have to accumulate vastly more data, while powering algorithms to simulate different scenarios and "keep introspecting," Dr. Dhar says.

That will take time, if it happens at all, AI specialists say. But the idea is that eventually it will become much easier for an algorithm to provide fiduciary care, perhaps better than a human adviser, who might be tempted to recommend one product over another because of higher commissions or other incentives.

Meanwhile, robo advisers from pioneers such as **Betterment** LLC and **Wealthfront** Inc., as well as those from traditional asset managers and Wall Street banks, are grabbing an increased share of assets from their human rivals.

Firms including Bank of America Corp.'s Merrill Lynch and **Morgan Stanley** have been targeting younger investors and those with more moderate wealth, offering their robo services to those with just $5,000 in assets. Betterment has no minimum at all. By comparison, human advisers at Merrill typically take on accounts of at least $250,000 in investible assets, while the threshold at Morgan Stanley tends to be even higher.

Aite Group estimates the number of robo-advice clients will climb to 17 million by 2021 from 1.8 million in 2016, with a big chunk of those clients having less than $10,000 in investible assets.

As assets grow and technology advances, the expectation is that robo advisers will become more sophisticated. Future robos might have the ability to interview clients, instead of simply relying on answers from a risk-tolerance questionnaire to make fund recommendations. Some envision consumers accessing robo services though a platform that looks like Amazon.com, where the robo will be armed with troves of data to help it understand investors' lives.

Today's robo advisers aren't really all that intelligent, says Tucker Balch, professor of interactive computing at Georgia Institute of Technology. They're essentially simple programs doing what human advisers do, like making trades and rebalancing clients' portfolios—just much faster and more frequently. Eventually, that will become the baseline expectation of every investor, he says, which will push firms to use AI to try to differentiate themselves from competitors.

Portfolios managed through robots likely will stretch beyond index-tracking funds into more active approaches that aim to spot opportunities in, say, specific stocks.

Some robos are expanding their offerings already. Wealthfront in March added a higher-cost fund that uses derivatives to replicate a popular hedge-fund strategy known as risk-parity. Wealthfront and others also offer smart-beta funds, which weight stocks by factors other than traditional market capitalization.

Human touch

Some say human involvement may always be part of the equation. Someone has to write the algorithms for robos, even if the algorithms then teach themselves. And it is humans—the firms that employ them and the clients who hire them—who will chose which metrics to maximize.

Mr. Balch is among those who believe human designers can equip robos with ethics. As for a conscience? "The best AIs will ruthlessly strive to maximize their profit," he says, with a conscience arising "as a consequence of what that formula looks like."

Ms. Beilfuss is a reporter for The Wall Street Journal in New York. Email her at lisa.beilfuss@wsj.com.

Bank of America's Workers Prepare for the Bots

The company expects AI technologies to eliminate existing jobs. It wants its employees to be ready.

BY RACHEL LOUISE ENSIGN

MICHAEL NAGLE/BLOOMBERG NEWS

Chief Operations and Technology Officer Cathy Bessant is helping Bank of America adapt to AI.

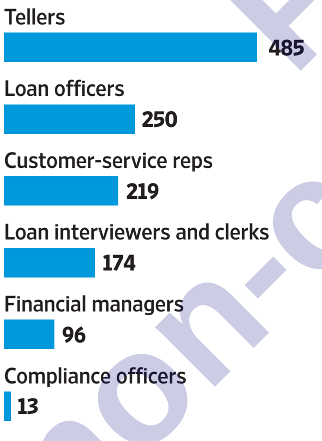
Bank of America doesn't want employees to worry that its new virtual assistant, Erica, will change or eliminate their jobs. It wants them to prepare for that to happen.

Erica made its debut this year as one of Bank of America's highest-profile efforts to use artificial intelligence. Responding either to speech or text commands, Erica helps customers perform basic banking tasks, like locking a missing debit card or finding routing numbers.

But while the virtual assistant—the first to be offered in a large U.S. lender's app—is intended to bolster the customer experience, such innovations pose a threat to existing jobs. To help workers cope, Bank of America recently launched a set of online courses to train them for new and evolving roles in the company.

More Productivity For U.S. Banks

By 2030, AI could have an impact on some 1.2 million banking industry workers. Positions affected, in thousands.



Sources: Autonomous Research; U.S. Bureau of Labor Statistics
THE WALL STREET JOURNAL.

Changes coming

About three years ago, Chief Operations and Technology Officer Cathy Bessant realized that technological changes were fundamentally transforming the nearly 95,000 jobs in her unit, she says. Her division consists of staffers who build and run the digital tools that underpin the bank, as well as employees in call centers and loan processing. Some of those jobs will go away, Ms. Bessant says, while for others, new roles and responsibilities will emerge.

Across the banking industry, 1.2 million jobs are expected to be affected by AI technologies like Erica, according to a 2018 report by Autonomous Research. Such tools will allow many employees to do their jobs more efficiently, the report says. But thousands of others will find their roles eliminated.

Technology has already changed the nature of work in the banking industry. Many customers, for instance, now perform routine tasks themselves, such as depositing checks digitally instead of visiting a branch. In response, Bank of America and others have minimized the role of tellers and boosted sales staff in branches. AI is expected to continue to affect customer-service roles such as tellers, the Autonomous report says.

Ms. Bessant believes cheap, high-speed computing power means technological change in the industry has now escalated to a pace rivaling the Industrial Revolution. Tasks that involve "routinizable skills that don't add customer or company value" will be automated, she says, and tools like Erica will allow customers to get help quickly without a human intermediary.

The Charlotte, N.C.-based bank already has cut the number of employees across the bank to 209,000 at the end of 2017 from 282,000 at the end of 2011. Going forward, Ms. Bessant doesn't think the number of employees in her unit will necessarily decline further. Instead, she says, the nature of those jobs will change. While some roles will be automated, new jobs will be created to analyze and oversee the automated processes.

A new university

The new online courses—dubbed GT&O University—are part of an effort to make the transition go as smoothly as possible. The online training, which was rolled out in late April, grew out of the bank's desire to train employees for those new jobs and the "very real and day-to-day need for people to stay motivated about working here," Ms. Bessant says. The courses are available to workers in Ms. Bessant's global tech and operations unit. Employees can choose from classes in four "colleges" encompassing basic banking skills, technology, operations and leadership.

Within each college, employees can pick different topics and sit through beginner, intermediate and advanced training. The topics currently have about 20 to 30 hours of content each, and include AI and various coding languages.

There are also courses on the bank's efficiency initiative known as "operational excellence." In these popular classes, employees learn to document and measure clients' experiences, for example.

The courses are optional, but the bank says they have already been taken more than 20,000 times. The bank says course completions in relevant subjects are starting to become a factor in internal job applications.

When asked how many of the roles in her unit will change in coming years, Ms. Bessant says: "100%. Including, by the way, mine."

Ms. Ensign is a reporter for The Wall Street Journal in New York. She can be reached at rachel.ensign@wsj.com.

EXPERTS' VOICES | ANNAMARIA LUSARDI

The Uncomfortable Relationship Between Mobile Payments and Financial Literacy

Systems like E-ZPass and phone apps are mirrored in a chore we all face: making payments. The latest survey of Consumers' Use of Mobile Financial Services of the Federal Reserve Board found that 28% of respondents with a smartphone made payments through it.

But are these payment innovations coming at a price for consumers?

When Amy Finkelstein, a professor at the Massachusetts Institute of Technology, looked at the data for E-ZPasses on the Mass Pike, she found that people who use the pass are less aware of how much they pay for the toll than are those who use cash. Since our financial decisions should be based on prices and cost comparisons, this is a concern—and it prompted our research team at the Global Financial Literacy Excellence Center to take a closer look at mobile-phone payments. We focused on heavy users of mobile payments—millennials ages 18 to 34.

Some of the findings are what we expected: Ease of payments attracts those who are comfortable with technology and have a busy life. Users of mobile payments are most likely to work full time, have higher education and be male. They are also more active financially.

However, troublesome findings emerge when we examine how these financial obligations are managed. Millennials who make mobile payments are much more likely to use credit cards in expensive ways, such as paying only the minimum due or incurring fees. They are much more likely to overdraw their bank accounts (33% of mobile-payment users vs. 19% of nonusers) and to make withdrawals from their retirement accounts, if they have them. Some 37% of mobile-payment users take money from their retirement account vs. 9% of nonusers.

One more crucial finding: Those who use mobile payments have much lower levels of financial literacy than nonusers.

When we look at our data, we found a strong correlation between using mobile payments and spending that exceeds income, even after we account for demographic characteristics, including education and income.

There is potential good news: Our findings suggest that mobile-payment services are attracting segments of customers with a range of needs beyond simple monetary transactions.

—Dr. Lusardi is the Denit Trust Chair of Economics and Accountancy at the George Washington University School of Business.

The Experts are industry and thought leaders who write on topics of their expertise. Read this full blog post and others at **WSJ.com/Experts.**

The Personalized Index Fund's Time May Be Near

Many people may not be up to the task, but some experts expect more individuals will be doing this

SERGE BLOCH

BY CHUCK JAFFE

SOMEDAY SOON, your favorite index could be, literally, "the index of my favorite stocks."

While you might not feel qualified, technology already exists to help you build an index just as good as what the experts do, and lower your investment costs in the process.

"Personalized indexing" may not be here yet, but it isn't far off.

Index investing and passive management—buying and holding a basket of stocks that replicates a benchmark—has been taking over the investment scene for years. Index funds attract the vast majority of investment flows, compared with active funds. Their low cost, transparency and tax efficiency are the pillars of the multitrillion-dollar exchange-traded-funds business.

Yet what investors have seen is just the beginning.

Whatever the financial-services industry can dream up, and believes the public will buy, it can turn into an index ETF. That is why there already seems to be an index ETF for every occasion and specialty, from artificial intelligence (AIEQ) to gaming (GAMR) to obesity (SLIM) to whatever stuff millennials are into (MILN).

It isn't a big step from that to building an index portfolio that follows your personal rules.

Evolution of indexes

As indexing has evolved, so has the thinking about what index funds are and what they are supposed to do.

Jack Bogle, founder of Vanguard Group and the first index fund, advocated classic indexing, where investors buy into old-school indexes like the S&P 500 and hold them forever. This is truly "passive investing," where both the buyer of the fund and the manager of the fund do virtually nothing.

But many investors these days are "tactical," meaning they trade passive index funds to tilt a portfolio toward whatever sector or region is most promising at any point. As investors, they could be described as "actively passive."

The next extension of this phenomenon becomes the personalized index, one where *you* make the rules.

While it could be as simple as "buy all large-cap stocks with a positive earnings trend and no debt on the balance sheet," it is more likely to reflect research you trust, with your confidence then leveraged into a portfolio.

Here's how it might work: You go to your brokerage website, logging into the research tools there from your favorite analytical firms, like Morningstar Inc. You screen investments—mixing and matching what you want to see. You cross-reference different research firms, maybe combining 5-star options from Morningstar with highly rated securities from other research firms and add in personal criteria, like a preference for increasing dividend payouts.

It's a rules-based approach where you make the rules.

Ben Johnson, director of global ETF research at Morningstar, compared the financial concept to what hungry eaters find at Chipotle Mexican Grill: "All of the ingredients are out there, and you order whatever looks good to you, and each person gets their food the way they want it, at a cost they can see and understand. You get exactly what you want."

With the screening done and the rules in place—including how often to rebalance and how to weight the portfolio—you click a button to buy the portfolio and—boom!—personal index fund.

Trading costs

There will be trading costs to buy the securities—currently excluded from the expense ratios of traditional funds and outside of the cost structure of ETFs—but no management fees. And brokerage firms are developing ways to nearly eliminate trading costs, such as flat annual fees for managing a personalized portfolio.

"The technology is here to do it now, but the industry is resisting it because the establishment gets paid to put together baskets of stocks," says David Trainer, president of New Constructs, a Nashville-based research firm. "As cheap as index funds are, the truth is that investment firms have been overcharging people for simply putting stocks into groups. You don't need that middleman anymore, so you will either buy the lowest-cost index funds out there or you will make them and execute them yourself."

Mind you, personalized funds aren't a new concept.

At the height of the internet-stock bubble, various firms started trying to sell investors custom baskets of stocks. The idea was to build low-cost, diversified portfolios where the investor knew, and controlled, all holdings. While the concept was supposed to democratize investing, the leading players moved where the money took them, away from the personalized funds angle and more toward menus of thematic, prepared portfolios.

It's worth remembering, however, that both indexing and the ETF industry didn't become popular concepts overnight. The first ETF opened in January 1993; it took more than 15 years for the industry to reach 1,000 offerings, then took less than 10 years to double from that size.

Thus, the personalized index fund is greeted with skepticism, even as industry watchers can't help but acknowledge its potential.

The DIY crowd

At a press briefing at the recent Morningstar Investment Conference in Chicago, Morningstar Chief Executive Kunal Kapoor said he believes that "the do-it-yourself crowd will go in that direction [of personalized funds], but the average investor probably won't take it that far."

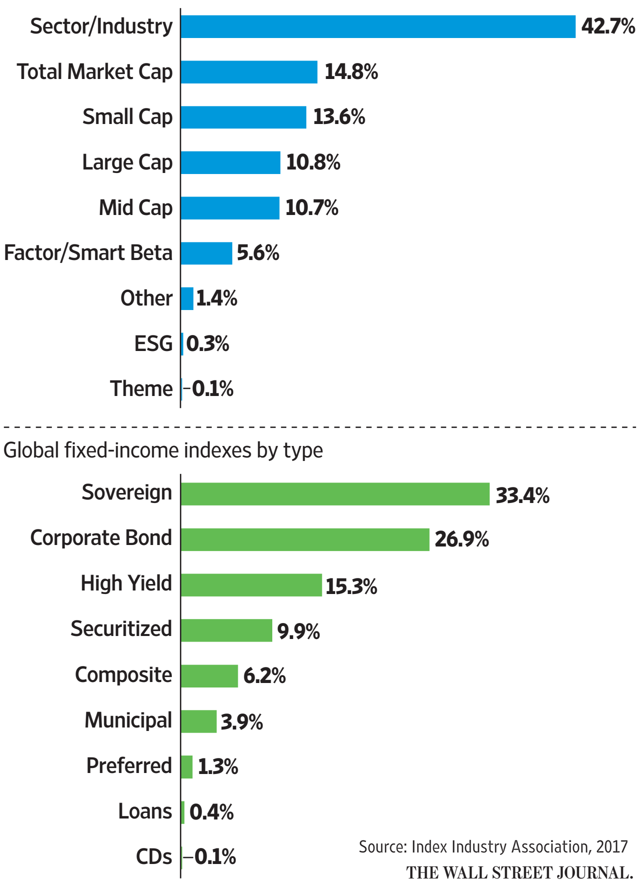
But a moment later, he was asked what the next generation of investors is demanding from the financial-services industry, and his answer showed the potential of the personalized portfolio.

"Personalization is very big to the new generation," Mr. Kapoor said. "They want something tailored to them instead of being put into a black box. They want to know how their money is working for them. They want transparency and low costs. And those are all things they're going to insist on and won't be satisfied without."

Mr. Jaffe is a writer in Boston. He can be reached at reports@wsj.com.

Where the Benchmarks Are

A breakdown of the different types of equity indexes used as benchmarks around the world



Source: Index Industry Association, 2017
THE WALL STREET JOURNAL.

Wall Street Sees a Future in Superforecasts

Financial firms hope that the wisdom of teams can better predict market behavior

BY MIKE BIRD

LAUREN KALLEN/WEWORK

IN FINANCE, a good forecast can mean the difference between bumper earnings and bankruptcy. The need for an accurate outlook is leading some firms to a novel and increasingly popular technique for predicting the future.

Superforecasting, as it is called, has its roots in efforts to exploit the wisdom of crowds—an approach to statistics in which large numbers of estimates are averaged to find the most likely answer.

But superforecasting goes much further. It starts with predictions by individual experts who have both subject knowledge and training in probability and other statistical tools. Among other steps in the complex process that follows, the forecasts get combined and weighted, based on timeliness and past accuracy, until finally all of the results are melded into one forecast.

The concept began in an experiment in 2011 led by a professor at the University of Pennsylvania, a forecasting tournament in which tens of thousands of untested amateurs were pitted against seasoned experts in forecasting. The novices and the experts were asked hundreds of questions relating to U.S. national security. The amateurs won.

The amateur forecasters who scored in the top 2% in the experiment, known as the Good Judgment Project, now make forecasts as part of Good Judgment Inc., the commercial spinoff of the original project, whose work is sometimes outsourced from the corporate world. Working part time, these forecasters now attach numerical probabilities to potential outcomes for thousands of global events not just in finance but in electoral politics and foreign policy as well.

Financial firms such as BlackRock, NN Investment Partners, Oaktree Capital Management and Barings Asset Management have had workshops conducted by the firm. Sometimes instead of hiring superforecasters, the companies try their own hand at processes advocated by such figures as Philip Tetlock, the Penn professor and co-founder of Good Judgment. Such processes involve attaching numerical probabilities to different outcomes, and constantly updating them, constantly keeping an account of how accurate predictions were.

ERIC MENCHER

Philip Tetlock, co-founder of Good Judgment superforecasters

Not in the plan

The idea of starting a company by training the most successful amateur forecasters in probabilities and reducing biases was not in the plan when the Good Judgment Project started. But in subsequent annual rounds, as the founders refined their methods, they started putting the most successful participants on teams and aggregating their predictions into a single forecast.

That is a big departure from the way most financial and investment firms operate.

"Generally in fund management it's been about demigod fund managers—Soros etc.," says Chad Slater, joint chief investment officer at Morphic Asset Management, an equity investment firm that uses superforecasting. "This emphasizes the value of teams," he says. "You don't necessarily need a high IQ as much as you need a good process."

Mr. Slater says that superforecasting principles led his firm to hire a more diverse team, to broaden the knowledge base, and to focus more on constantly updating probabilities rather than on raw intelligence. "There's something about forcing yourself to update that's just very good mental hygiene," he adds.

"We have around 70,000 contributors, it's a rough split between people who work professionally in the industry and people who don't. We keep their data, which sector they're in for example, but otherwise on the platform they're anonymous."

—LEIGH DROGEN, founder and CEO, Estimize

A company that regularly attempts to use the wisdom of crowds is Estimize, a New York-based financial-forecasting firm. When forecasting quarterly earnings, Estimize collects estimates from as many as 70,000 contributors, including investors and asset managers. Each estimate is weighted by a confidence algorithm that takes account of historical accuracy within a forecaster's sectors, the freshness of the estimate, and the number of predictions he or she has made.

"One of the things I'd been looking at before founding Estimize was Tetlock's work," says Leigh Drogen, founder and chief executive of Estimize. "He proved...that a bunch of housewives in their kitchens could be more accurate on whether we would bomb Iran or whatever than a CIA case officer."

Mr. Drogen says his company's process, which puts a premium on updating estimates, is around 15% more accurate than existing consensus measures. Most consensus estimates typically only collect sell-side estimates from banks, Mr. Drogen says, and sell-side analysts tend not to revise their estimates in the three or four weeks before results are posted.

Research on the behavior of financial analysts suggests that several different habits hurt their ability to forecast accurately. One study, conducted in 2011 by academics at Penn and Stanford University, found that when analysts make unusually bearish or bullish earnings forecasts relative to the consensus view, they are more likely to double down on their view after being proved wrong than they are to reassess their forecasts.

Hedging bets

Stock-market analysts for years have been ribbed for making estimates that offer them protection whether they're right or wrong. Giving an event a 40% probability of happening gives an analyst protection whether the prediction comes true or not.

"Uncertainty is often expressed by language," says Warren Hatch, president of Good Judgment Inc. and a former hedge-fund manager. "Take 'maybe.' It's useless. It could be around, less or more than 50%. A number is much more useful, and it allows you to make tweaks more easily," says Mr. Hatch.

Sander Wagner, an assistant professor of sociology at ENSAE, a French university, joined the Good Judgment Project as a superforecaster in 2013.

"I am in no way a subject-matter expert," he says. But, Mr. Wagner uses statistics regularly in his research into subjects like fertility and intergenerational mobility. "Thinking about the world in a probabilistic way," he says, "probably comes relatively natural to me."

Mr. Bird is a reporter for The Wall Street Journal in London. He can be reached at mike.bird@wsj.com.

EXPERTS' VOICES | OLIVIA S. MITCHELL

Why Elder Financial Fraud Is Worse Than We Thought

To investigate financial victimization at older ages and the consequences of financial mismanagement, our recent research used the Health and Retirement Study, a nationally representative survey of Americans over the age of 50.

We asked respondents questions about whether they had been victimized by financial fraud within the past five years, by which we meant: investing money after a meeting that offered a free meal and educational information for some sort of investment; investing after receiving a cold call from someone they didn't know; or investing in penny stocks or in investments that guaranteed daily returns of more than 10%.

All told, almost 8% of the over-50 group admitted that they had fallen prey to at least one of these fraudulent activities over the past five years.

What's more, exposure to financial fraud uncovered in our study was twice as large as reported in other studies, probably because we probed for specific instances of financial fraud while other studies did not.

Casting a wider net, we also found that almost one-third indicated that others had used or attempted to use the respondent's accounts without permission, and one-third said that they had been exposed to financial scams during the past five years. This figure is far higher than found in other studies that have asked less detailed questions about victimization at older ages.

So what can be done?

Banks, insurers, credit-card companies and online service providers need to enhance protections for older customers to ensure that they are not financially victimized. Several new efforts are under way; for instance, the AARP has a new program training bank tellers how to recognize when customers show signs of declining mental capacity or are being financially exploited. Meanwhile, the use of robocall blockers like Nomorobo can help shut down the increasing number of phone scammers and telemarketers targeting cellphone numbers.

Policy makers also will need to do more to protect our nation's aging and increasingly vulnerable population. Several states have laws protecting elders, permitting triple damages for victims winning legal cases against their perpetrators. This needs to expand. The Senate's Special Committee on Aging's fraud hotline at 1-855-303-9470 can help by offering steps that consumers can take. And the Consumer Financial Protection Bureau is still open for complaints about financial fraud.

—Prof. Mitchell is a professor of insurance/risk management and business economics/policy at the Wharton School of the University of Pennsylvania.

The Experts are industry and thought leaders who write on topics of their expertise. You can read this full blog post and others at **WSJ.com/Experts.**

Private-Equity Firms Think Longer Term

Some look to stay invested in companies for unlimited periods

BY DAWN LIM AND LAURA COOPER

PRIVATE-EQUITY firms have long hewed to a certain model: They raise investor money to buy businesses, then exit their bets in a decade or so.

Now, some private-equity firms want to stay invested in companies longer, perhaps even forever, driving a broad push by the industry into longer-life pools, and what some call permanent-capital funds.

BlackRock Inc., for instance, is seeking more than $10 billion for a new private-equity pool that has no deadline for exiting the investments it makes. Other companies, including **Altas Partners**, **Blackstone Group**, **CVC Capital Partners**, **KKR** & Co. and **Vista Equity Partners**, collectively have raised or are still looking to raise billions of dollars for pools designed to last longer than the typical 10- to 12-year funds.

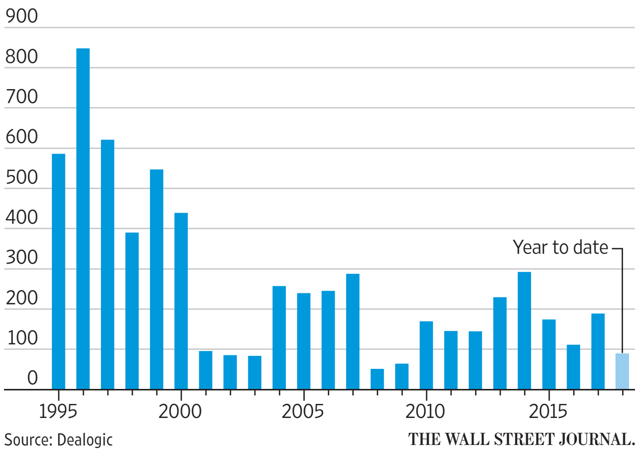
KKR has amassed $9.5 billion to hold companies for the long term, and well beyond the life of traditional private-equity funds. KKR is currently investing $8.5 billion of that capital, which is the largest pool of its kind and is backed by $3 billion of the private-equity firm's own balance sheet. The firm raised the remainder from institutions, with a large amount coming from sovereign-wealth funds and insurance companies.

Fewer flubs

There are clear incentives to a long-term strategy for both the firms and the investors. For one, firms that keep investments private for longer can lower the risk of flubbed initial public offerings. There is also appetite among some large investors—sovereign-wealth funds in particular—for more investment strategies that match their own long-term strategic horizons, which often extend for decades or longer.

Fewer Public Offerings

The number of companies going public in the U.S. is dwindling.



Source: Dealogic

THE WALL STREET JOURNAL.

To keep these long-term investors satisfied, firms managing permanent-capital funds typically purchase businesses with recurring revenue—examples could include a dental-services chain with regular customers or a software company with licensing agreements—that can flow back to the funds' investors as fee income for decades.

'Holy Grail'

One technology banker has called permanent-capital funds the "Holy Grail for private-equity firms" because they help the firms compete with corporate buyers, which can essentially hold the companies that they purchase indefinitely. Private-equity funds, in contrast, face pressure to sell companies or take them public after a few years.

The trend to long-term private-equity investments could have repercussions in broader capital markets. A proliferation of long-life funds could further shrink the U.S. public market as more companies can readily tap the private markets for money and delay plans for initial public offerings. About 200 companies went public in the U.S. last year, down from more than 800 in 1996, according to research firm Dealogic.

Another incentive of long-term deals for private-equity firms is they may help the firms avoid the distraction of having to market new funds every three or four years.

But the rise of funds built for the very long run also raises the risk that private-equity managers become less motivated to generate the outsize returns that have characterized the asset class over the past decade or more. Indeed, it could become challenging for firms to incentivize their deal makers to stick around when the investments they make are expected to last for decades.

Too much 'flipping'

The shift away from traditional 10-year funds shows large institutions are rethinking their relationships with Wall Street.

"Investors with a long-term horizon don't see the point of investing in private-equity funds to hold companies for just four or five years," says Ludovic Phalippou, an associate professor of finance at the University of Oxford's Saïd Business School.

These investors want to avoid having their managers become forced sellers of companies. Instead, they are warming up to a view that institutions should back companies as long as possible to maximize their profits.

Some big investors say they are tired of finding themselves indirectly on both sides of a deal as private-equity firms increasingly trade companies among themselves. The volume of such deals globally rose to $93.7 billion in 2017, the highest level since 2007, according to Dealogic.

"We've seen our own investments flip four times through our portfolio from one manager to the next manager," Jerry Albright, the investment chief of the Teacher Retirement System of Texas, said at a pension meeting earlier this year. "In between those flips, there's fees."

California Public Employees' Retirement System, for its part, is exploring plans to set up multibillion-dollar funds to buy and hold private companies for extended periods. The idea would be to hold companies "forever rather than being forced to sell them at an arbitrary time point," Chief Investment Officer Ted Eliopoulos told The Wall Street Journal in May.

Staying put

As it gets harder for investors to find bargains when assets are increasingly overpriced, staying put in companies may be more attractive than having to put cash to work. For investors, one of the biggest draws of a private-equity fund with an exceptionally long outlook is the lack of more attractive investment options in a low-yield environment.

Institutions that have backed this strategy "prefer to keep their capital invested for longer, rather than having it returned quickly only to have to go out again to find opportunities to put it to work," says Webster Chua, KKR's head of corporate development.

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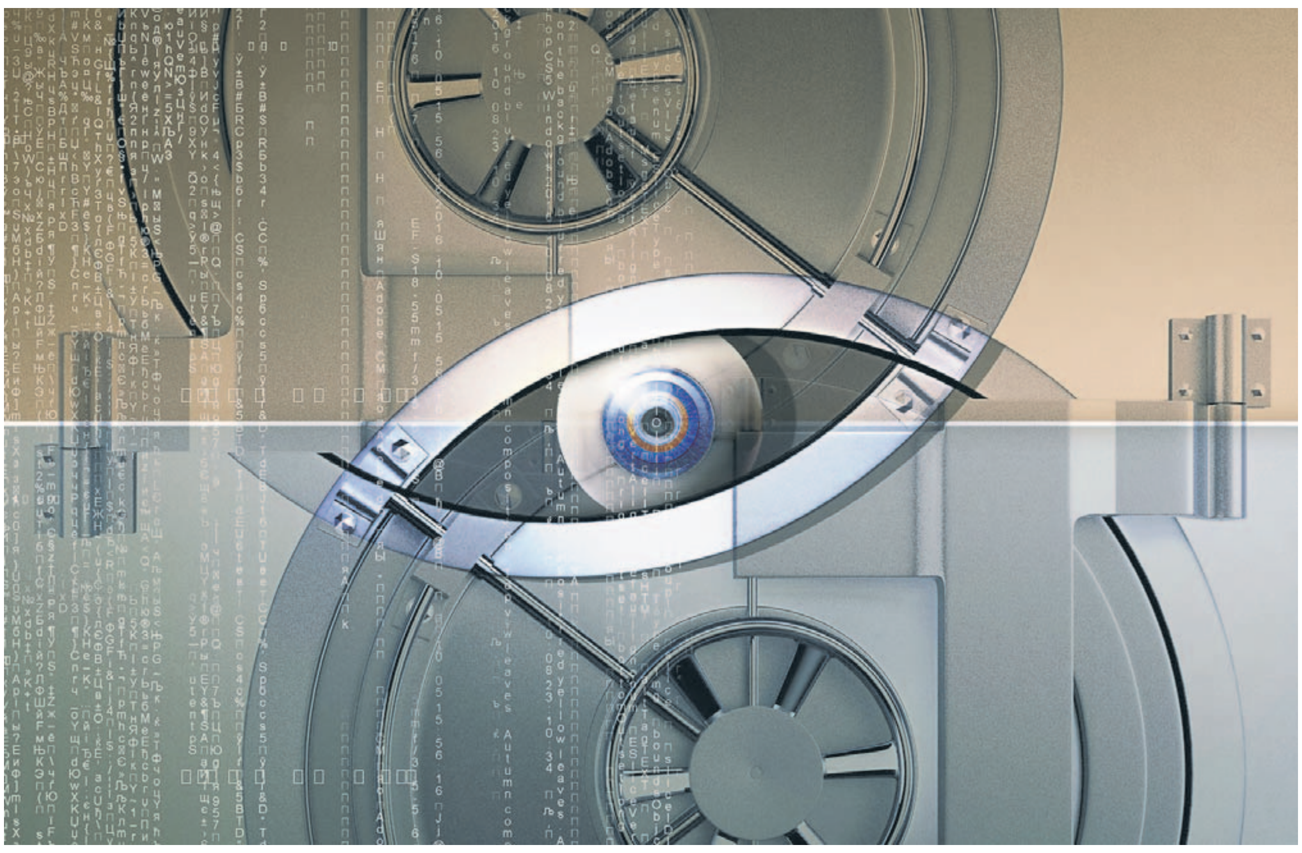
In the Name of Security, Banks Share Data

But privacy experts warn this new cooperation could unfairly hurt some customers



VIKTOR KOEN

BY LALITA CLOZEL

IN A NEW EFFORT to combat global crimes and terrorism, banks around the world increasingly are conducting joint investigations that rely on sharing the details of suspicious transactions and the accounts that are involved.

Authorities in the U.S. and elsewhere have lauded the effort, but it has raised concern among privacy advocates, who worry it could lead to some people or companies being penalized without due process.

In one example of the cooperative efforts, seven of the world's largest banks have been working together to facilitate the sharing of data such as the identities of account holders and the dates and other details of certain financial transactions. This has allowed them to experiment with ways to analyze large amounts of transactions data using artificial-intelligence tools as they try to uncover activities like money laundering or terrorist financing.

Created in 2015, this group includes **J.P. Morgan Chase** & Co., **Citigroup** Inc., **Bank of America** Corp., **Wells Fargo** & Co., **U.S. Bancorp**, **HSBC Holdings** PLC and **Standard Chartered** PLC.

"We are working together with other banks and with law enforcement around the world to share information in a more open way," says Colin Bell, HSBC's group head of financial-crime risk. "We play an active or founding member role in partnerships in six countries," he says, adding that together these efforts have "contributed to dozens of arrests and the seizure of millions of dollars of suspected criminal funds."

The banks declined to publicly discuss the details of their cooperation under this group.

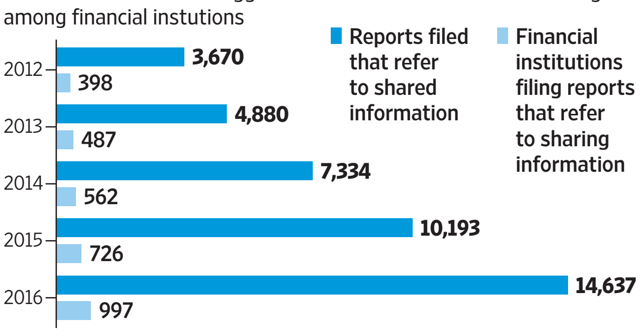
Banks in the U.S. were given the legal authority to share limited amounts of information with each other, regulators and law-enforcement authorities by the 2001 Patriot Act, a package of measures designed to combat terrorism. But such coordination has spread significantly in recent years.

Praise and concern

Regulators over the past decade have encouraged banks to form information-sharing groups by signaling that the Patriot Act's protections for such cooperation extend to dozens of suspected underlying crimes that can produce tainted money—including weapons or human trafficking as well as more benign activities like food-stamp fraud.

Sharing Signals

Suspicious Activity Reports filed to the U.S. Financial Crimes Enforcement Network suggest an increase of information sharing among financial instutions



Sources: U.S. Department of Treasury; Financial Crimes Enforcement Network

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"We are highly encouraged by, and supportive of, the private sector's willingness to engage in this type of exchange," Sigal Mandelker, the Treasury's under secretary for terrorism and financial intelligence, told a Senate panel in January. But privacy advocates worry that banks may be stretching their authority to share sensitive customer data, unnecessarily exposing personal information, leading to the possibility of individuals or companies being penalized over the mere suspicion of wrongdoing.

"My concern with this program is what customer information is being shared," says Shana O'Toole, president and founder of the Due Process Institute, a Washington nonprofit that acts as an advocate for what it considers fairness in the legal system. "Efficiency is great, but constitutional protections are mandated."

Advance analysis

Traditionally, individual banks have relied on markers such as the size of transactions or names of people on government sanctions lists to flag suspicious activity, an approach that can result in many so-called false positives, or warnings about transactions that turn out to be entirely legitimate. But now banks are using sophisticated new technologies in analyzing the information they're sharing. Artificial intelligence allows them to detect patterns in data that wouldn't otherwise be readily apparent, and sharing information gives the technology more data to work with. For instance, a single bank may be unable to tell whether a company is receiving an atypical amount of income given its size and the business it's in. But by extrapolating from a broader set of data, an artificial-intelligence application could spot an outlier. "What you would get with information-sharing is smarter positives," says Greg Baer, president of the Clearing House, a trade group for large banks.

As information moves more smoothly between financial institutions, the government could also have an easier time obtaining customer data. Reports often filed by banks in conjunction with information sharing can be used by law enforcement in investigations without any need for judicial approval, though a subpoena is needed for the information to be used as court evidence.

There are "all sorts of underlying criminal activities that generate proceeds and therefore potentially tie things to money laundering. So we do look at that broadly," says Jamal El-Hindi, deputy director of the Treasury Department's Financial Crimes Enforcement Network, which collects and analyzes financial intelligence. "At the same time, we don't want financial institutions to take that so broadly that their purpose in information sharing is not related to countering money laundering and terrorist financing." Information sharing, Mr. El-Hindi adds, can produce more-targeted investigations. "The more that they can look at some of those things together, the better they're able to piece together some of the puzzles of this criminal activity," he says.

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EXPERTS' VOICES | BENJAMIN HARRIS

The High Cost of Buying and Selling a Home

It is only a slight exaggeration to say that American households only invest in two things: Their homes and financial assets. In many ways, these assets couldn't be more different.

Taxpayers can write off interest on a loan to buy a home, but not stocks. Retirement accounts can hold stocks, but not homes. It's easy for investors to diversify a stock portfolio, but nearly impossible to diversify home equity.

And perhaps most important: It costs a small fortune to buy and sell a house, while stocks can be sold for close to nothing.

That last one is worth examining more closely. Stocks used to be much more expensive to buy and sell. A working paper by economist Charles Jones found that the cost of trading stocks, including both commissions and bid-ask spreads, fell by about 85% between the mid-1970s and 2000. But as technology and regulatory reform drove down the costs of trading financial assets, homes have remained an expensive asset to trade.

Any homeowner knows that it costs a lot to buy and sell a home, but the magnitude of these costs may be underappreciated. In a working paper from 2011, I found that for someone owning a home for four years or less, the cost of buying and selling the home were higher than for all other costs—including interest payments, property taxes and the foregone return on home equity had it been invested in stocks.

Even after owning the home for a decade, the costs of buying and selling a home make up about one-fifth the total cost.

The problem with housing transaction costs is that they interfere with markets. To start, like any other costs, transaction costs discourage investment—one study found that Toronto's 1.1% transaction tax drove down sales by 15%. Expensive closing costs can also impede mobility for workers, making it less likely they'll sell their home to take a better job in a new location.

Just as the costs of trading stocks fell over time, buying and selling homes may eventually become cheaper. An important first step is for cities and states with high transaction taxes to cut down on the cost of trading. Philadelphia, Seattle and Washington, D.C., are all examples of cities where it costs a lot to buy and sell. And there is a wide gap between what states charge to buy and sell a home.

Subsidizing first-time home buyers can also help defer the costs of buying a first home. During the housing crisis, the federal government temporarily offered a tax credit of up to $8,000 for qualifying first-time home buyers.

Better transparency can also help. Closing costs can vary substantially even within a given market, and better-informed consumers can more easily find a better deal. One study of title charges in a handful of cities found that borrowers can shave almost one-third off their title charges by shopping around for a deal.

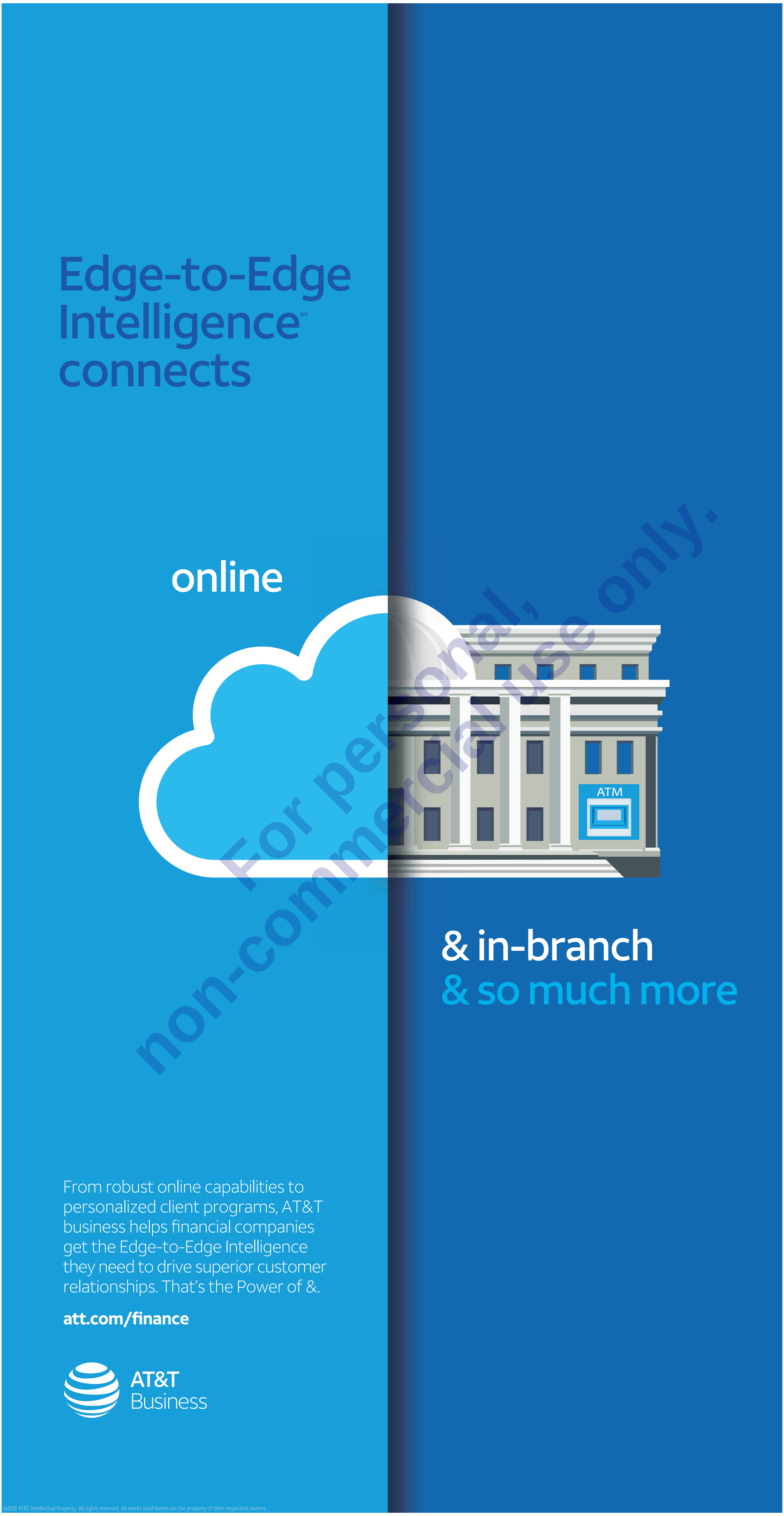
But when it comes to buying and selling homes, real-estate-agent costs dominate. Discount brokerages helped drive down the cost of trading equities, but analogous efforts in real estate have been less successful. As with title charges, one answer might be in homeowners' ability to shop around. One analysis of real-estate agent fees showed that while 29% of sellers paid exactly 6% of the home price, 12% paid less than 4%.

But the problem might be even more ominous than that—a lack of competition in the real-estate industry. One problem is that several states have banned "commission rebates," taking away consumers' ability to negotiate with their real-estate agent for a lower price. Other states have put in place "minimum-service requirements" that restrict consumers from negotiating lower fees by agreeing to reduced service.

None of these state laws have strong economic justification, and likely mean consumers end up paying more.

—Dr. Harris is a visiting associate professor at the Kellogg School of Management and was the chief economist to Vice President Joe Biden.

The Experts are industry and thought leaders who write on topics of their expertise. You can read this full blog post and others at **WSJ.com/Experts.**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