Bloomberg Businessweek
June 18, 2018

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Your North Korea Investment Guide*

Petroleum!

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Zinc!

Molybdenum!

PLUS Beaches!

“Think of it from a real estate perspective.”

—U.S. President Donald Trump

*RISKS (AND SANCTIONS) ABOUND; PROCEED WITH CAUTION. PAST PERFORMANCE MAY BE INDICATIVE OF FUTURE RESULTS. INVESTORS MAY LOSE EVERYTHING WITHOUT RECOURSE

Page 36

The Urban Underground

China's subway evolution exemplifies the achievements of reform and opening up By Yuan Yuan

More than 10 million people ride Beijing's 22 subway lines each day, making the metro system an indispensable part of the city's urban life.

But things were very different just 10 years ago, when Beijing only had eight subway lines. In the 1980s, the city's first two subway lines dominated underground transportation until the turn of the century, when more lines were finally added, and further expansion has occurred rapidly.

Fast growth

In recent years, subway networks have expanded considerably in China's megacities. At the same time, many other cities have hopped on the metro map. The lengthening city subway networks connect suburban districts with central areas, reduce commuter time and make people's lives more convenient. This is perhaps the epitome of China's urban development in the past 40 years, since reform and opening up began.

Line 1, running east and west, began operating in 1971 in Beijing, the first city in China to have an underground railway system.

Line 2, a loop circling roughly under the Second Ring Road, became the second operational line in 1984, but the area covered by both lines was mostly in downtown Beijing.

"In the 1990s, only a small fraction of people would choose the subway since it was more expensive than a ride by bus. Plus, the number of subway stations was quite limited," said Chang Zhifu, a volunteer with the metro system for many years. "Many who took the subway had to transfer to buses to get to their final destinations anyway, so it was not a good deal," the 76-year-old Beijing resident added. After quite a few price adjustments, in 2000 the fare was finally set at 3 yuan ($0.47), regardless of transfers or distance.

The next line, Line 13, a half-loop that links the northern suburbs with Line 2, was put into operation in January 2003. Another line, Batong Line, an extension of Line 1, was opened in December 2003. These two lines helped Beijing's subway ridership hit 607 million in 2004.

Line 5, which took more than seven years to construct, was opened in October 2007 as the city's first north-south line. Subway fares were reduced to a flat fare of 2 yuan ($0.32), including unlimited transfers. That year, ridership rose to a total of 655 million.

In July 2008, Line 10, the Olympic Branch Line (Line 8) and the Airport Express were all opened on a trial basis ahead of the Beijing 2008 Summer Olympic Games. With the addition of the three new lines, total ridership rose by 77 percent over the previous year to 1.2 billion in 2008.

Since November 2008, Beijing's railway construction has accelerated. Above-ground light rail lines—which were cheaper to build—to suburban districts have sprouted up, and the city's subway network has rapidly expanded as more than 10 new lines have been added in the past 10 years.

Improved services

With many more people opting for an underground commute, peak-hour congestion has become a major problem, as is the case in many other megacities around the world.

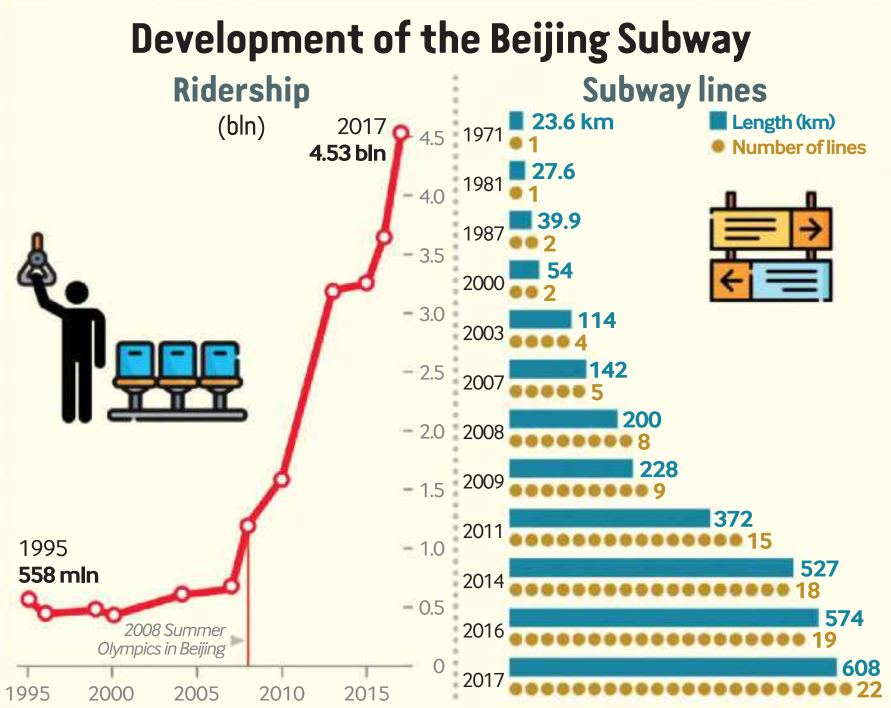
"We have to wait in super-long lines to squeeze onto the trains, and it is normal to wait for six trains before you are finally able to board one," said Fu Yimin, from Tiantongyuan, a residential compound at the northernmost stations of Line 5. "In order to be on time to work, I have to leave my house half an hour earlier to avoid rush hour."

This is commonplace for most of Beijing's subway lines at peak hours. In order to relieve the pressure, more lines and trains have been launched. In 2009, Line 4, funded through a joint venture with the Hong Kong MTR, was built as another north-south line, reaching the farthest southern suburbs. In December 2012, Line 6, paralleling Line 1's east-west route, was put into operation. At the end of 2017, the city's subway lines measured 608 km (expected to increase to 630 km by the end of this year), and ridership skyrocketed to 10.35 million daily, almost twice the number initially expected.

"The subway stations are now a lot cleaner and more orderly," said Chang, who now serves at the Nanluoguxiang Station of Line

XINHUA

The Yanfang subway line in southwestern Beijing, the first fully domestically developed automated line in China, opened to the public at the end of 2017.



Source: Beijing Subway. Designed by Pamela Tobey.

Source: National Development and Reform Commission. Designed by Pamela Tobey.

8 for two hours a day. She said she is awed by the incredible expansion of the subway system in the past several years. "It is very convenient now to take the subway to go many places in the city—even Fragrant Hill in a far western suburb is within metro reach."

Chang told *Beijing Review*, "There used to be a ticket-selling window here, but now all the tickets must be purchased through the machine"; every day, she helps passengers buy tickets using the automated ticket-selling machines. "More young people now choose to scan a QR code with their smartphones to hop on the subway, but most tourists and seniors still use cash," Chang said.

Technological advances have given metro expansion in many Chinese cities a strong boost, and since May 2013, cities only need approval from provincial authorities rather than national ministries to build a metro line.

"Urban rail transit not only helps with urban space expansion, but also boosts economic development," said Li Guoyong, an inspector with the National Development and Reform Commission's Department of Basic Industries.

Economic driver

At the end of 2017, the National Development Reform Commission announced plans to relax the requirements needed for local governments to pursue subway projects, including lowering the minimum population from 3 million to 1.5 million, which means more third- and fourth-tier cities can submit proposals.

"China's third-tier cities are actively building metros. This enthusiasm will be a key driver of infrastructure building," said Jiang Shenggang, a metro expert in Fujian Province on China's southeast coast.

By December 2017, there were 171 subway lines stretching over 5,083 km in 35 cities on the Chinese mainland. China has the longest urban railway network in the world, which is predicted to surpass 6,000 km by 2020.

The rapid development of China's urban railway system reflects the country's growing economic strength. The system has experienced the fastest growth over the past 15 years due to the investment of wealth, accumulated from the reform and opening up, in urban infrastructure construction. An urban railway system is expensive to build, with one kilometer of subway costing approximately 700 million yuan ($110 million). A city without economic strength cannot develop such an extensive system.

The progress in urban railway construction technologies has also contributed to the fast expansion of the infrastructure. Subway construction involves building underground tunnels, laying rails, manufacturing trains and the operation and management of subways. It is a systematic project that not only includes building traditional infrastructure, but also modern electronics and information technology.

The expansion of Chinese cities has made it necessary to develop urban railway systems. Since the start of the reform and opening up, a large number of people have migrated to cities and the number of private cars has increased dramatically, resulting in serious traffic congestion, and building subways has become an important way to solve this problem. The success of the urban railway network also reflects the openness and inclusiveness of cities. Since the beginning of the reform and opening up, the geographic mobility of people has greatly improved, promoting the prosperity of cities and making it necessary to build subways to improve urban transportation systems.

This year marks the 40th anniversary of the launch of China's reform and opening up, and the rapid development of China's urban railway system exemplifies the achievements made by the policy. As China furthers its opening up, it will continue to maintain steady and rapid economic growth, and railway systems will be available in more and more cities. ■

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◀ Addyi was reintroduced through an online prescription service on June 11

FEATURES

PHOTOGRAPH BY VICTOR PRADO FOR BLOOMBERG BUSINESSWEEK

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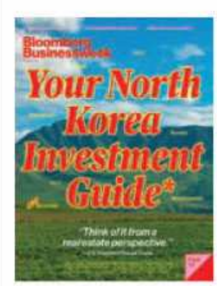

Cover: Michael Runkel/ ImageBroker/Polaris

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MEET IN MONACO

An Ideal Backdrop to Raise Your Business Profile and Elevate Your Brand

To think of Monaco is to conjure images of style and glamour. It's to picture Grand Prix races and black-tie galas and movie stars basking aboard super-yachts. In this sun-kissed principality, home to the most millionaires per capita in the world, even business has the look and feel of pleasure.

And that's the point.

Monaco isn't merely a resplendent playground. It's a dramatic destination where serious work gets done.

"There's so much culture and entertainment packed into this tiny territory that people rightly know it as a luxurious getaway," says Cindy Hoddeson of the Monaco Government Tourist Office. "But it's also a draw for experts in a number of key industries. When you combine that with the entrepreneurial spirit and a welcoming climate that are so apparent here, you see why Monaco is regarded by so many as the place to meet."

The most famous meeting to take place in Monaco was Grace Kelly's introduction to her future husband, Prince Rainier III. But in the years since, Monaco has gained renown as a gathering place for business leaders across a range of sectors, from finance and medicine to sustainability and high-tech. The Samsung European Forum and Ernst & Young's Entrepreneur of the Year are just two in a multitude of high-wattage corporate events held here.

As a rendezvous point, Monaco makes perfect sense. Politically neutral, and at peaceable reprieve from outside turmoil, it is readily accessible to the world, linked by rail to mainland Europe, and served by Nice Côte d'Azur Airport, which welcomes flights from more than 100 destinations, including non-stops from New York.

Travelers touching down here find themselves in friendly, cosmopolitan surrounds that make doing business easy. English, French and Italian are widely spoken. Public transportation is efficient and eco-friendly, fueled exclusively by biofuel, hybrid or electric power—not that you need much help to get around a country that is roughly half the size of New York's Central Park.

"The entire Principality is so small that you can walk almost anywhere and mingle easily," Hoddeson says. "We sometimes joke that if you're planning a large event, we can pretty much give you the whole country."

What businesses wind up with is a whole lot more. With its grand Belle Époque hotels, modern resorts and a shiny constellation of acclaimed restaurants (six of which are bedecked with Michelin stars) Monaco amounts to the ultimate reward: A shimmering incentive for motivating sales teams.

Synonymous with luxury, Monaco is a brand unto itself, the ultimate embodiment of lofty aspirations. That makes it an ideal backdrop for high-end product launches.

Take the Monaco Yacht Show, an autumn spectacle that offers a first glimpse of one-off super-yachts. Or Top Marques, an annual showcase of new watches, sports cars, jewelry and aircraft. Such products make a statement. So does the location, a worldly destination set on cliff-tops rising from the Mediterranean Sea.

"When you bring your business to Monaco, the world takes notice," Hoddeson says. "It's really no wonder that so many luxury brands want to be associated with that." ■

visit MONACO

■ IN BRIEF

By Kyle Stock

● Tesla said it would let go 9 percent of its workforce, roughly 3,500 employees, in a bid for its first annual profit.

The dismissals will spare production ranks and focus on middle management.

● Backed by Saudi Arabian troops, Yemeni forces attacked Hodeidah, a port city controlled by Houthi rebels. The United Nations warned the fighting could trigger a humanitarian crisis, as 80 percent of the country's aid is processed in the port.

● "I stand by every one of those decisions to disagree with the president."

South Carolina Representative Mark Sanford, once a GOP darling, lost his primary after Trump tweeted he was "nothing but trouble."

● Greece resolved a decades-long diplomatic dispute with Macedonia, which now will be known as the Republic of North Macedonia. The accord must still be ratified by both sides.

● Apple changed rules for app developers, curtailing their ability to use and share iPhone owners' contact information and other data.

● A coalition of the U.S., Canada, and Mexico won a bid to host the 2026 FIFA World Cup, defeating Morocco in a landslide vote.

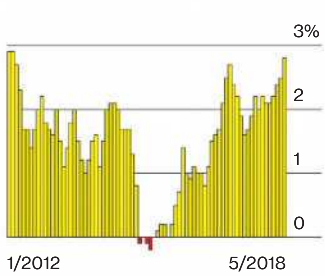
● Mars agreed to buy AniCura, a European veterinary empire, in a deal valued at

$2.4b

adding to a collection of pet brands that already includes Iams and Purina.

● U.S. inflation rose to 2.8 percent in May, its highest level in six years, driven by gains in fuel prices and housing.

U.S. consumer price index, year-over-year change



● Vietnam passed a cybersecurity law requiring tech giants such as Facebook and Google to store data in the country.

● Rolls-Royce plans to cut 5,000 jobs, or 10 percent of its workforce. One contributing factor: a shortage of parts to repair faulty Boeing 787 engines, which it manufactures.

● Dhivya Suryadevara was named CFO of General Motors. The company's top two jobs are now occupied by women.

● Aerion Supersonic is accepting contracts for a $120 million ultrafast business jet that it plans to deliver in 24 months.

● Toyota Motor said it would invest $1 billion in Grab, Southeast Asia's ride-hailing leader.

● White House economic adviser Larry Kudlow was released from the hospital on June 13 after suffering a heart attack.

FROM TOP: SCOTT J. FERRELL/GETTY IMAGES; MARKO DJURICA/REUTERS; ALAMY; DATA: BUREAU OF LABOR STATISTICS

▶ Saudi Arabia Is Over a Barrel

Iraq has joined Iran and Venezuela to oppose Saudi Arabia's push to increase oil supplies, pitting three of the five original OPEC nations against the Gulf kingdom going into the 14-member group's June 22-23 meeting. Nonmembers Russia and the U.S. back the Saudi proposal.

▶ Two reports on the U.S. housing market are expected to show that sales of previously owned homes and new home construction both rose in May.

▶ Christopher Steele will be deposed in a defamation suit against BuzzFeed filed by Aleksej Gubarev, named in the British ex-spy's Trump-Russia dossier.

▶ South Korean President Moon Jae-in will attend his country's World Cup match against Mexico on June 23 while in Russia for a summit with Vladimir Putin.

▶ Greece is set to finalize its exit from the EU financial aid program by the June 21 Eurogroup meeting in Luxembourg.

▶ The board of the International Monetary Fund will vote on a $50 million line of credit for Argentina at its June 20 board meeting.

▶ U.S. special envoy Jason Greenblatt will join White House adviser Jared Kushner on a trip to Egypt, Israel, and Saudi Arabia to discuss the crisis in Gaza.

■ THE BLOOMBERG VIEW

The Insulin Price Hikes

● Producers should help provide low-tech—and cheaper—versions of the drug to the millions who need it

The researchers who pioneered insulin injections for diabetes sufferers in 1922 were dedicated to making the lifesaving treatment widely available and gave away their rights to profit from the discovery. Yet almost a century later, the medicine is still beyond the reach of about half of the 100 million people around the world who need it. Governments should be asking why–and doing something.

Insulin is still expensive because the three major producers–Novo Nordisk, Eli Lilly, and Sanofi–have been granted patents on the drug as they've incrementally changed it. First they derived the hormone from animals, then from humans, and most recently from recombinant DNA. With each small advance, the price has gone up. The advanced formulations are meant to work faster or longer, but they've been shown to offer little or no advantage over the basic alternatives. Yet they cost almost six times as much. On average, patients pay less than $8 a vial for human insulin and $45 a vial for the analogs.

Nevertheless, in developed countries, doctors are widely prescribing analog insulin. In the U.K., analog insulin accounts for three-quarters of the total supply, up from just 11 percent in 2000. A similar shift in the U.S. has tripled the annual insulin bill since 2002, to $15 billion.

Unfortunately, many doctors in low- and middle-income countries are also favoring analog over human insulin. The World Health Organization has declared that the cost of high-tech insulin outweighs its potential benefit, because governments cannot afford enough of it for all the people who need it. In Iran, where 5 million people have diabetes, buying analogs rather than human insulin costs the government an extra $49 million a year–money that could be used instead to more widely diagnose and treat the disease. (An estimated 35 percent of diabetes cases in Iran remain undiagnosed.) In sub-Saharan Africa, only 40 percent of countries provide insulin at public hospitals and clinics.

Governments could save money by purchasing only simple human insulin from smaller drug companies, but they've been reluctant to challenge the big three in the face of the companies' vigorous marketing. As a first step, governments should arrange for competitive bidding. Nine Caribbean countries have collectively saved money on insulin in this way.

Governments can lower prices further by reducing their own taxes and customs duties on imported insulin. They should also encourage drug companies to create cheaper copies of branded insulins as patents expire over the next 5 to 10 years. The WHO could help by creating a prequalification process to vet potential competitors and guide national regulators as they evaluate and approve products.

Also needed: coordinated efforts to better distribute insulin to avoid the kind of unnecessary shortages that force people to buy higher-priced drugs from private retailers. Ⓑ

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Noisy attacks aren’t hard to find...
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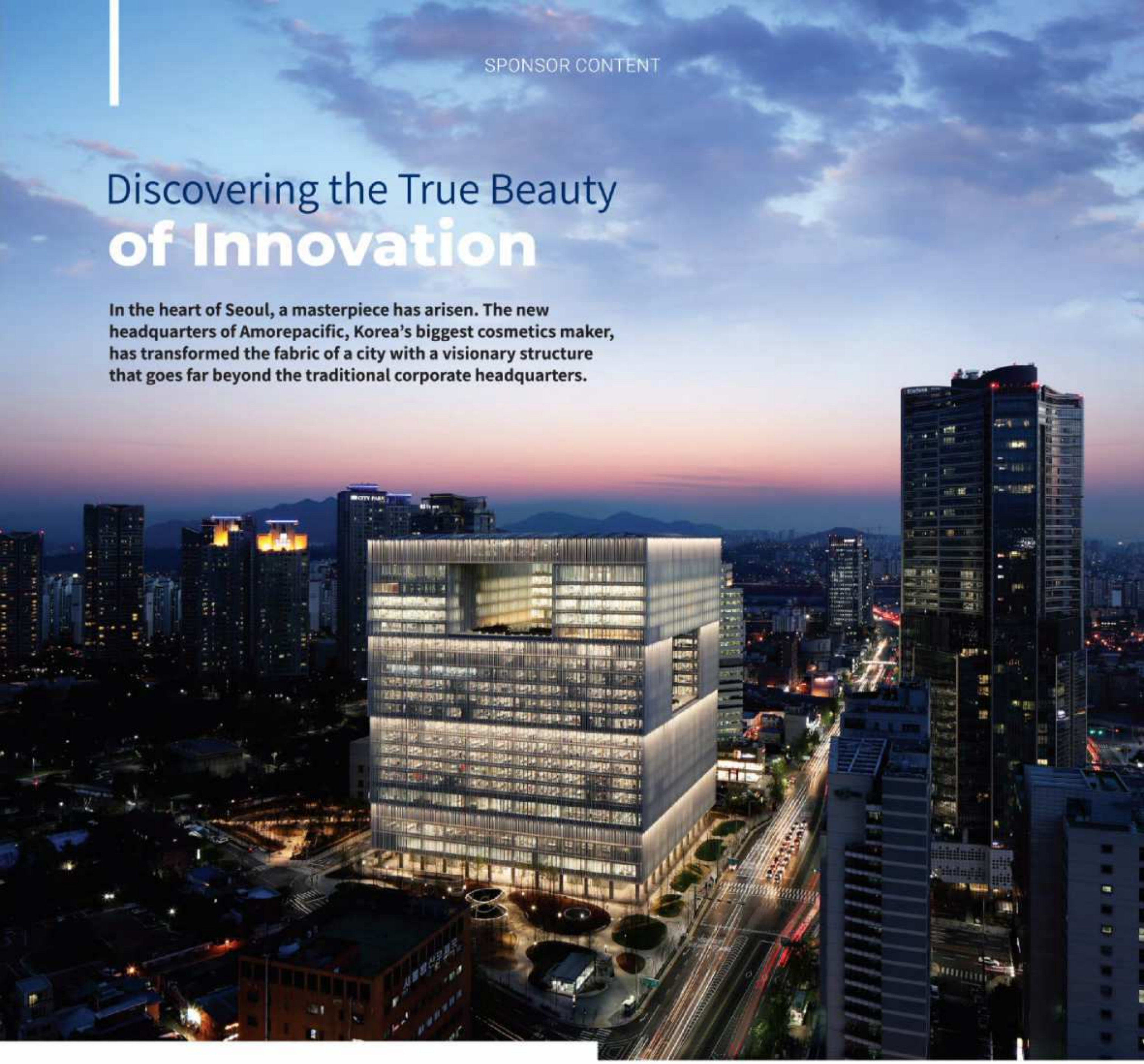
Discovering the True Beauty **of Innovation**

In the heart of Seoul, a masterpiece has arisen. The new headquarters of Amorepacific, Korea's biggest cosmetics maker, has transformed the fabric of a city with a visionary structure that goes far beyond the traditional corporate headquarters.



Amorepacific HQ: An Architectural Marvel

World-renowned architect David Chipperfield and design director Christoph Felger took the Korean white porcelain moon jar—a traditional symbol of beauty—as their inspiration and created an "abstract and gestural" building that embodies Amorepacific's philosophy.

The theme of connectivity runs through the entire structure—and speaks to the company's sense of duty, born of a deep desire to coexist with society.

"I hoped for it to be a place that is open to everyone—a communal space where the company is one as a community, but also where we break boundaries and freely communicate with the wider world," says Amorepacific Group Chairman and CEO Suh Kyungbae.

At the lower levels, an atrium, museum, auditorium, library and childcare facilities connect the building to the community. Above, hanging gardens, a roof terrace and energy-saving innovations connect the structure with nature and the mountains beyond the city. Inside, there is a workplace where all things—people, space and thoughts—are directly connected, with no partitions between people, no walls between executives and employees, no barriers between the company and the world.

A Sense of Space, Ownership and Community

In 1932, Yoon Dokjeong began selling camellia hair oil in her home town of Gaeseong. She made the oil in her kitchen; pure and hand-pressed from camellia seeds. Meticulously crafted, inspired by nature and rooted in the concept of traditional Asian beauty, those humble beginnings inspired her son Suh Sungwhan to establish the company in 1945.

Today, third-generation CEO Suh Kyungbae has taken Amorepacific global, realizing the company's vision to turn the Asian beauty concepts of health, balance, well-being and harmony with nature into brands recognized around the world, like Sulwhasoo, Laneige, Mamonde, Innisfree and Etude House. As the country's pioneering cosmetics company, Amorepacific has spearheaded the "K-Beauty" phenomenon worldwide.

For more than 70 years, Amorepacific has dedicated itself to changing the world through beauty, and today it is a $4.5 billion company with more than 12,000 employees. From her tiny kitchen to the world, Yoon Dokjeong's focus on craftsmanship and dedication to quality remains at the heart of everything Amorepacific does.

The Beauty of Innovation

While Amorepacific is anchored in Asian traditions, the company is committed to creating innovative products that are relevant today and into the future. Being attuned to the needs of modern consumers has helped the company forge new paths of discovery in beauty science—creating not just new trends, but entirely new markets.

Decades ago, the company created the world's first ginseng face cream, the origin of Sulwhasoo. Since the 1960s Amorepacific has been researching and refining the extraction of the active enzymes from this miraculous root. After decades of study, the company's researchers have more recently discovered that ginseng berries, leaves, blossoms and seeds all have their own benefits for the skin. The result is a range of products that set the standard for eco-friendly medicinal herbal cosmetics.

> "The new structure is not like the other high-rise buildings that surround us, which loudly boast their majesty. Instead, it takes on the responsibilities of a space for community, encouraging new cultural inspirations and breathing social vitality in the center of Seoul."

Suh Kyungbae
Chairman and CEO
Amorepacific Group

ILLUSTRATION BY 731

● Global trade operates on trust—and using the loophole of "essential security" erodes the system

● By Peter Coy

Away from the cameras at the Group of Seven summit in Charlevoix, Quebec, Canadian Prime Minister Justin Trudeau was groping for ways to explain to U.S. President Donald Trump that trading with Canada is not a threat to U.S. national security. According to a Canadian official who spoke with the *Toronto Star*, Trudeau brought up the air base at Bagotville where Air Force One had landed. Trudeau told Trump, "Why is Bagotville there? Bagotville is there to protect aluminum smelters that were building American warplanes in the Second World War."

Trudeau's message clearly didn't stick. Trump continued his pattern of being friendlier with America's enemies than with its friends. He called Trudeau weak and dishonest on his way from Canada to a convivial meeting with the brutal North Korean leader Kim Jong Un.

A possible explanation for Trump's behavior is that in his worldview, national security appears to encompass freedom of action. To him, a great nation is unencumbered. Trump seems to be energized by engaging with world-historical characters like Kim, Russian President Vladimir Putin, and Chinese President Xi Jinping. With them, he can paint in bold colors on a big canvas. He shows less enthusiasm for the quotidian work of maintaining alliances. The web of long-standing relationships with countries such as Canada, Mexico, Germany, France, and the United Kingdom hems him in.

This is a real problem, because no law forces sovereign nations to cooperate. They do it because they trust one another. By destroying trust, Trump could do lasting damage to the international order that supports shared prosperity.

There's no better example of Trump's dislike of encumbrances than the U.S. position in a trade case filed by Ukraine against Russia that's wending its way through the World Trade Organization. Russia is invoking its "essential security" to argue that the WTO has no standing to intervene against it. Canada and the European Union, among others, are arguing that essential security should not be a carte blanche for Russia to act as it wishes against Ukraine.

Only one major nation has taken Russia's side in this pivotal case, and it is—you guessed it—the U.S.

To exert pressure on Ukraine—which is battling a Moscow-backed separatist movement—Russia is preventing it from shipping goods to Kazakhstan, Kyrgyzstan, and other nations directly across Russian territory, insisting that they first pass through Belarus. Ukraine says this and other restrictions cause delays, "effectively ban" some commerce, and violate WTO rules guaranteeing freedom of transit for goods.

Lawyers for Russia cite WTO rules that exempt a defendant nation for "any action which it considers necessary for the protection of its essential security interests." The WTO's charter lists three types of actions that qualify for the exemption. The one Russia rests its case on is any action "taken in time of war or other emergency in international relations."

It's ludicrous, of course, to argue that Russia's essential security is threatened by the transit of mundane goods such as malt extract, wallpaper, and steam turbines from Ukraine to Kazakhstan. But Russia says the WTO, according to its own charter, has no right to second-guess it.

You see the problem here. If Russia wins the case—a decision is expected later this year or in 2019—the WTO could become a dead letter. Countries would be able to engage in almost any kind of protectionism by asserting a claim of essential security that would be unchallengeable. "A lot of countries would feel fairly emboldened," says Jennifer Hillman, a professor at Georgetown Law Center who was a member of the WTO's seven-person Appellate Body.

In a filing, Canada argued that a country can't invoke essential security and then simply stroll off as Russia wants to do: "A complete lack of substantiation would be grounds for finding that use of the Article is not justified." The European Union went further, saying "the invoking Member bears the burden of proof" that its trade-limiting action was both necessary and applied in good faith.

In contrast, lawyers for the U.S. say Russia's argument is airtight. "A dispute involving essential security is political in nature and, therefore, beyond the proper authority and competency of the WTO to assess," they insist in their filing. The WTO panel asked the Americans if a country invoking essential security should at least have to explain itself. Not at all, the U.S. says: "There is nothing in the text of Article XXI that requires any elaboration on the part of the invoking Member."

Why would the U.S. side with Russia? Obviously because the U.S. wants the same kind of freedom from irksome trade rules that Russia seeks. The U.S. has claimed essential security as a defense against trading partners' complaints over its steel and aluminum tariffs. Its chance of winning will be hugely better if Russia wins its case.

The shame of this fight between allies is that it tarnishes the Trump administration's legitimate concern that U.S. security is jeopardized by new technologies and geopolitical rivals. Daniel Coats, director of national intelligence, testified to the U.S. Senate Select Committee on Intelligence last year that Russia is "a full-scope cyber actor that will remain a major threat to U.S. government, military, diplomatic, commercial, and critical infrastructure." China, he testified, "will continue actively targeting the U.S. government, its allies, and U.S. companies for cyber espionage." Coats also cited terrorism, new nuclear weapons, space warfare, and transnational organized crime. And it's not just the U.S. that's at risk. Developing nations suffer far more violence from terrorism and organized crime than developed nations do. ▶

Gross Domestic Product, 2016

Average imposed tariff rate, 2016

World	4.80%
Japan	2.55
European Union	1.96
U.S.	1.67
Canada	1.56

◀ But fighting threats to national security requires choosing targets wisely. It makes sense to cast a wary eye on Chinese attempts to acquire advanced U.S. technologies that could be weaponized. Also, punishing ZTE Corp., the Chinese telecom equipment company that violated sanctions on Iran and North Korea and then rewarded the executives involved, was a step in the right direction—until Trump unilaterally decided to lighten the punishment at the request of China's Xi.

In contrast, putting tariffs on metal from reliable nations doesn't fit the bill. Even Defense Secretary James Mattis wrote in a February memo that unfair trade practices weren't harming the Pentagon's ability to get the steel and aluminum it needed and opposed blanket tariffs that would have "a negative impact on our key allies."

Advocates of protection for U.S. steel and aluminum producers warn of a World War III in which U.S. battleships and aircraft carriers are sunk and new ones can't be built because the steel for them can't be imported from Europe or Japan or South Korea, blocked by an unnamed enemy who controls the shipping lanes. As an aside, it's hard to imagine that World War III would drag on long enough, without going nuclear, for the U.S. to have time to build replacement ships, tanks, and planes from freshly produced steel and aluminum. But even if that happened and the sea lanes were closed, the U.S. would be able to get metal from Canada and Mexico—making the national security case for tariffs on them hard to fathom. Even Scott Paul, president of the Alliance for American Manufacturing, which supports protection, says the administration "has made some missteps." Says Paul: "Ultimately engaging Mexico and Canada in some sort of alternative arrangement is the right thing to do. I hope that's where this lands, and I hope that it gets there quickly."

To the hawkish advisers surrounding the president, such as Peter Navarro, director of the White House National Trade Council, "national security" has become the phrase that must win every argument. It's what a bridge player would call a trump card: A lowly 2 of diamonds can defeat an ace of spades if diamonds are trump. Protectionists take advantage by picturing their industries as essential to the U.S. "industrial base." When the U.S. Navy announced it was dropping woolen peacoats from sailors' sea bags, switching to synthetic parkas, the House Armed Services Committee's Readiness Subcommittee expressed concern that the Navy failed to consider "the impact to the nation's domestic textile industrial base." As the 18th century essayist Samuel Johnson said, "Patriotism is the last refuge of the scoundrel."

After the disaster of the G-7 meeting in Charlevoix, trade experts are asking themselves how much worse things can get. Simon Lester, associate director of the Cato Institute's Stiefel Center for Trade Policy Studies, says it's possible that "the whole system unravels," but says he considers that unlikely. The reason: It's in no one's interest. "Even if you're Peter Navarro and you think tariffs work, you recognize that you can't do this in every industry."

Game theorists look at global trade as a system that can have multiple equilibriums. In a good equilibrium, trade barriers are low and the world benefits from lower prices and enhanced variety. Workers who lose their jobs because of imports are retrained or financially supported with some of the gains society gets from freer trade. In a bad one, tariff walls rise so high that each country is like Robinson Crusoe, making everything it needs in a costly and inefficient way.

The purpose of the WTO is to nudge the world toward a good equilibrium. A new book called *The Republic of Beliefs*, by Kaushik Basu, a Cornell University professor and former chief economist of the World Bank, explains how that can happen. Let's say people are driving on both sides of the road and crashing; the government can make everyone better off simply by decreeing that everyone must stay to the right. (Or left.) The side that's picked becomes a "focal point" that everyone believes everyone else will choose. It is this belief, not ink on paper, that makes the system work, Basu argues. He asserts that the "might" of the law is "rooted in nothing but a configuration of beliefs carried in the heads of people in society."

Norms take hold slowly. Basu attributes a witticism to former British Prime Minister Gordon Brown: "In establishing the rule of law, the first five centuries are always the hardest."

Likewise with trade. The WTO has no real enforcement power. It can only convene and guide and inspire nations to coordinate around a better equilibrium. In 1947, when the charter of a proposed International Trade Organization was being written, a Dutch delegate expressed concern that the essential security clause would become a pretext for protectionism. The chairman, Erik Colban of Norway, responded that "the atmosphere inside the ITO will be the only efficient guarantee against abuses of the kind to which the Netherlands Delegate has drawn our attention." Atmosphere seems to be a thin substance on which to rely for protection of the global trading system. Ultimately, though, it is all we have. Ⓑ

DATA: WORLD INTEGRATED TRADE SOLUTIONS/WORLD BANK

A Big

● AT&T's victory leaves Trump's quest for media subjugation, not to mention populist credibility, in tatters

On June 12, U.S. District Judge Richard Leon approved AT&T Inc.'s $85.4 billion acquisition of Time Warner Inc., rejecting the federal government's ham-handed effort to block the deal. Leon ruled that the government had failed to make its case that the combination of AT&T, the country's biggest pay-TV distributor, with Time Warner, the owner of CNN, HBO, TNT, TBS, and Warner Bros., would hurt competition and lead to higher prices. The judge approved the deal with no conditions.

It was an ignominious outcome not just for Makan Delrahim, Trump's antitrust chief at the U.S. Department of Justice, but for anyone still clinging to the faint hope that Donald Trump's arrival in Washington might usher in an era of populist antitrust crackdowns. Far from dealing a decisive blow to the monopolistic creep of corporate America, the government's move against AT&T will probably have the opposite effect. Consolidation will accelerate. Big Media will grow bigger.

Not long ago, Trump was promising to reverse the trend. During the 2016 presidential campaign, he would occasionally train his populist spray gun on AT&T's pending purchase. There was already too much power concentrated in the hands of too few, he told crowds. This led to the type of insider corruption he said he was fighting against.

It was almost possible during such moments to imagine Trump, if elected, reinvigorating America's once-barrel-chested, monopoly-busting tradition. Perhaps he would travel to Washington with a well-whiskered, wild-eyed Steve Bannon, visions of bearlike Theodore Roosevelt dancing in their heads, and savagely maul mergers with the relish with which Trump once disemboweled boardroom supplicants on *The Apprentice*. First, AT&T would come to heel. Then so would the rest of the greedy globalists.

Nope.

The Justice Department filed its suit to block the deal in November 2017. AT&T's lead attorney, Daniel Petrocelli, quickly struck back, calling attention to a televised interview that Delrahim had given months earlier when he was still working in the private sector. During the interview with BNN Bloomberg, Delrahim said that because AT&T, a content distributor, was proposing to buy Time Warner, a content supplier, the deal was a "vertical merger"—as opposed to a "horizontal merger," in which two direct competitors team up. The last time the feds had tried to block or dissolve a vertical merger was in 1977, when the Justice Department took on Hammermill Paper Co. and lost. Delrahim said that while the sheer size of the deal would attract scrutiny, "I don't see this as a major antitrust problem."

So what changed? In speeches last fall, Delrahim said that the department was taking a new approach toward mergers. Trump's Justice Department would rely less on "behavioral remedies," which require or restrict specific actions on the part of the combined companies for a set

Deal

period of time following the merger. Such remedies, Delrahim argued, were often ineffective and created a pseudo-regulatory process that the courts were ill-equipped to enforce. Instead, he said he favored "structural remedies," in which the merging companies would be required to divest problematic divisions or product lines to gain approval. Before filing suit, Delrahim's team discussed two potential structural remedies with AT&T: selling DirecTV, its satellite TV provider, or forgoing the acquisition of Turner Broadcasting, Time Warner's division of pay-TV networks that includes CNN, TBS, and TNT. AT&T had declined to do either.

As the suit moved toward trial, Petrocelli and other AT&T advocates went on to suggest that the government's true motivation was Trump's personal grudge against CNN, a major asset within the Turner Broadcasting portfolio. Throughout his campaign and since becoming president, Trump has called the channel "fake news," "fraud news," "garbage journalism," "dishonest," "unwatchable," "distorted," "sick," "a great danger to our country," and "the enemy of the American people." The name-calling, of course, is just one tactic in his media disparagement routine, and CNN is not the only target. He's blacklisted news organizations from campaign events. He's threatened to yank broadcasters' licenses. He's fantasized about changing libel laws to make it easier to sue reporters. He's mused about revoking White House press credentials. He's mocked the physical disabilities of one reporter, claimed that a TV news anchor was suffering from botched plastic surgery, and invoked the menstrual cycle of another.

But could the president actually manipulate federal antitrust enforcement as part of a strategy for controlling the press? It's been done before. In 1963, according to an account in Robert Caro's *The Path to Power*, President Lyndon Johnson sized up a pending bank merger in Houston and saw a political opportunity. The president of one of the banks was also the head of the *Houston Chronicle*, one of the most influential papers in Johnson's home state. Johnson reached out to the publisher-banker and offered to disarm the government's opposition to the bank deal if he would guarantee in writing that the *Chronicle* would henceforth shower Johnson in favorable coverage. The publisher-banker acquiesced.

President Richard Nixon carried on the tradition. In 1971, Attorney General John Mitchell was preparing to file an antitrust suit against the three largest TV networks (ABC, CBS, and NBC) over their monopoly ownership of prime-time TV shows. Nixon, however, decided to hang fire. "If the threat of screwing them is going to help us more with their programming than doing it, then keep the threat," Nixon was recorded telling an aide in the White House. "We don't give a goddamn about the economic gain. Our game here is solely political."

Was Trump playing a similar game with AT&T? The White House and Justice Department have repeatedly shot down the suggestion. But Trump did seem to be dangling the company on a string. In the early days of the administration, AT&T Chief Executive Officer Randall Stephenson cozied up to Trump. He described himself as one of Trump's ▶

"I don't see this as a major antitrust problem"

◀ "biggest defenders on public policy," met with the president-elect at Trump Tower, and praised him to investors. Behind the scenes, AT&T began paying $50,000 a month to an obscure limited liability company founded by Trump's personal lawyer, Michael Cohen. AT&T said it hired Cohen's firm for insight on Trump administration views on issues such as antitrust enforcement and corporate taxation.

Throughout the courtroom proceedings, the government struggled to tell a convincing story about the risks the merger posed for consumers. Several witnesses testified that the combination of AT&T and Time Warner would create an unstoppable behemoth. This merged monster could favor its programming over shows from other entertainment companies. Or it could restrict other cable, satellite, or web-TV distributors from gaining access to its top networks—thereby jeopardizing the innovation of streaming-TV services, such as Netflix Inc. or Hulu Inc., that are delivered to consumers via the web. It was all very bad, the government argued, and ultimately would cost consumers more than $400 million a year.

But weeks of testimony turned up little in the way of damaging revelations about AT&T's plans. Again and again, representatives of AT&T and Time Warner coolly downplayed the government's concerns, testifying that withholding Turner programming would be self-defeating because its profitability depends on wide distribution. From the start, AT&T said it would be happy to allow arbiters to resolve any disputes that might arise during fee negotiations with rival distributors. The acquisition, they argued, would give AT&T better insight into how its customers prefer to interact with TV shows and advertising—ultimately allowing AT&T to design cheaper, more efficient, more satisfying experiences for its millions of customers.

Meanwhile, Petrocelli effectively attacked the credibility of the government's gloomy projections. He argued that even if the government's flawed analysis were correct, the merger would result in a price increase of only 13¢ per subscriber per month—which he called "statistically indistinguishable from zero." And by the time he was done, the government's case looked statistically indistinguishable from roadkill.

Trump's promises to curb the dangerous influence of Big Media haven't progressed much beyond the Justice Department's actions against AT&T and Time Warner. If anything, the government has tilted in the opposite direction a year and a half into his presidency. Since Trump's arrival in D.C., the Federal Communications Commission has proved as committed to populist media reform as the farm-to-table dining community is dedicated to Choco Tacos.

Under Ajit Pai, the former Verizon Communications Inc. lawyer Trump appointed to head the FCC, the commission has been busy steadily loosening the nation's rules restricting media ownership. The changes have only encouraged more consolidation, such as Sinclair Broadcast Group Inc.'s pending $3.9 billion acquisition of Tribune Media Co.—the completion of which, critics argue, will further crimp local TV news reporting across the country.

Media watchdog groups—which have long been concerned that the self-interest of powerful corporate interests would someday stifle independent and investigative journalism—have watched in alarm as the FCC has rolled back the so-called net neutrality rules. The changes, critics say, have given big conglomerates more power than ever to determine what information and programming reaches consumers.

At the same time, the long-simmering concerns about media consolidation have been joined by new anxieties about the consolidation of power in the far larger, far richer tech giants (Apple, Amazon.com, Facebook, Google, Microsoft) and the vexing societal problems—online abuse, data theft, privacy violations, election interference, and conspiracy mongering, to name a few—radiating from their most successful media products.

Part of AT&T's rationale for acquiring Time Warner is that to compete successfully with the tech megalodons, the company must get bigger. Virtually every media and telecommunications conglomerate these days is making the same justification: Silicon Valley is coming for our dinner, and if we don't get larger, we'll be left fighting over the scraps.

That may be true. But the argument that to survive amid monopoly-size behemoths you have to first achieve their monopoly-size stature will hardly placate the growing chorus of economists who believe that Silicon Valley giants have already grown too powerful and might need to be broken up. How the loss to AT&T will affect the Justice Department's appetite for fighting monopolistic trends in the tech world remains unclear.

To date, Trump's stance on technology consolidation looks a lot like his position on media consolidation: wildly inconsistent and personal. Throughout the campaign, he often singled out Amazon.com Inc.—whose chairman and CEO, Jeff Bezos, is the owner of the *Washington Post*—as a company in need of stronger antitrust scrutiny. At one point, during an appearance on Fox News, Trump told Sean Hannity that Amazon has a "huge

● Announced deals facing antitrust scrutiny

Bidder: CVS Health
Target: Aetna
Announced: October 2017

$68b

Bidder: Cigna
Target: Express Scripts
Announced: March 2018

$54b

Bidder: Comcast
Target: 21st Century Fox assets (topping an earlier $52 billion bid by Walt Disney)
Announced: June 2018

$65b

antitrust problem." More recently, he's taken to attacking the company on Twitter, suggesting that the U.S. Postal Service should be charging it more for deliveries. The antitrust division's assessment of Amazon shouldn't depend on the nature of the *Washington Post*'s coverage of Trump. Yet even after this administration's loss to AT&T, it still might.

Meanwhile, any kind of sustained antitrust pressure looks less and less likely under the current administration. Far from wilting under the Washington spotlights, AT&T and Time Warner executives seemed energized. They repeatedly used their time in court to promote AT&T's bigger-is-better vision for the future of wireless communications and home entertainment. Rather than stifling web-TV services, they argued that the merger would spur innovation.

At one point, CEO Stephenson went so far as to unveil a streaming-TV product from the witness stand. He explained that the online bundle of TV channels, called AT&T Watch, wouldn't include any sports and as a result would cost only $15 a month. AT&T wireless subscribers who have an unlimited data plan, he testified, would get it for free. What started as an example-setting populist attack by the Trump administration turned out to be a high-profile, government-sponsored marketing event for AT&T. —*Felix Gillette, with Scott Moritz and Erik Larson*

THE BOTTOM LINE The approval of AT&T's acquisition of Time Warner is both a black eye for the Justice Department and likely to spur further media consolidation.

Making Billions Off China's Worried Parents

● TAL Education tutors kids for the tests that determine a child's future on the mainland

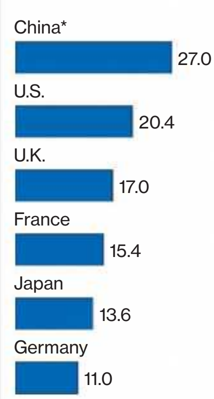
The weekend ritual for many American kids includes hanging out with friends, sports, cruising the mall, or honing their online gaming skills in *Fortnite*. Steven, a serious-looking 9-year-old public school student in Beijing, spent a recent Friday evening in a classroom at a tutoring center operated by TAL Education Group, cramming mathematics drills. On Saturday he was back for extra instruction in English and Chinese. "He likes the environment at TAL, where classes are lively and students get to play little games while learning," says his mother, Zhao Liu, a nurse in a Beijing military hospital. "His father and I would never force him to study."

No one has to, because even elementary school students in testing-obsessed China know the importance of doing well on the dreaded national exams. Those who do poorly can end up in dead-end livelihoods with no chance of college admission. That's why many parents are gladly willing to make the investment in time and money—Steven's folks spend about 20,000 yuan ($3,124) a year for his tutoring—to guarantee a bright future for their offspring. That desire has also turned TAL, the nation's largest tutoring outfit, into a major money spinner. But that position has been put at risk by the Chinese government's crusade to cut back on academic stress and foster childhood creativity. A primary target: the kind of extracurricular drilling TAL provides.

TAL's initials stand for Tomorrow Advancing Life, a none-too-subtle nod to one of the biggest anxieties of middle-class families in the test-based world of Chinese education. Combining in-person coaching and online instruction that lets teachers lecture across the country to multiple classrooms equipped with large video monitors, TAL expects this year to tutor 1.9 million students—double the enrollment of the New York City public school system.

The company operates 600 sites, and its online and in-person enrollment has been rising at a 49 percent annual clip. It had revenue of $1.72 billion in its fiscal year ended February 2018. By June 12, TAL's stock had soared 27-fold since its October 2010 initial public offering, giving it a market value of $25 billion. That was more than three times that of London-based Pearson Plc, the world's largest education services company. Its fortunes shifted on June 13, ▶

● Average number of hours 15-year-old students studied out of school per week in 2015



*INCLUDES ONLY BEIJING, SHANGHAI, JIANGSU, AND GUANGDONG; DATA: ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

◀ when Muddy Waters Research co-founder Carson Block, whose firm in the past has wagered against the value of several Chinese companies, said TAL's profits weren't as strong as reported. A TAL spokesperson didn't immediately respond to a request for comment, but the company's shares fell as much as 16 percent that morning.

No one had profited from the stock's rise more than Zhang Bangxin, TAL's co-founder, a 37-year-old former math tutor who's become one of China's richest people: His TAL shares are worth about $7 billion. Zhang's parents ran a noodle and dumpling-wrapping shop in rural Jiangsu province. He was a stellar student, enrolling in a life-sciences doctoral program at prestigious Peking University. He started tutoring to ease his parents' financial burden, then dropped out to build a tutoring business. Zhang now presides over his testing empire from an office tower in Beijing's Zhongguancun district, home to tech startups.

Ivy League strivers in the U.S. may think they have it tough with their Advanced Placement tests and résumé-polishing community service. But they have nothing on the offspring of China, where a ticket to prosperity boils down to two exams that have been known to induce breakdowns or even suicides: a high school entrance exam, the Zhongkao, and a college test, the Gaokao. They determine not only the schools that students attend but also whether they go to college or vocational school.

To woo customers, Zhang has taken a classic marketing approach: an unconditional money-back guarantee. Parents can audit the sessions freely and get refunds anytime they aren't satisfied. "We wanted to make sure customers always hold the knife handle and can force us, from teachers to management, to act with extreme caution," he says in an interview in April.

TAL's tutoring encourages students to practice the kinds of questions they'll face on China's exams. On a Friday evening in April, for instance, 8- and 9-year-olds descend on a 16-story Beijing apartment building where numerous units have been turned into tutoring spaces. A teacher delivers her math lecture online via life-size video screens. "Did you watch the Winter Olympics?" the bespectacled instructor asks. "What is the average if three divers received a 10, and two a 9?" Fidgeting students, dragged here by mothers and fathers and the occasional grandparent, shout out their answers, even though the teacher can't hear them.

China's Communist Party leaders, including President Xi Jinping, worry that the nation's testing obsession is crushing the creativity that could yield China's own Steve Jobs. Leaders also say they want to keep wealthier families from gaining an edge through after-school enrichment. In February the Ministry of Education tightened tutoring licensing, banned privately operated ranking tests and competitions, and prohibited courses considered overly advanced for lower grade levels.

The measures aimed to eliminate one of TAL's profit centers: training for the Mathematical Olympiad, an intense competition for students up to

● Zhang

◀ age 20. Victories helped students gain admission to coveted secondary schools. They were so central to TAL's success that the company promoted them in its IPO prospectus.

At the time of the antitutoring edict, Nicky Ge, an analyst with China Renaissance Group, said the initiative could lower demand for TAL's services, especially in math, which made up more than 60 percent of the company's revenue last year. Even so, TAL shares are up more than 30 percent this year—even after the Muddy Waters challenge. Investors may be agreeing with Zhang, who says the government intervention could help TAL as tighter regulation drives smaller companies out of the market.

Many within China's educational community say parents are unlikely to abandon a hard-charging academic culture that dates to China's 1,300-year-old civil service system, in which officials are chosen based on competitive exams. "I provide high-quality education to people who demand it," Zhang says. "I don't create the demand."

Besides, despite all the rhetoric about reducing student stress, so far the government hasn't eliminated the main source of parental anxiety—the high-stakes exams for high school and college. Says Otis Shi, an education consultant and a director at Gaosi Education, a Beijing-based tutoring company: "The reality is that scores are all the yardstick." —*Hui Li and Dexter Roberts*

THE BOTTOM LINE Students in China must do well on national tests to move into the top academic high schools or to be admitted to college programs. That's made tutoring a big business.

Getting a Kick From World Cup Stickers

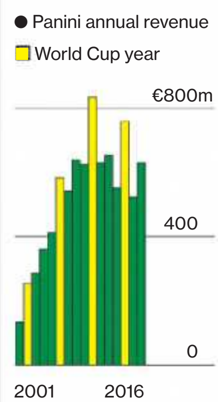
● Italian publisher Panini must grapple with a surge in sales when the tourney rolls around every four years

Fabrizio Melegari admits he's one of the few people in Italy looking forward to the World Cup. Sure, along with the rest of the country, he was heartbroken when the Azzurri—the national soccer team—lost its chance to participate in this summer's tournament after a 0-0 tie with Sweden on Nov. 13. "The fan inside each of us got hit hard," says Melegari, editorial director at Panini SpA, the maker of baseball-card-like World Cup stickers collected by the soccer-besotted worldwide. "But from a commercial standpoint, it's not hitting our business at all."

The company's sales surge every time the World Cup rolls around as kids (and often the former kids known as parents) buy hundreds of stickers to paste into albums. The 80-page booklet is free, but the stickers cost about $1 for a packet of five. Schoolyards in Europe and Latin America become de facto trading floors for Panini stickers where kids swap duplicates for players they need to complete their album. Anyone lucky enough to get no duplicates (read: nobody) would spend almost $150 to get the 681 stickers, but most will pay more than $300 even after swapping with friends. "It's an expensive business," says Luca Masse, 50, a surveyor who says he's managed to put together a full set for the past half-dozen World Cups. "If you buy a few packets at a time, you'll never finish the album."

Panini is part of a universe of companies that feed off the global competition every four years. Shoe and athletic-wear makers such as Adidas, Puma, and Nike all ring up substantial sales of special shoes and team jerseys created for the tournament. Watchmaker Hublot SA, the event's official timekeeper, introduces soccer-themed models including this year's Big Bang Referee (ostensibly for use by the officials calling the matches) offering digital links to scores and other game data. And McDonald's Corp. has promotions tied to the competition, including special cards for Panini albums. "From a sponsor's perspective, to be associated with the most popular game in the world is very attractive," says Tim Bridge, a director of the sports business group at consulting firm Deloitte LLP.

Few are as reliant on the tournament as Panini. Although the company doesn't release financial ▶



DATA: PANINI

ILLUSTRATION BY LUNA MONOGATARI. ZHANG: COURTESY TAL

◀ details beyond annual revenue, that figure has climbed by more than a third in each of the past four World Cup years and typically drops in the year following the quadrennial competition. Sales for 2014, for instance, jumped 38 percent, to €758 million ($917 million), then fell to €522 million in 2015. In a World Cup year, the company's global workforce of 1,100 expands by about 20 percent. At Panini's headquarters in Modena—a city of 180,000 on the plains south of Milan best known as the home of balsamic vinegar—production staff doubles, to about 240 workers. For six months prior to the competition, they feverishly cut the stickers from newspaper-size sheets and slot them into machines that mix them randomly and seal them inside the packets. By the time the first ball is kicked, more than 90 percent of the stickers will have been sold. "You have to be incredibly flexible and fast," says Melegari. "If you don't have stickers, kids will come back once or twice, OK, but by the third time you've lost them."

To reduce its dependency on the World Cup, Panini has diversified far beyond soccer. In 1961 the company started producing albums and cards—at the time you had to supply your own glue for pasting them into place—with a booklet on the Italian pro league; it produced its first World Cup album for the 1970 tournament in Mexico. In recent years it's added more entertainment series, making albums and stickers tied to dozens of titles featuring, for example, Disney characters, Harry Potter, and Spider-Man—a legacy of the company's ownership by Marvel Entertainment LLC in the 1990s.

As for Italy's failure to make it into the competition, collectors say this year's album will be extra-valuable without Panini's home squad—the first time since 1958 that the team hasn't qualified. For Melegari, it's just business. "In the past we've had to publish the World Cup album without France, without England," he says. "In those countries it meant a lot, but on an overall basis, there's always one big team missing." —*David Rocks and Chiara Albanese*

THE BOTTOM LINE In World Cup years, Panini's revenue typically jumps by more than a third as kids and parents worldwide snap up its baseball-card-like stickers and albums in which to put them.

▲ Cutting and packing stickers in Modena

COURTESY PANINI

Exxon Doubles Down on Oil

● As rivals embrace renewables, the energy giant is betting on continued crude demand

In the late 19th century, inventors including Thomas Edison created electric lighting that all but ended demand for kerosene, then the biggest product made from petroleum. Oil magnate John D. Rockefeller, the forefather of Exxon Mobil Corp., was unmoved, seeing any price dip as a chance to buy up competitors.

"We must try and not lose our nerve when the market gets to the bottom as some people almost always do," the founder of Standard Oil instructed his senior management in 1884. "We will surely make a mistake if we do not buy."

More than 130 years later, with renewable energy growing and electric vehicles threatening the future of gasoline-powered cars, the strategy of Exxon, Standard Oil's biggest successor, is largely the same: double down on oil.

Speaking at his second Exxon annual meeting as chief executive officer in late May, Darren Woods used the kerosene story as an example of how the company adapts over time. "Society's needs evolve, and so do we," he said, as he positioned Exxon as part of the solution to what he calls the "risk of climate change." But Woods in an interview says the company's investment dollars will follow Rockefeller's bet-on-what-you-know mantra.

At a time when most of Big Oil is restraining spending, in part because of uncertainty over the future of energy markets, Exxon plans to boost expenditures every year from now until 2025. It wants to invest a total of more than $200 billion, almost all on traditional oil and gas megaprojects

◀ around the world, from Brazil to Papua New Guinea. The company has no plans to follow global rivals such as Royal Dutch Shell, Total, and BP into wind, solar, or battery storage.

"It's about finding the advantaged barrels, the profitable barrels, the barrels that we'd be happy with, irrespective of where we're at in the price cycle," Woods says.

The way the Exxon chief sees it, the world's energy consumption is growing at such a fast rate that even in the unlikely scenario that all cars are electric in 2040, oil demand would be the same then as it was in 2013. So investing when others are pulling back should pay off, he says.

The risk, of course, is that Exxon gets caught on the wrong side of history, producing fossil fuels that consumers don't need, that governments don't want, and that are a major cause of climate change. Those prospects have made many investors wary. "If you look back historically there have been a lot of industries that have disappeared because change has swallowed them up," says Brian Rice, a portfolio manager at California State Teachers' Retirement System, which manages $225 billion including Exxon shares. "I can't imagine oil and gas going away completely, but it's evolving."

None of the majors detail their spending on renewable energy, but the difference in their strategic positioning is marked. Royal Dutch Shell Plc has pledged to invest in wind projects in the Netherlands. It plans to offer hydrogen refueling and electric car charging stations and will supply power to retail customers in the U.K. BP Plc is investing in solar, and Total SA in battery manufacturing. Norway's state-controlled oil company recently changed its name to Equinor ASA from Statoil to indicate its post-petroleum future.

Exxon has no expertise in renewables, Woods says, so despite the role they have in the world's energy mix, the company won't be investing in them. Its renewable efforts are largely focused on developing proprietary technology in-house, including an algae-based fuel that could power heavy-duty vehicles.

"Society has aspirations for economic growth, reliable and affordable energy, and environment protection," Woods said at the annual meeting. "We see our role as helping close the gap between what people want and what can be responsibly done."

Higher long-term spending on traditional projects isn't what investors want now, and it's evident in Exxon's stock market performance. Shares are down 2 percent over the past three years even as Brent crude, the international benchmark, has climbed 19 percent. And now the company is close to the once unthinkable—losing its position as the world's biggest publicly traded oil company. Its market value lead over Shell has narrowed to about $55 billion, from $128 billion a year ago.

"The market wants disciplined spending, they want return of cash flow, and, effectively, Exxon is off-cycle," says Mark Stoeckle, who manages $2.4 billion including Exxon shares at Adams Funds in Boston. "Exxon is spending. It's spending more than the other integrated Big Oil companies."

Exxon's capital expenditures will rise roughly 40 percent by the early 2020s, to about $33 billion a year. By contrast, Shell's spending is remaining at about $27 billion annually, while Chevron's will top out at about $20 billion. Shell and Chevron have been open about their intentions to return money to investors through share buybacks. Woods says Exxon will only do so if there's enough cash left after its investment in new oil and gas production.

The key areas of focus are offshore oil drilling in Brazil and Guyana, producing and processing liquefied natural gas in Mozambique and Papua New Guinea, and shale oil and gas production in the U.S. Permian Basin. "Everyone, if they had the investment opportunities that we have, they would be progressing those investment opportunities," Woods says.

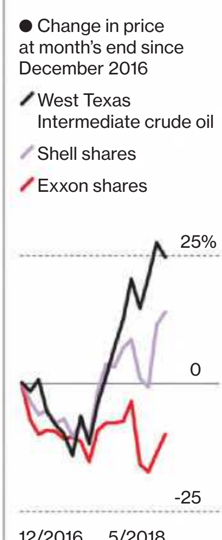
His plan is in part borne out of necessity, because major investments in Canada, Russia, and the U.S. over the past decade have sputtered. Exxon spent $35 billion on U.S. gas producer XTO Energy Inc. in 2010 just as prices peaked and has invested $16 billion in Canada's Kearl oil sands project since 2009—only to write off much of the oil reserves.

The landmark exploration deal the company signed with Russia in 2013 was supposed to take up the slack, but it was caught behind a wall of sanctions and later abandoned. As a result, Exxon's production has dropped five of the last six years.

Woods's new projects should reverse that trend, increasing production by about 25 percent, to 5 million barrels a day, by 2025, he says. That would be Exxon's highest-ever production since its 1999 merger with Mobil—just in time for the peak in global oil demand many analysts are predicting sometime after 2030.

"Other companies' returns will go up faster than theirs because they're weighed down by this" capital expenditure, says Kevin Holt, who helps manage $934 billion at Invesco Ltd. in Houston. "They're having to invest to make up for errors of the past." *—Kevin Crowley*

THE BOTTOM LINE Exxon is spending to increase its oil output 25 percent by 2025. That would make it crude-rich at about the time many analysts see global demand approaching its peak.



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Thou Shalt

Not Kill

● Nuro says its driverless delivery cars will protect people at all costs

COURTESY NURO

June 18, 2018

Edited by Jeff Muskus

Businessweek.com

In an abandoned lot on the outskirts of Sacramento, R1, a domed gray vehicle half the size of a Toyota Corolla, is practicing driving itself. It stops at stop signs, yields to people, and handles sharp turns, as other self-driving vehicles do on test courses in Silicon Valley, Detroit, and China. But R1, made by a startup called Nuro, doesn't need to be as good. It can make a jolting brake if it sees something on the road or cruise untroubled over a small bump—wrinkles that companies building autonomous taxis work tirelessly to remove. Nuro spent less time on this, because its robots aren't designed to ferry people. "A lot of those problems can be solved when you remove the passenger," says co-founder Dave Ferguson. "The pizza doesn't care if you're going a little slower."

Almost every company making self-driving cars, including Alphabet's Waymo, General Motors, and Ford Motor, says the second move will be delivery vehicles. Nuro, whose co-founders spent years on Waymo's car project when it was still part of Google, is focused on delivery first. Without passengers, an R1 doesn't need to worry about saving riders, so it can swerve out of the way to avoid a person, even if that's more dangerous for the bot. Worst case, in a collision, Ferguson says, several inches of compressible foam covering the rounded front bumper will soften the impact. While R1 maxes out at 25 mph, Nuro says it expects that top speed to climb.

At about 74 inches tall and 1,500 pounds, the electric vehicle looks a bit like a massive toaster on wheels, with two doors carved into a monochrome frame that resembles stainless steel. "It could be worse," Ferguson says. An Audi AG exec once panned Google's early driverless car as an "ugly potato." A small central console holds a camera that can spot someone approaching. Seven more cameras line the top of the robot, which is also packed with radars and lidars.

For the demo, co-founder Jiajun Zhu opens an app and makes a delivery request, placing a digital pin on his location as though he's ordering an Uber. R1 makes its way toward him, stopping right at the curb; when Zhu taps a button on the app, two doors flip up to reveal compartments for pizza, packaged food, and whatever else the co-founders think you might want a robot to bring you. It carries 12 grocery bags; Nuro says the next version, planned for commercial release later this year, will hold 20. The company is in talks with restaurants and retailers to provide delivery services, but it wouldn't name any.

◀ Co-founders Ferguson (left) and Zhu experimented with facial-recognition for their delivery bot, but found it freaked people out too much

DAVID PAUL MORRIS/BLOOMBERG

Ferguson and Zhu have remained fairly quiet since leaving Google in 2016. They hired Russell Smith, who, like Zhu, was among the early members of Google's self-driving effort. Early on they talked about making a home robot, but they've set that idea aside for now. "We might still," Ferguson says. While at Google, he and Zhu helped set off a multibillion-dollar corporate race to make self-driving cars, one that Waymo still leads.

"The pizza doesn't care if you're going a little slower"

They'll have to outpace a competing robot from Alibaba Group Holding Ltd. and an expected rival service from Amazon.com Inc. It's a no-brainer to back some of the select few who've built self-driving cars before, says Reid Hoffman, a partner at venture firm Greylock. His company led a $92 million financing round for Nuro, which now has more than 100 employees.

Without human labor costs, Nuro's robot has a better chance to make on-demand delivery profitable than the string of failed startups that have littered Silicon Valley in recent years, says Arun Sundararajan, a business professor at New York University who specializes in the economics of digital goods and networks. But it will take a little getting used to, he says, for consumers.

Nuro's co-founders acknowledge that they've had to learn some lessons in that regard. In field tests they've experimented with asking users to upload a faceprint so the vehicle's facial-recognition software could open the delivery doors. "That one I thought would be the coolest—sort of this magical situation where you walk up and it opens," Ferguson says, but he tabled the feature. "Turns out, people were much less comfortable with that."

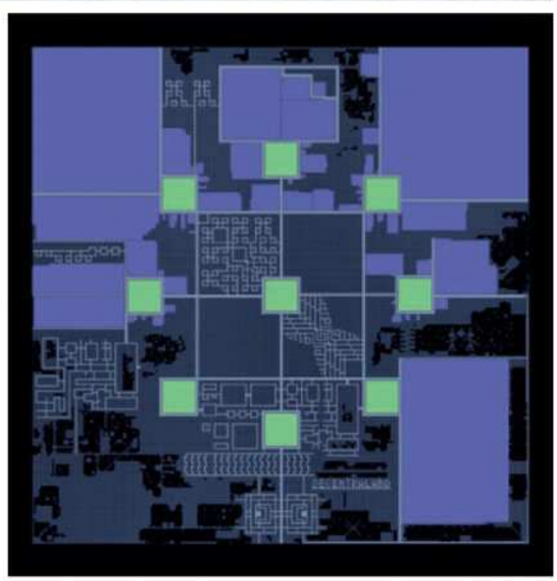
The company also built its robots to pull up to curbs and driveways, a feature suited for leafy suburbs. It's harder to imagine the vehicles navigating street traffic in the cities where early adopters tend to congregate—and where tipsy jerks may try to tackle the drones in search of pizza. Nuro says the novelty of robo-delivery will wear off soon, so it's debating antijerk countermeasures. "I'm sure," Ferguson says, "in the early days, there will be some challenges." —*Mark Bergen*

THE BOTTOM LINE With $92 million in hand, Nuro's Google veterans are betting they can beat self-driving car makers in creating a safe, reliable robot delivery vehicle. Now they need customers.

Making a Bundle in Virtual Real Estate

● Manhattan's price growth looks tame next to that of Genesis City's digital market

◀ Owners' ideas of what their virtual property will look like tend to be pretty rough



◀ Early adopters have already started to divide Genesis City into neighborhoods

Last month, Ryan Kunzmann went to a bar in New York to see his 58,000 square feet of property. No, it's not the world's biggest bar—his holdings are virtual.

Kunzmann was one of about 20 people meeting to chat and compare their little slices of Genesis City, a digital metropolis they're hoping will eventually become a major hub for virtual-reality commerce. Kunzmann, who does tech support for a property management website, says he intends to turn one of his larger stretches into a virtual museum or art gallery. "There's a lot of great art out there that people don't get to see," he says. "Especially if you don't live in a big city."

While this sounds like a lark, or perhaps another iteration of the faded online world Second Life, there's already real money behind the blockchain-based real estate. In December, Kunzmann paid \$15,000 for 62 plots of about 1,100 square feet apiece, and he recouped his investment three months later by reselling a mere eight of them. Today, resellers can reliably get as much as \$30,000 for a Genesis City plot. Credit network Ripio.com paid almost \$150,000 for a spot next to the main square where visitors appear when they enter the city. The record is \$200,000, sold by a user who'd recently bought the same plot for \$13,000.

Scarcity is driving the speculation. Unlike Second Life, or games such as *SimCity*, Genesis has fixed virtual dimensions, some 90,000 plots that make it about the size of a digital Washington, D.C. Argentine coders Esteban Ordano and Ari Meilich created the city, part of a broader digital world called Decentraland, using the Ethereum blockchain. Another key factor, they say, is that no single corporation can suddenly change the ▶

COURTESY DECENTRALAND (2)

◀ terms of their virtual world or own users' data, which helped Decentraland's initial coin offering raise about $26 million in 30 seconds last year. The decentralized nature of Ethereum has also made it easy for users to trade the fixed supply of Genesis real estate among themselves, which contributed to a jump in virtual land values after an auction of plots helped raise an additional $28 million.

The early adopters haven't built much on their plots yet, but they've already divvied up Genesis City into themed neighborhoods, including ones modeled on Las Vegas, cyberpunk fiction like *Blade Runner*, and—this being the internet—a red-light district. What's there so far looks like a piecemeal mash-up of video game aesthetics and projects in need of developers. "Once virtual reality becomes a mass movement, and we're heading in that direction, we'll come to a critical mass of users that will need a platform to discover content," says Meilich. Besides VR headsets, visitors will be able to use web browsers to view the plots.

Like other founders of startups who have raised money through ICOs, Meilich and Ordano have based their business model on their cryptocurrency, Mana tokens, which were worth 2¢ apiece when they began trading in September, rose as high as 29¢ in January, and are now about 12¢, according to cryptocurrency rankings site CoinMarketCap. Decentraland is usually among the 20 most used applications on the Ethereum network, according to DAppBoard, a website that monitors such activity.

Ordano and Meilich acknowledge that a VR future is a ways off. They won't have even a basic Genesis City up and running for at least a few months, by which time they're hoping landowners will have built up more of the neighborhoods. And plot-buyers have little guarantee that the network will become anything remotely useful, let alone as commercially valuable as they imagine. But users such as Kunzmann and Ripio Chief Executive Officer Sebastian Serrano say they're patient. Kunzmann is slowly learning how to code his art gallery, though he says he'll probably subcontract the bulk of the work.

Serrano says he'll use his prime virtual real estate to pitch cryptocurrency loans and other financial services. For now, he's hawking mortgages for Genesis City plots on his regular website. "It allows us to explore at low costs, with less money at stake and within something that's like a game, how blockchain-based mortgages can work," he says. "Yes, it sounds crazy." —*Camila Russo*

THE BOTTOM LINE Early adopters are paying as much as $200,000 for roughly 1,100 square feet in Genesis City, a gamble that the digital burg will someday become a commercial VR hub.

When AI Helps Keep The Lights On

● HomeSmart adjusts African homes' power consumption based on prior use of solar energy

In sub-Saharan Africa, home electricity is a 50-50 prospect and bank accounts can be rare, but most people have some kind of cellphone. The phones provide information often tough to come by in rural areas—the latest commodity prices, for example. And even in places where pastoral tribesmen tend livestock in very old-school ways, they may also chat over WhatsApp and use money-transfer apps to settle debts. To charge the phones without access to an electrical grid, Africans spend more than $17 billion a year on such fuels as kerosene and firewood to power sometimes primitive generators. Simon Bransfield-Garth is pitching a cleaner and, he says, smarter alternative.

His company, Azuri Technologies Ltd., has brought what it calls smart solar power to 150,000 people in a dozen African nations, focusing on East Africa and Nigeria. While solar batteries often struggle to power homes through the night, Azuri's yellow box—the size of a landline phone, it's called HomeSmart—uses software with artificial intelligence to learn each home's energy needs and adjust power output to keep things running. Those tweaks include automatically dimming lights and TV screens, lowering speaker volume, and slowing a fan's motor.

"Instead of a system just powering as fast as it can for a certain amount of time and stopping, we provide customers with the amount of light they

▼ Beyond LEDs and charging ports, Azuri is pitching customers on TVs and radios

COURTESY AZURI TECHNOLOGIES

typically use on a day-to-day basis," Bransfield-Garth says. His company runs on a lease-to-own model. Customers can make payments online monthly, weekly, or as they go. Most pay about $3 a week for 18 months to pay off the equipment costs, roughly half what they used to pay for kerosene.

The setup is simple: A roof-mounted, 5-watt solar panel connects to the battery, placed on a wall in the home. The basic system comes with two LED lightbulbs and a USB port for charging mobile devices. Add-ons such as radios and TVs cost more.

The Azuri system's AI software distinguishes it from other solar startups in Africa, says Benjamin Attia, a solar analyst at researcher Wood Mackenzie Ltd. To make the most of the juice the solar panel gathers, the software sets internal targets for the exact amount of energy it thinks a customer will need overnight and refines those estimates based on use patterns. Unlike with kerosene, "I have no fears of burns and fumes," says Lucia, an Azuri user in the Tanzanian village of Ngulyat.

Bransfield-Garth has raised $18 million in venture funding, led by the U.K.'s IP Group Plc. He says the company is profitable and revenue has doubled in two years but wouldn't provide numbers. A Briton, he began researching AI neural networks in the 1980s before getting into semiconductors, consumer electronics, and eventually renewable energy. He spun Azuri out of his solar panel company, Eight19 Ltd., in 2012, after spending two years developing the storage cell and figuring out how sensors and panels could be used to better predict customers' energy habits. Based on when the sun hits a panel, for example, the HomeSmart software can determine sunrise and sunset, latitude and longitude, and what time of year it is. The company installed its first units outside Nairobi.

"When people looked out of their homes at night and saw someone had light on at 10 p.m., two days later there was a queue around the block," Bransfield-Garth recalls. "First there's a sense of disbelief. Then people get excited, and it's something of an event. And in six months, it all becomes fairly normal." Six years ago, few homes used solar. Now, as many as half a million homes in East Africa plug in.

Azuri says sales volume allows it to offset costs and offer the incentives it does. The company has about 80 employees and 2,000 sales and marketing partners throughout Africa, mostly residents with relationships on the village level. Gratis installation and upkeep, the company says, helps secure loyalty and friendly word-of-mouth. —*Adam Popescu*

THE BOTTOM LINE Azuri says its lease-to-own, AI-powered solar hookups are already profitable and have brought solar electricity to 150,000 people in a dozen African countries.

Innovation Disease Breathalyzer

The ReCIVA (as in "respiration collector for in vitro analysis") breath sampler can detect the kinds of volatile organic compounds (VOCs) in people's breath that are early indicators of lung cancer, colon cancer, and other diseases. It's meant to substitute for costlier, more invasive CT scans and biopsies.

Innovator

Billy Boyle
Age: 39
Chief executive officer of Owlstone Medical Ltd., a 100-employee startup in Cambridge, England

Origin

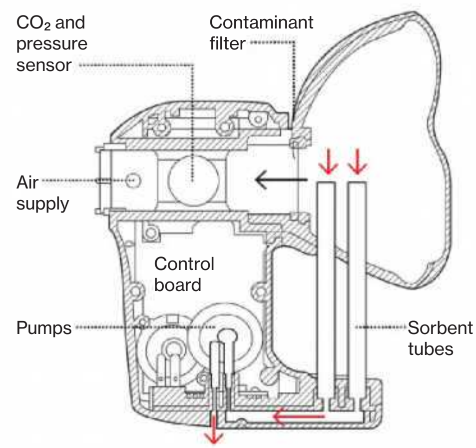
Boyle, a Belfast native, spent a decade researching ways VOCs could help diagnose, say, complications from chemical warfare. He shifted to civilian applications in 2016, after his wife died of colon cancer at age 36, leaving him with twins.

Funding

Owlstone has raised $38.5 million in venture funding to expand, including by building U.S. labs.

Testing

Hospitals in a half-dozen European countries are helping conduct Phase II clinical trials, supported by $1.6 million from the U.K.'s National Health Service.



How It Works

❶ Put the sampler's mask on your face and breathe, and an embedded sensor ionizes the VOCs you exhale to register a sort of chemical fingerprint.

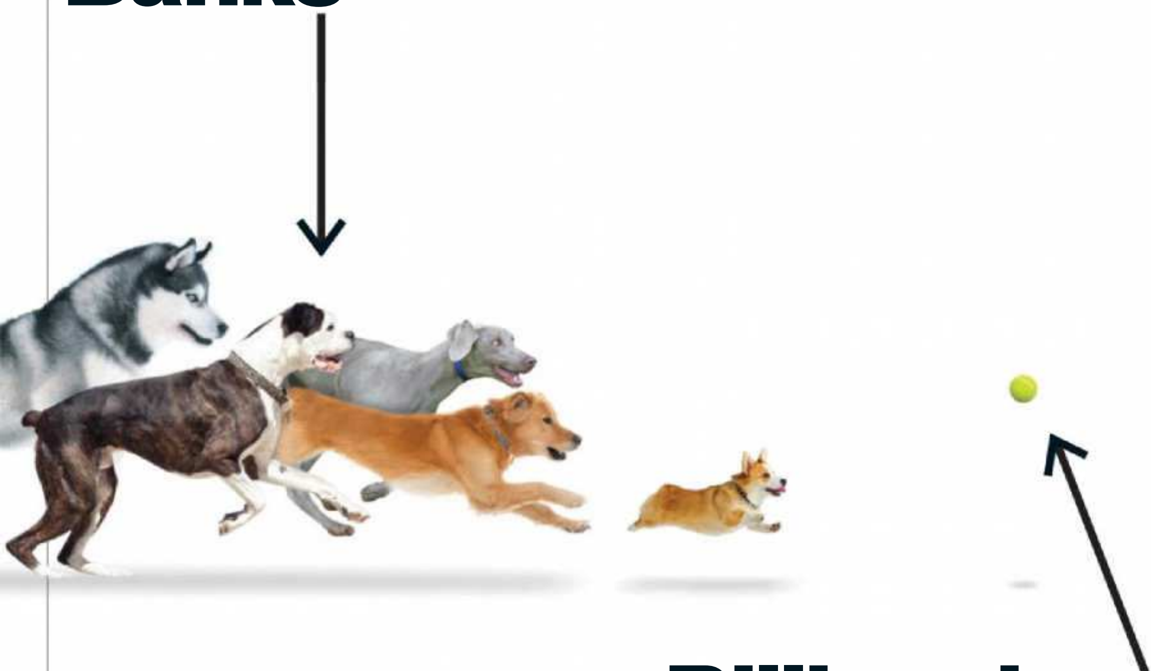
❷ A PC connected to the mask apparatus analyzes the readings to determine whether you should receive further tests for one or more of dozens of diseases.

Next Steps

In November, Owlstone teamed up with pharma giant GlaxoSmithKline Plc to try to identify markers for chronic obstructive pulmonary disease, which affects about 329 million people around the world. Boyle says he hopes to have the breathalyzers in clinics late next year and sell them for less than $100 each. Eric Topol, director of the Scripps Translational Science Institute, says Owlstone's early successes make it a leader in the emerging field but that clinical trials and further diagnostic tests are among the remaining hurdles before the technology has a chance to reach the mainstream.
—*Adam Popescu*

COURTESY OWLSTONE MEDICAL; ILLUSTRATION BY 731

Banks



Billionaires

● In an age of concentrated wealth, Credit Suisse and JPMorgan are focusing on the upper-upper class

America's last Gilded Age had its "List of 400," the people said to be worthy enough, or at least rich enough, to climb to the pinnacle of high society. Today there's something closer to a List of 55. Its members are so rich that they can seem less like actual people than vast investment empires. Their ranks include familiar names such as Bezos and Dell, as well as a growing number of lesser lights whose dynastic wealth is reshaping global business.

This unofficial list represents the first rough cut of the most sought-after banking clients at JPMorgan Chase & Co., and it's by no means complete. Major banks are vying for the world's hyperwealthy as never before. They woo billionaires and their family offices much the way they do multinational corporations or institutional investors.

Anyone can buy stocks. Only a privileged few behind the velvet rope of bespoke investment banking can bankroll multimillion-dollar ventures or buy entire companies. Services offered by banks to billionaires range from advising on mergers and acquisitions to arranging financing for the companies in their portfolios to providing counsel on expanding or selling family businesses. Not since the days of John D. Rockefeller has so much been owned by so few. "This is a new world that's been around, basically, forever," says David Dwek, head of private sponsors at Morgan Stanley. "They're an important part of the deal ecosystem."

Goldman Sachs Group Inc. has its own list of 60, counting among its clients the Reimann family's JAB Holding Co. and the Koch brothers' investment firm. JPMorgan, in addition to its initial 55, is watching several hundred families that are poised to enter this select club. Credit Suisse Group AG reserves its white-glove treatment for about 200 moneyed individuals and clans. Deutsche Bank AG and UBS Group AG have separate units that bridge private wealth management and investment banking. At Morgan Stanley, Dwek's team targets "permanent capital"—money from families, sovereign wealth funds, pension systems, and listed investment companies. The operation began about eight years ago as part of an effort to pull wealthy families into Morgan Stanley's orbit.

Over at JPMorgan, bankers in April arranged financing for an acquisition of Texas-based food company C.H. Guenther & Son Inc. by PPC Partners Inc. The investment company is controlled by the ▶

PHOTO ILLUSTRATION BY 731. PHOTOGRAPHS: CORGI AND BALL: SHUTTERSTOCK. DOGS: GETTY IMAGES

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Edited by
Pat Regnier and
Jillian Goodman

Businessweek.com

◀ Pritzker family. Paul Carbone leads PPC with Tony Pritzker, and together they focus on North American companies valued from $100 million to $750 million. Carbone, formerly managing partner of the private equity group at Robert W. Baird & Co., says PPC doesn't rely on bank-led auctions to source most of its deals. Rather, banks tend to serve as intermediaries and pitch firms such as PPC to business owners looking to sell or expand. The banks' goal, as he puts it: "To put people together who have like interests, in a very old-world sort of way."

Credit Suisse, which has also advised PPC, went as far as to organize an event in Detroit to nurture ties with Daniel Gilbert, the founder of Quicken Loans Inc., and other superaffluent types. (Gilbert, who co-hosted the event, is worth more than $7 billion, according to the Bloomberg Billionaires Index.) Representatives of 43 families worth a combined $75 billion attended the May 2017 event. The official topic was revitalizing Detroit. If Credit Suisse drummed up business, so much the better.

The bank was already financing mortgage originations for Quicken Loans. But it sees its relationship with Gilbert as valuable even beyond his company, says Charles Buckley, head of ultra-high-net-worth coverage for North America. "We're trying to reach people where they're most passionate," he says. "Sometimes that's in traditional investment banking ways, but sometimes it's not. Sometimes it's helping them revitalize Detroit."

The value of deals done by family offices jumped to $100.6 billion in 2016, from $25.1 billion five years earlier, according to PitchBook data. Major banks must compete for a piece of this business with specialized boutiques. Byron Trott, known for his long-term links to Warren Buffett, caters to the world's wealthy. His firm, BDT Capital Partners, has used its connections to raise billions for private equity funds. One of the grand old names in banking, Rothschild & Co., has also been expanding lately. It helped the Koch brothers finance Meredith Corp.'s takeover of Time Inc. last year.

Over the years, some large global banks became so fragmented that billionaires simply outgrew them and hired their own investment professionals. Many bankers were so focused on corporate clients and big institutional investors that they largely ignored individual fortunes. No more. "From our perspective, they're No. 1 or No. 2 on a call list," says Todd Stevens, head of the key client partners business at Deutsche Bank. —*Simone Foxman and Sonali Basak*

THE BOTTOM LINE Billionaires and their family offices are doing more deals, and major banks are jostling with each other to get a piece of the business.

Buy Bonds, Bury Coal

● Closing old power plants is expensive. Legislators are looking for ways to pay the bill

As President Donald Trump prepares to pay failing coal plants to stay open, several states are hatching plans to put them gently to sleep. One solution gaining steam among lawmakers, environmentalists, and policy experts can be found in an unlikely place: the bond market.

For utilities, getting out of the coal business can be costly. They have to pay to dismantle generators, and they don't want to miss out on future revenue by scrapping still-productive assets early. Plus, coal plant workers will need to be retrained for other jobs. To pay for all that, states could allow utilities to issue special bonds at low rates. While the plan has yet to be implemented, Colorado, Missouri, and New Mexico are among the states where legislation has been debated.

"If there's a no-cost option available to the state, I think it would be absurd to not do it," says Jacob Candelaria, a Democratic state senator in New Mexico. Candelaria sponsored a bill that failed to pass and plans to reintroduce it next year. No tax dollars would be spent for such bonds, he says, but the debt would be backed by ratepayers. That

ILLUSTRATION BY AARON FERNANDEZ; DATA: BLOOMBERG NEW ENERGY FINANCE means the utility can add a special charge to customers' bills to cover the payments. The predictable cash flow means the bonds can carry lower rates.

For years, coal's been losing out to cheaper natural gas and cleaner renewables such as wind and solar. Coal-fired facilities accounted for more than half of U.S. electricity from 1949 through 2005, according to the Energy Information Administration. Since then its share has declined to less than one-third of the U.S. total.

Trump, who has struggled to fulfill a campaign promise to help the coal industry, announced on June 1 that he was ordering Energy Secretary Rick Perry to stem the tide of closures. The government would establish a "strategic electric generation reserve" and compel grid operators to buy electricity from coal and nuclear plants. The administration says this is to protect national security.

Still, many state and local authorities–and even a lot of utilities–see coal plant shuttering as inevitable. Almost two dozen coal plants, with a combined capacity of more than 16 gigawatts, are scheduled to close in 2018, according to data compiled by Bloomberg New Energy Finance from the EIA and the Sierra Club. An additional 30 GW worth of plants are scheduled to follow suit by the end of 2025.

It's just a question of how the process unwinds. Candelaria estimates his legislation would have allowed utility PNM Resources Inc. to issue bonds that would pay 1 percent to 3 percent, as long as the proceeds were spent on shutting a coal plant. If PNM issued bonds on its own, it might have to pay interest of 6 percent to 8 percent, the lawmaker says. The exact rates would depend on a variety of factors, but "we're talking about real money," Candelaria says.

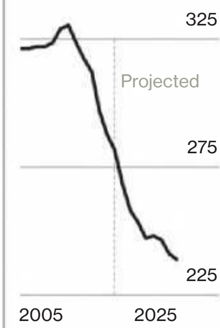
Ultimately, energy customers are responsible for old coal plants, says Colorado Representative Chris Hansen, who introduced reduced interest rate legislation last year that failed. The costs of closing them down will work their way into rates. "If we can create a mechanism that saves the ratepayer from having to pay those off in the normal way at full whack, that's a big cost savings," he says.

Meanwhile, some of the alternatives to coal generate power more cheaply. Using such bonds to close coal plants could save utility customers in 13 states $2.5 billion a year in fuel costs, according to Uday Varadarajan of the Climate Policy Initiative in San Francisco.

Not everyone is sold. Benjamin Fowke, chief executive officer of Xcel Energy Inc., which provides power in several states, says he's concerned that the plan doesn't provide enough compensation for shutting down an income-generating facility. "There has to be something in it for the shareholders," says Fowke.

Some environmentalists say the proposal is a giveaway to utilities that have profited for years on coal generation. Mariel Nanasi, executive director of the Santa Fe, N.M.-based nonprofit environmental group New Energy Economy, helped block Candelaria's bill. She called the proposed legislation a "blank check" for the utility. In New York, green groups are backing an alternate way of shuttering coal plants–by adopting strict emissions rules the facilities can't possibly meet. Some in the environmental community view the bond plans as a reward for polluting, says Paul Bodnar, managing director at the Rocky Mountain Institute in Boulder, Colo. "It's not about compensation," he says. "It's about finding the appropriate societal solution that makes sense." *—Jim Efstathiou Jr. and Joe Ryan*

● Gigawatts of U.S. electricity generation capacity from coal



THE BOTTOM LINE Special bonds could help offset the cost of moving to cleaner energy, but some environmentalists question whether utilities should get paid to stop polluting.

Trouble for Dubai's Star Investor

● Arif Naqvi's business appears to be collapsing under its own mismanagement

Pakistani financier Arif Naqvi shared a stage with Bill Gates at the World Economic Forum in Davos, Switzerland, in January for a panel on global health. Even alongside the billionaire philanthropist and two medical professionals, Naqvi stood out for his enthusiasm. "Like Bill, I'm an optimist," he said. "So I believe the glass is half full, very firmly."

Unbeknownst to the crowd, four investors in Naqvi's Dubai-based $1 billion health-care fund, including the Bill & Melinda Gates Foundation, had hired forensic accountants to see where their money went. The inquiry's existence was reported less than a week later by the *Wall Street Journal*. A subsequent review by Deloitte LLP, requested by Abraaj Group, Naqvi's holding company, found its senior managers shared "collective responsibility" for "lapses in governance and control," according to a draft summary sent to creditors and seen by Bloomberg News.

Abraaj still was pushing creditors to agree to a standstill on debt payments as of mid-June. Now it's considering filing for provisional liquidation ▶

ahead of a June 29 hearing on a petition from Kuwait's Public Institution for Social Security seeking to dissolve its holdings, say people with knowledge of the matter.

"We should have reacted to the kind of questions that investors were asking, arguably, in a different way," Naqvi says. "The fact that we didn't, the fact that we took a particular perspective and stuck to that, is in hindsight not the smartest thing we could have done."

For the United Arab Emirates, the swift collapse of Naqvi's reputation threatens its future as a business hub. Abraaj has grown with Dubai's desire to be a world-class financial center. "Private equity is still a nascent industry in the region, so it's a shame to see the biggest name falling apart," says Ali Al-Salim, co-founder at Arkan Partners, which advises global asset managers on investments in the region.

Naqvi, 57, built his reputation as the Gulf's buyout king producing stunning returns in places few would venture. In recent years he promoted impact investing, the concept that private capital can be applied to alleviate some of the world's most intractable problems—poverty, climate change, inequality. Abraaj used its health-care fund as a prime example of how money could be profitably and virtuously deployed in Africa and South Asia, where it had invested in companies ranging from a diagnostics business based in Islamabad to hospitals in India.

Born in Karachi, Naqvi was an immigrant outsider in the countries where he made his name. Before his arrival in the UAE, he worked at the Olayan Group, the dynastic Saudi Arabian conglomerate founded by billionaire Suliman Saleh Olayan.

His origin story as a Gulf power player begins in 1999, when he and his little-known investment firm, Cupola Investments Ltd., fought off established private equity giants to win Inchcape Plc's Middle East portfolio, worth $150 million. The first leveraged buyout in the Middle East, it marked Naqvi's arrival on the nascent investment scene of Dubai, more than 10 years before glittering skyscrapers such as the Burj Khalifa crowded the skyline. The deal also turned a spotlight on Naqvi and his firm, founded with $75,000 of his own money. By the time he exited the investment, with a $71 million profit, his reputation had been sealed.

More deals followed after Naqvi founded Abraaj in 2002. For large institutional investors, the company offered access to risky investments in rapidly expanding markets, all conveniently packaged in a blue-chip private equity firm.

Troubles at Abraaj began late last year, when investors in the health-care fund tapped Ankura Consulting Group LLC to track their money. The investigation turned up irregularities, including the diversion of funds from that pool to unrelated investments. A KPMG LLP review commissioned by Abraaj in response found no misuse of money at the fund, the firm said in February. Deloitte's subsequent inquiry found that the company had commingled money in the health-care fund and a private equity fund with its holding company.

While all the money has since been accounted for and there's no evidence of "embezzlement and/or misappropriation," according to the summary of Deloitte's report, the accountants found a "lack of adequate governance, including segregation of duties and the overall weakness in the control framework." People familiar with the matter say that KPMG's U.K. branch is conducting an internal review of its original investigation. KPMG declined a request for comment. Dubai's financial regulator has said it's "aware of various matters" involving Abraaj, though no investigation has been announced.

"It looks like the culture inside Abraaj was never built up to prevent this from happening," says Sabah al Binali, chief executive officer of Universal Strategy, an Abu Dhabi-based turnaround specialist and investment manager. "You see it anywhere in the world where someone has been hugely successful very quickly."

By early May, Abraaj's onetime competitors—Cerberus Capital Management LP and Colony NorthStar Inc.—were circling. Colony abandoned the idea of buying the holding company a month later after its due diligence raised further concerns about the business, according to people familiar with the matter. TPG Capital is said to still be interested in buying the health-care fund outright, while Cerberus has made a $125 million bid for Abraaj's fund management business.

Dubai's financiers joke that the "Goldman Sachs of the Middle East," as Abraaj was once known, risks becoming the Lehman Brothers instead. Naqvi—who so often espoused the importance of transparency and good governance—may have undermined confidence in the region for years.

"The whole industry relies on trust," says Ludovic Phalippou, a professor at the University of Oxford's Saïd Business School and author of *Private Equity Laid Bare*. "If Abraaj did something that investors did not expect, the validity of the trust argument will be questioned not just for Abraaj, but for the whole Middle East PE industry, and probably for the world PE industry as well." —*Tracy Alloway, Dinesh Nair, and Matthew Martin, with Archana Narayanan*

THE BOTTOM LINE The potential liquidation of Abraaj Group and the damage to Arif Naqvi's reputation may affect investor confidence in Dubai for years to come.

● Naqvi

PHOTOGRAPH: LUKE MACGREGOR/BLOOMBERG

Brussels Throws Its ***Weight*** Around

● The European Union is emerging as the new sheriff for global financial markets

From its Chicago headquarters, CME Group Inc. offers options, swaps, and futures contracts designed to help investors mitigate the potential fallout from, say, a failed gold mine in Africa, a spike in Mexican interest rates, or an oil spill in the North Sea. Today the company itself faces growing risk from an unexpected quarter: Brussels.

European Union regulators are seeking greater influence over the supervision of financial companies, including those based in the U.S., such as CME, and in the U.K. once Britain leaves the bloc. The EU is proposing that clearinghouses—financial middlemen—in the region undergo inspections by European supervisors and be required to respond to the European Central Bank in emergencies. Those rules present "grave concerns," says Sunil Cutinho, president of CME Clearing, who on June 6 told industry executives in London that the EU's growing reach threatens a long-standing practice of deferring to oversight in a company's home country. "There was a time when regulators trusted each other," Cutinho said, echoing calls by CME's main regulator, the Commodity Futures Trading Commission, for the EU to rely on cooperation with U.S. authorities.

As the U.S. rolls back regulations enacted after the 2008 crisis, the EU is emerging as the new sheriff for international markets. Europe is introducing standards for everything from investment research to trading to oversight of client data—rules with repercussions from New York to Hong Kong.

When the EU introduced its General Data Protection Regulation last month, Facebook Inc. and Microsoft Corp. said they'll largely adhere to the directive everywhere they operate, not just in Europe. Anu Bradford, a professor at Columbia University's law school, calls it the "Brussels effect." Multinationals complying with European regulations to gain access to the region's €15 trillion economy sometimes find it's cheaper and easier to implement a blanket global policy. "The EU has become more self-conscious of its ability to set international standards and is embracing that opportunity," Bradford says.

New EU guidelines give authorities in Brussels greater sway over regulations made by watchdogs in other countries. For foreign companies to do business in the EU without setting up a subsidiary in the bloc, they and their home country typically need a so-called equivalence finding. These rulings from the European Commission, the EU's executive arm, assess whether foreign statutes are sufficiently strong to protect European consumers and corporations. As the clock ticked down to the January start of the EU's revised Markets in Financial Instruments Directive, or MiFID II, brokerages warned of a rupture in global markets if the EU were to find that other countries' laws weren't tough enough. The EU approved the U.S. rules just before Christmas, but a similar authorization for Switzerland expires in December and is subject to further negotiations.

"There was a time when regulators trusted each other"

The U.S. Securities and Exchange Commission had to take emergency action to limit the impact of MiFID II after American companies warned that a key part of the law would threaten their investment research business. The U.S. bars Wall Street brokers from accepting payments for research, but MiFID II requires money managers to pay separately for research and trading services. The SEC said it would suspend enforcement of its rule for some investors in Europe while it assesses the impact.

The EU is in the process of toughening its equivalence standards, such as those for derivatives clearinghouses like CME. At a London industry conference, Jochen Metzger, an official at Germany's central bank, sat on a panel next to a counterpart from the U.S. and said he's "a bit skeptical" about cooperation among international authorities. Collaboration works in "fair weather" but can prove more difficult in crises, Metzger said, calling for greater European oversight of big foreign companies. Brian Bussey, head of the CFTC's clearing division, countered that cooperation has worked well over the years and that the U.S. has a history of deferring to foreign regulation of major clearinghouses abroad. As the discussion heated up, Bussey urged pragmatism, finally telling Metzger: "We're going to need to go for a drink to talk this through." —*Silla Brush and Viren Vaghela, with Alexander Weber*

THE BOTTOM LINE The EU is gaining influence and a bigger seat at the table with its standards for everything from investment research to trading to oversight of customer data.

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Land of Opportu

A father and son in front of Pyongyang's April 25 House of Culture, the site of political and military gatherings

CARL DE KEYZER/MAGNUM PHOTOS

● Optimists see a huge turnaround play. Pessimists call it a graveyard of foreign investments

Would any corporate executive in his or her right mind be willing to put big money into a centrally planned economic underachiever? One that's best known for food shortages, a backward manufacturing sector, and woefully inadequate infrastructure?

Maybe a businessman whose name adorns buildings in such places as Azerbaijan, Panama, and the Philippines. On June 12, Donald Trump wrapped up an historic summit with Kim Jong Un with a plug for North Korea's waterfront. "They have great beaches," America's realtor-in-chief said at a news conference. "You see that whenever they're exploding their cannons into the ocean. I said, 'Boy, look at that view. Wouldn't that make a great condo?'"

Pristine coastline isn't North Korea's only untapped asset. The country boasts vast stores of minerals—including iron and rare earths—which could be worth $6 trillion, according to a 2013 estimate by the North Korea Resources Institute in Seoul. There are also unconfirmed reports of oil and gas deposits in the East and West seas. Then there's North Korea's working-age population of about 17 million, another potential asset in the eyes of businesses in Japan, South Korea, and China, where labor forces are graying and shrinking. "Northeast

Asia could become one of the most exciting places in the world," says Masaaki Kanno, chief economist at Sony Financial Holdings Inc.

All this bounty has been largely off-limits to foreign companies since 2006, when the United Nations began layering on economic sanctions as punishment for North Korea's efforts to build a nuclear arsenal. Net inflows of foreign direct investment amounted to just $93 million in 2016, compared with $12 billion for South Korea.

To some, North Korea is still the ultimate frontier market, a place with extra-large opportunities—and similarly sized risks. (Mind you, the country has no stock exchange or publicly traded companies, so it's not designated a frontier market by investment banks.) "North Korea is now where China was in the 1980s," says Jim Rogers, whose Rogers Holdings Inc. doesn't currently have investments in North Korea. "It's going to be the most exciting country in the world for the next 20 years. Everything in North Korea is an opportunity."

That may be, but the country is also littered with foreign deals that have gone wrong. Sweden, for instance, is still awaiting payment for 1,000 Volvo sedans shipped in the 1970s. A Chinese mining company called its four-year venture in the isolated nation a "nightmare." And an Egyptian telecommunications giant doing business there can't repatriate its profits. "A major deterrent to foreign investment is the chronic breakdown in the rule of law," says J.R. Mailey, an investigator who's worked on fraud and corruption cases in North Korea.

Surprisingly, some who've butted heads with the regime in Pyongyang remain upbeat about the country's prospects. Orascom Telecom Media & Technology Holding SAE, an Egyptian company, helped build the North's communications networks after entering the country in 2009. But its Koryolink business lost exclusive rights to the market after Kim rose to power in 2011 and financed the rollout of a rival cellular network. "The emergence of a state-owned competitor and the strict economic sanctions made our operation much less attractive," an Orascom spokeswoman says. But she adds, "The lifting of sanctions and peace between the two Koreas will improve the overall business climate in the DPRK and will have a positive impact on Koryolink."

Investors from China, North Korea's economic patron, have also been burned. Xiyang Group signed a contract in 2007 to set up a venture with the government to process 500,000 tons of iron ore per year. Five years later, Pyongyang terminated the deal and cut off the plant's access to water, electricity, and communications. Xiyang issued a terse statement after it didn't receive a cent of compensation.

Andrei Lankov, a director with Korea Risk Group, which provides clients with information and analysis on North Korea, sees a pattern in the way companies such as Orascom and Xiyang have been treated. "Once they see foreign businesses get too profitable, the authorities just take a bigger slice," he says.

Lankov is doubtful that, even if international sanctions were lifted, Kim's regime would lay out the welcome mat for foreign businesses. "Openness would be suicidal for the regime, as it would bring in a flood of information from outside and could loosen its political control," he says. Consequently, he says, North Korea would limit international companies to joint-venture projects as minority partners.

The bulk of any new investment would likely ▶

● "I think the North Korean authorities—assuming they actually want to develop capital markets—would need at least 5 to 10 years even with a determined effort to build the credibility and infrastructure to get the major index providers to look at them."

Sonja Gibbs, Institute of International Finance

● "At the margin, I would do nothing. I would just wait.... For most people, it's going to be business as usual."

Bhaskar Laxminarayan, Bank Julius Baer

◀ come from companies south of the border. Conglomerates including Hyundai Group, Lotte, and KT already have set up task forces to look into business opportunities in the North. In a recent survey by the Korean Federation of SMEs, 96 percent of the 101 South Korean companies polled expressed interest in returning to Gaeseong, an industrial park in North Korea that was closed in 2016 because of military tensions.

"It took us about two years to break awkward moods and to get along with North Korean workers," says Shin Han-yong, who runs Shinhan Trading, a maker of fishing nets that was one of 124 companies operating in Gaeseong. Still, he'd like to expand his business in North Korea if the complex reopens. Says Shin: "The only thing I can do now is watch Trump's mouth." *—Andy Sharp, with Sohee Kim, Daniele Lepido, Chris Anstey, Serene Cheong, Ben Bartenstein, Rachel Chang, and Tomoko Yamazaki*

THE BOTTOM LINE Foreign investment into North Korea amounted to less than $100 million in 2016, but some say the market has China-like potential.

Buried Assets

North Korea's mineral resources may be worth trillions of dollars

The Quest for Pyongyang's Defaulted Debt

● Bond speculators have profited from previous bursts of optimism about peace

Hedge fund manager Kyle Shin has been trying to get his hands on rarely traded North Korean debt that went into default more than three decades ago. Shin, whose Gen2 Partners in Hong Kong runs a $720 million hedge fund, believes the bonds are trading at about 20¢ to 30¢ on the dollar—which could mean a windfall for anyone holding them when and if a peace deal with the North comes to fruition. "If we're reunited, it's highly likely that North Korea will have to come back to the financial markets," says Shin, a South Korean native. "To come back to the financial markets, they will have to pay off the bonds."

There's about $900 million of debt outstanding in principal, or as much as $5 billion depending on how past unpaid interest is calculated, according to Stuart Culverhouse, chief economist of Exotix Partners Ltd., a London-based brokerage specializing in distressed securities. Shin is trying to locate investors who own the bonds and might want to sell. He's reached out to brokers such as French bank BNP Paribas SA, which in 1997 helped repackage about half of North Korea's defaulted commercial bank debt into notes denominated in deutsche marks and Swiss francs. (No luck: BNP told him it has no information on where to buy the bonds.)

Speculators have periodically used the notes to bet on easing tensions on the Korean Peninsula. In 2007 their value surged 36 percent on optimism that then-North Korean leader Kim Jong Il would buckle under U.S. pressure and agree to divulge details of his nation's atomic weapons program, Exotix told Bloomberg News in 2008.

Even if investors do locate the bonds, they may not be able to buy them unless sanctions are lifted. U.S. sanctions on North Korea have frozen secondary-market trading for the country's defaulted debt since 2013, Culverhouse says. Prices were in the single digits before trading was halted, but there's no indication of what they'd be should the U.S. lift sanctions. "Up until 2013 there was an active market," he says. "It was the only investable thing really that Western investors could look at in North Korea." *—Sree Vidya Bhaktavatsalam, with Bei Hu*

THE BOTTOM LINE North Korea would need to honor its debt commitments before ever being integrated into the global financial system, which could be a windfall for a lucky few investors.

● "The only investment opportunity that might make sense would be to build hotels for foreigners—tourists or business investors—who want to visit North Korea and stay at a name they recognize."

Noah Hudson, Guotai Junan Securities

*2015. DATA: WORLD BANK. GRAPHIC BY BLOOMBERG BUSINESSWEEK. DATA: U.S. GEOLOGICAL SURVEY, SOUTH KOREAN UNIFICATION MINISTRY, 38 NORTH

Worlds Apart

Unifying the divided Korean Peninsula remains a distant and daunting prospect. A 2015 report from South Korea's National Assembly Budget Office estimated it would cost about $2.8 trillion in infrastructure investment and humanitarian aid to bring the North's gross domestic product to two-thirds that of the South. —*Jiyeun Lee and Hooyeon Kim*

South Korea
North Korea

Life expectancy at birth
82.4
69.6

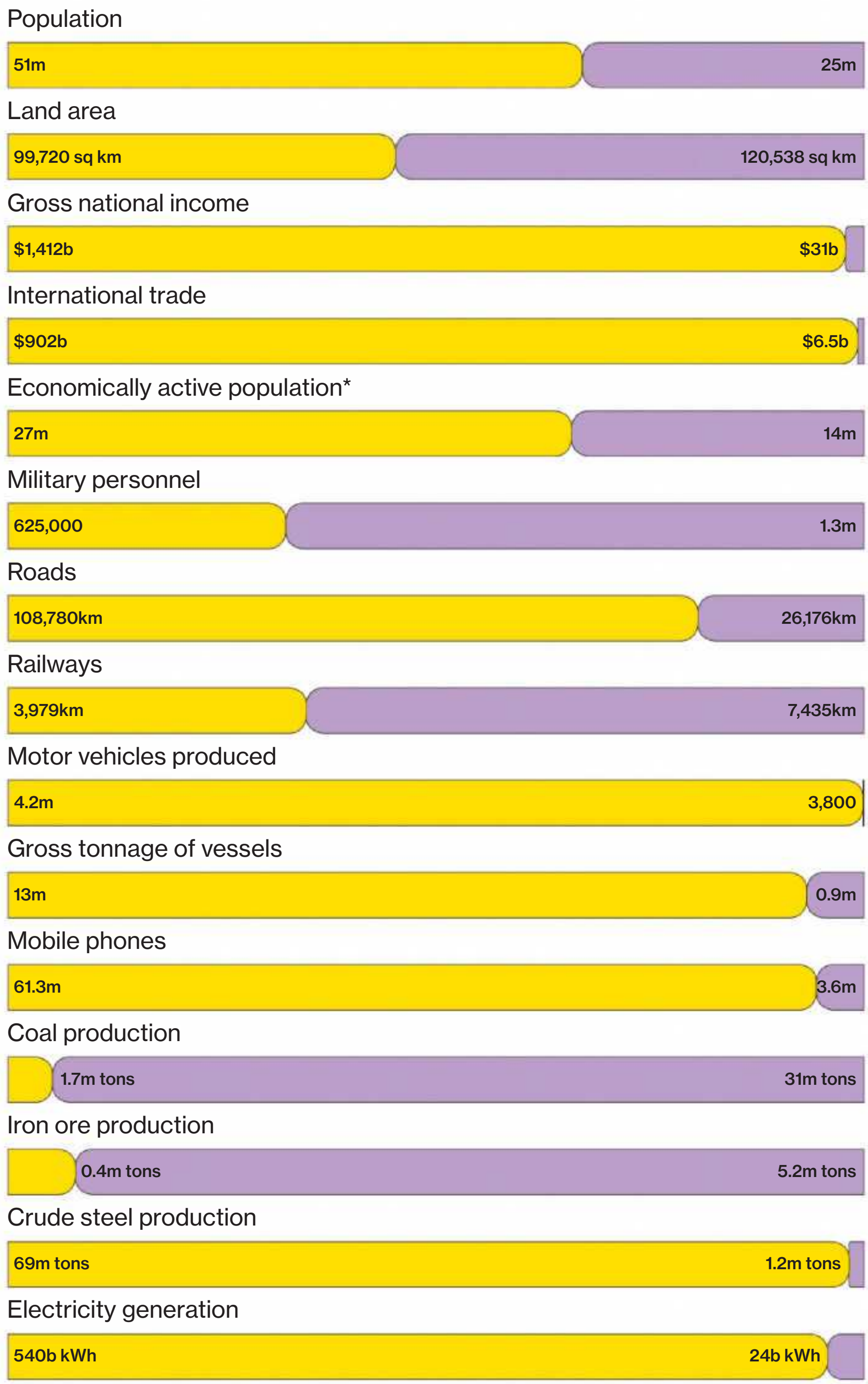
Median age
40.8
34.0

Birthrate
1.32
1.89

GNI per capita
$27.6k
$1.3k

Largest export
Electronic integrated circuits
Coal briquettes

Biggest trade partner
China
China



*PEOPLE 16 AND UP. DATA: CIA WORLD FACTBOOK, STATISTICS KOREA, UNITED NATIONS, BANK OF KOREA, KOREA INTERNATIONAL TRADE ASSOCIATION, SOUTH KOREA MINISTRY OF LAND, INFRASTRUCTURE AND TRANSPORT, KOREA AUTOMOBILE MANUFACTURERS ASSOCIATION, SOUTH KOREA MINISTRY OF OCEANS AND FISHERIES, KOREA COAL ASSOCIATION, KOREA INSTITUTE OF GEOSCIENCE AND MINERAL RESOURCES, KOREA IRON AND STEEL ASSOCIATION, KOREA ELECTRIC POWER CORP.

Natural Gas Pipe Dreams

● Hopes that Russian natural gas could help wean North Korea off nukes seem misplaced

The idea of building a conduit to carry natural gas from the Russian Far East to South Korea has been around since the 1990s. From 2008 to 2011, as Russia's gas giant, Gazprom PJSC, was building a pipeline as far as Vladivostok, the company signed a memorandum of understanding with North Korea and a framework agreement with Seoul's Korea Gas Corp. to extend it south.

It went nowhere, primarily because of the politics surrounding Kim's bid to build up his nuclear and missile programs. With North Korea's relations with the U.S., Seoul, and China now on the mend, and South Korea trying to reduce its dependence on coal and nuclear power, the pipeline would seem an obvious piece of economic diplomacy.

The government in Seoul, at least, seems interested in bringing the proposal back to life. "Should the security situation on the Korean Peninsula improve, we will be able to review the LNG project involving the two Koreas and Russia," South Korean Foreign Minister Kang Kyung-wha told a regional energy conference at the end of March, according to the state-owned Yonhap News Agency. Getting the North involved in such a project could "serve as a catalyst that helps ease geopolitical tensions in the region," she said.

Perhaps, but many obstacles stand in the way. Impoverished, unpredictable, and with a history of flouting international law, the government in Pyongyang would make a high-risk partner for something as capital-intensive as an energy pipeline. Even at the height of optimism about the project in 2012, when Gazprom was announcing it was ready to start work, a report by a Russian energy academic warned that "Russia cannot provide its South Korean counterparts with reliable guarantees of safe delivery," because it lacked "real influence" over Pyongyang.

More important, the project has become commercially less attractive to Gazprom. The company already has its hands full building $40 billion worth of pipelines to China and Europe. *—Marc Champion, with Elena Mazneva*

THE BOTTOM LINE A proposal to build a pipeline through North Korea to transport Russian gas faces even greater obstacles today than when it was first floated in the 1990s.

● "Looking at North Korea's oil demand, it is only a fraction of its Northeast Asian neighbors.... But that can change if the economy grows. These numbers indicate vast opportunity for multibillion-dollar infrastructure investment, particularly from the U.S., China, Japan, and South Korea."

Prakash Sharma, Wood Mackenzie

Can the *Chaebol* Cash In?

South Korea's biggest companies have spent years trying to do business in the world's most isolated economy. In 2004 a handful of them created a joint venture with the North Korean government, the Gaeseong Industrial Complex, just north of the Demilitarized Zone. It closed in 2016 after North Korea fired a rocket and the South Koreans pulled out. Most of those businesses are again eyeing opportunities to the north. If the region ever does open up, these companies are best positioned to profit.
—Sohee Kim, with Heejin Kim

SM Group
Nuclear power

The shipping and construction giant was part of a failed attempt to build light-water reactors in North Korea in the late 1990s. A deal on nuclear weapons may allow North Korea to restart nuclear energy projects, which SM Group could bid on.

Hyundai Group
Infrastructure

An industrial conglomerate best known for building elevators, it developed the land for the Gaeseong complex and would like to build railroads, power plants, and airports.

KT Corp.
Communications

The former phone monopoly installed about 700 private communication lines for the Gaeseong complex in 2005. It's also explored providing the North with satellite telecommunications and broadcasting services.

Lotte Group
Cookies

The Korean-Japanese conglomerate considered building a plant near Pyongyang in the 1990s to make its Choco pies, which are so popular they trade on North Korea's black market. Lotte is looking for openings for its food, hotel, and retail lines.

Daemyung Group
Hotels

South Korea's largest resort operator says it has begun feasibility studies to operate businesses in the North's Wonsan-Kalma special tourist region and the Masikryong ski resort.

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● Good luck fighting sexual harassment when your boss is Uncle Sam

ICE's Disappearing Data

The agency is making it difficult to examine its immigration crackdown

Five days into his presidency, Donald Trump took aim at illegal immigration with executive orders signaling a new era of heavy enforcement. Not only did he threaten to go after undocumented immigrants, many of whom he labeled violent criminals, he also vowed to crack down on so-called sanctuary cities that thwart the federal government's attempts to round up people who are in the U.S. illegally. The U.S. Department of Homeland Security promised to put out weekly updates that would include information on localities that release immigration violators and the criminal records of those released.

The first reports were filled with inaccuracies and in several instances called out counties for not cooperating with detainer, or detention, requests that were actually sent to other places with similar names. The U.S. Immigration and Customs Enforcement agency had to issue a list of corrections, and soon it simply stopped putting out the reports. For the past 18 months, ICE has also refused to release other key data about its enforcement activity that had been routinely available.

This disappearing data is at the heart of two lawsuits brought against ICE by the Transactional Records Access Clearinghouse (TRAC), a small research group at Syracuse University. As of January 2017, ICE stopped handing over records it had provided under the Freedom of Information Act for years, including any details about how effective Trump's crackdown has been. If ICE prevails in court, it could give other agencies a legal

PHOTO ILLUSTRATION BY 731; PHOTO: COURTESY U.S. IMMIGRATION AND CUSTOMS ENFORCEMENT; DATA: TRAC IMMIGRATION

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Edited by Matthew Philips and Jillian Goodman

Businessweek.com

rationale to deny public access to the vast cache of government data now kept in electronic databases.

At a time when U.S. authorities are separating children from their parents at the border—and then losing track of them—and the president continues to assert that many immigrants are violent criminals, the lack of basic data on government enforcement has created a fog of uncertainty over an already charged issue. TRAC was founded in 1989 by co-directors Susan Long, a statistician, and David Burnham, an investigative journalist, specifically to cut through this sort of political rhetoric by amassing data on federal policy. It uses FOIA requests to pull in 250 million records from various agencies each month, and its website offers tools to help analyze the data. TRAC had long requested and received information on detainers, as well as deportations aimed at removing undocumented immigrants with criminal records. After ICE abruptly stopped providing the information last year, Long and Burnham sued it in federal court in New York to regain access to the detainer data, and then in the District of Columbia over the missing deportation records.

"We have this huge political debate going on in the country over secure communities and sanctuary cities and all the claims that the government is making about how essential this is, and the very data that would allow you to evaluate the program, they're withholding," Long says. ICE argues that many of the records TRAC has asked for don't exist in the form requested and says producing responses would require searching its database, a process the agency claims amounts to creating new records, which isn't required under FOIA. ICE didn't reply to a list of questions and a request for comment.

"If they're going to court to try to keep information hidden about the detainer policy, they're probably hiding something," says Peter Boogaard, a former DHS press secretary in the Obama administration. More broadly, transparency has become a function of political convenience, Boogaard says. "They're happy to say that immigration is causing huge problems, but at the same point, they are not sharing information."

It's still possible to track the overall number of detainers ICE issues—about 14,000 a month on average through November 2017. That's up from the last months under Obama, but much lower than the peak of close to 28,000 in 2011. Left out are details on whether ICE takes custody—or the criminal records of those targeted. Under Obama, TRAC found that even when local law enforcement held an individual under a detainer, more than half the time ICE agents didn't show up to take custody—and that few ICE detainers targeted serious criminals. That sort of analysis is now impossible to do. "It's really frustrating to not be able to get a holistic picture of what's happening," says Emily Ryo, an associate professor of law and sociology at the University of Southern California, who's tried with TRAC to get data on detentions. "It really is an important moment for the public to understand what's happening and for researchers to be able to document what is going on."

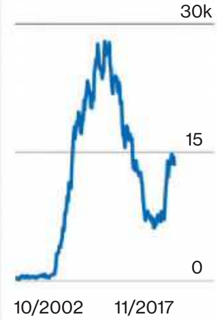
In place of detailed reports, ICE issues press releases describing raids and arrests, citing criminal records of detainees, and complaining about the lack of cooperation from sanctuary cities. "I don't want bullet-pointed press releases that say some large numbers of people were apprehended over the weekend and here are five examples of how dangerous these individuals were," says César Cuauhtémoc García Hernández, an associate professor of law at the University of Denver. "I want to know details about the large number of people. I want percentages. I want actual numbers about what kinds of crimes."

The data García Hernández has been able to cobble together show a reality at least partly at odds with Trump's rhetoric. In fiscal 2017, a period that covers the end of the Obama administration and the beginning of the current one, the average daily population held in immigration detention centers rose by 3,730 people, an 11 percent increase from fiscal 2016. The average length of stay has also risen, to 43.7 days, up from fewer than 35 the previous year.

The number of prosecutions for immigration crimes fell by more than 10,000, or 15 percent, over the same period. That's striking given the emphasis the Trump administration has put on prosecuting undocumented immigrants. It's an incredibly complex system that's shifting all the time, making accurate data more important than ever. Data from this year that TRAC got using another FOIA request show a jump in prosecutions of border crossers. And the detention system may be nearing its limit: This month, authorities are transferring 1,600 detainees to federal prisons while they await civil court hearings.

The inaccuracies in ICE's statements about enforcement actions have caused a furor within the agency in recent months. James Schwab, a spokesman for ICE in San Francisco, resigned in March over misleading statements from agency leaders about an ICE raid in Oakland. The bigger implication is how agencies are allowed to draw the line when it comes to producing electronic records, and the distinction between creating a record and just extracting one from a database, according to Sean Sherman, a ▶

● ICE detainer requests



● Data ICE no longer discloses on individuals it's issued detainers for:

- ▷ ICE custody status
- ▷ Deportation status
- ▷ Criminal history
- ▷ Most serious criminal conviction
- ▷ Charges filed in immigration court
- ▷ What detention facility they were booked into

◀ lawyer at Public Citizen Litigation Group who's representing TRAC in Washington. "ICE is saying that by basically searching for these electronic records, that constitutes creating new records," he says. "That just can't be right, because that's basically true of all government records right now." Meanwhile, ICE is withholding data in many more of TRAC's FOIA requests. Says Long: "We could file a new suit every week, if we were going to aggressively litigate this." —*Dune Lawrence*

THE BOTTOM LINE Since January 2017 the Trump administration has refused to issue key data on its immigration enforcement activities, despite the political emphasis on the issue.

Federal Workers Miss Out on #MeToo

● At government agencies, employees find it arduous to obtain justice in cases of workplace misconduct

For three decades, Lisa Kincaid relished her work as a special agent for the U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives—the agency that pursues gun runners, arsonists, and bombers. It wasn't until she began looking into sexual harassment at the agency as an internal affairs investigator that she felt truly threatened.

In 2013, Kincaid was assigned to look into a claim filed by another veteran ATF special agent, SherryAnn Quindley, who said a male supervisor had harassed her and at least five others. After conducting dozens of interviews, Kincaid concluded that the supervisor had put his hand up one woman's skirt, discussed oral sex in front of others, and bullied and belittled female employees.

When she pushed for a fuller investigation into the alleged misconduct, Kincaid met resistance from the supervisor's boss at the ATF, who she says went out of his way to protect the subject of Quindley's complaint. Eventually, the case was taken away from Kincaid, who then found herself passed over for two job transfers and shunted into a rank-and-file position in a unit she once ran. "I felt hugely betrayed," she says.

The #MeToo movement has felled powerful men in politics, business, and the media, but it's largely bypassed the federal government, with its more than 2 million workers. Federal employees file about 500 complaints annually of workplace sexual harassment, which the U.S. Equal Employment Opportunity Commission acknowledges often goes unreported in government and the private sector. Women in government may be especially discouraged from pursuing claims, lawyers say, because the already convoluted process to do so has been allowed to break down at numerous points.

While the private sector is no Eden for women pursuing harassment claims, its employers often seek to resolve them quickly and carry insurance to cover settlements. Employment lawyers are also more willing to take their cases to court in exchange for a promised cut of settlements or awards.

Federal workers face a system with far greater limitations. Their legal pipeline is "absolutely slower than the private sector," says Fran Sepler, who advises employers on harassment matters. Workers in the federal government have just 45 days from the time of an incident to file a complaint, which first has to go through a mediation or counseling process. If this fails, agencies have more than half a year to investigate whether they, or their employees, were at fault. People who pursue complaints beyond the agency level often wait years for administrative judges to rule on their cases. And they must overcome high legal barriers to prove the treatment they received was due to their sex, gender, age, or religion. Unlike private workers, federal employees aren't entitled to punitive damages.

"I've seen the system work" in the past, says Cathy Harris, a Washington lawyer who represents harassment victims. But, she says, enforcement has degraded over time, and officials who harass colleagues may have little to fear. "The ones engaging in these discriminatory practices have no problems, because they're never going to be punished."

"To them, it's just a game. They want to win, and they're going to win at all costs"

Kincaid's investigation focused on Billy Wright Jr., then the deputy chief of ATF's special operations division, and Charles Smith, his division chief, according to a lawsuit she filed last year. Kincaid's preliminary investigation produced a 272-page internal report, which she says documented harassment, including the groping incident, talk of sexual conquests, and demeaning comments. She thought the case warranted a full investigation, but her supervisors in the ATF's internal affairs unit refused to approve her request to continue the harassment inquiry. She says one supervisor told her, "Being an asshole's not against the law."

Quindley's case languished until several of the women involved approached Senator Charles

Grassley (R-Iowa), who chairs the Senate Judiciary Committee. In a 2015 letter to the U.S. Department of Justice, which oversees the ATF, Grassley referred to the women as "whistleblowers" who "allege a wide variety of abuses, and expressed concern for dozens of other female agents who are too fearful of possible retaliation to come forward."

A week later, the Justice Department's complaints adjudication division ruled in Quindley's favor. The ruling said Wright discriminated against her and subjected her to a hostile work environment, according to a confidential Justice Department document reviewed by Bloomberg. It also said Smith condoned the hostile work environment. Both men were required to undergo anti-harassment training with the ATF's equal employment office, according to Kincaid's lawsuit, and the government settled with Quindley for $533,000, according to the *Boston Globe*. (The settlement is private, and neither Quindley nor her lawyer would confirm this number.)

Kincaid's legal odyssey was just beginning. After complaining internally about the treatment she received while conducting her investigation, she filed a federal lawsuit last September tying the missed job opportunities and reassignment to retaliation from her managers, who she says refused to take her harassment investigation seriously. The managers in charge "were protecting each other at the expense of the women who were harmed," says Kincaid. "To them, it's just a game. They want to win, and they're going to win at all costs. It doesn't matter who they hurt to do it. It's hard to stand up and do the right thing."

Citing pending litigation, the ATF declined to comment on Kincaid's case. Acting Director Thomas Brandon said in a written statement that he holds all ATF employees accountable for complying with anti-harassment policies and that any violation would result in prompt corrective action.

"ATF strictly adheres to Federal laws, regulations and Department of Justice policies prohibiting sexual harassment," Brandon wrote. "As the senior executive at ATF, I am professionally and personally committed to maintaining a workplace free from harassment and all other forms of discrimination. This commitment includes holding all ATF executives, managers, supervisors, and employees accountable for complying with anti-harassment policies."

Wright didn't respond to phone and email requests for comment. Smith "was a decorated agent of the ATF and served honorably and admirably for 30 years before his voluntary retirement," according to a written statement provided by his attorney. "He never condoned nor was aware of any discrimination directed toward any employee."

▲ Kincaid, in Washington, D.C.

PHOTOGRAPH BY GREG KAHN FOR BLOOMBERG BUSINESSWEEK

In a separate decision released in November 2015, the Justice Department's inspector general found that an ATF supervisor gambled while on duty and misused his government car and travel card. Kincaid's husband, a retired ATF agent, identified that supervisor as Smith in a newsletter he published and distributed to 800 people.

In a Jan. 2 court filing, government lawyers said Kincaid "confessed" to leaking Smith's identity to her husband, a claim she denies. The Justice Department has stated in court filings that Kincaid's discrimination and retaliation claims are without merit. They also argued that anti-harassment protections don't apply to internal affairs work.

Kincaid has had to take out a home equity loan to fund her lawsuit. She speaks regretfully of a future retirement party that she knows nobody will throw. "You give 30 years of your life to something and you want to have fond memories of it," she says. "I just resent having to go through this. It's not the women's fault." *—Neil Weinberg and David Voreacos*

THE BOTTOM LINE A combination of policy and practice discourages federal employees from reporting sexual harassment, even in the era of #MeToo.

From England, Groceries to Your Door

Britain's Ocado is starting to thrive by selling its online shopping technology overseas

In a warehouse an hour west of London, robots zip across a grid of thousands of crates filled with groceries, picking up cartons of milk, heads of broccoli, tubs of lemon sorbet, cans of tomato soup, and whatever else Britons might want for dinner. The hundreds of robots—imagine a cross between R2-D2 and a dorm fridge—pluck the food and skitter over to banks of workers who pack the items into red plastic boxes for delivery to customers' homes. "Designing it all has been immensely complex," says Tim Steiner, chief executive officer of Ocado Group Plc, the fast-growing online grocer that owns the facility. "The infrastructure, technology, and software we needed didn't exist, so we created it."

The system has caught the eye of American supermarket giant Kroger Co., which in May bought 6 percent of Ocado and hired it to build and operate up to 20 distribution hubs as Kroger takes on Walmart Inc. and especially Amazon.com Inc. in e-commerce. Kroger hasn't settled on details of the rollout but expects to start shipping groceries from an Ocado-run warehouse in two years. "There's no doubt that Ocado's infrastructure is the best way for Kroger to deliver," says Kroger CEO Rodney McMullen.

Coming on the heels of similar contracts in France, Sweden, and Canada for everything from the robots to the software that gets groceries to shoppers' homes within a one-hour window, the Kroger deal marks a breakout moment for Ocado. The company has spent the past five years seeking, and failing to close, such deals with supermarket chains worldwide. Since November, as Ocado has started to look more like a tech company than a marginally ▶

ILLUSTRATIONS BY TOMI UM

June 18, 2018

Edited by Dimitra Kessenides and David Rocks

Businessweek.com

At Ocado's warehouse near London, each robot travels up to 35 miles per day

◀ profitable grocer, its share price has more than quadrupled. That's catapulted the company into the U.K.'s benchmark FTSE 100 stock index and confounded skeptics who said Ocado was spending too heavily and would never become profitable. "They've proven the doubters wrong," says Richard Bernstein, a fund manager at activist firm Crystal Amber Fund, which holds a stake in Ocado. "Here is a little British company that's managed to do a deal with one of the biggest global retailers."

The turnaround, CEO Steiner says, can be attributed to Amazon's $13.7 billion acquisition of Whole Foods Market last year. After the purchase, supermarket executives worldwide looked across their aisles of veggies, dairy, and meat and saw the risk of becoming the next Barnes & Noble or Borders Group. "Amazon had previously made no impact in groceries, so grocers were able to sit back and think food is different," Steiner says. "People have realized online is not going to be 1, 2, or 3 percent of their market. It's going to be 10, 20, 30, or maybe even 60 percent."

In 2000, Steiner quit Goldman Sachs Group Inc. to set up Ocado with two fellow bankers. He figured Ocado could expand by licensing its technology to grocers overseas and avoid the expensive international failures of British retailers such as Tesco Plc and Marks & Spencer Group Plc. But Steiner vastly underestimated the complexity of storing, picking, and transporting foods ranging from produce to Popsicles to Pop-Tarts and delivering it all to customers at a specified time. "With the benefit of hindsight, it was insanity," he says. "It would have just been easier to stay at Goldman trading bonds."

For the past 18 years, Ocado has battled Tesco and Walmart's Asda to win web shoppers in Britain, where more than 7 percent of grocery sales are online, about four times the share in the U.S., researcher Kantar Worldpanel estimates. Ocado gained a reputation for reliability and upmarket fare that lured young, affluent customers, but building its system was expensive: Although grocery revenue last year grew 12 percent, to £1.3 billion ($1.7 billion), Ocado has logged £847 million in capital expenses since 2011, and in 2016—its best year—it saw just £12 million in pretax profit. Around the time of its initial public offering in 2010, Philip Dorgan, an analyst at brokerage Ambrian Partners, said, "Ocado begins with 'o,' ends with an 'o,' and is worth zero."

With backing from the likes of Swedish billionaire Jörn Rausing and former George Soros associate Nick Roditi, Steiner managed to keep spending. But even as shareholders have cheered the Kroger deal, it's provided more ammunition for detractors as Ocado has declined to offer forecasts of the financial benefits for fear of compromising negotiations with other prospective partners. "There's very little visibility on the details," says Clive Black, an analyst at Shore Capital Group Ltd. in Liverpool. "What history has taught us about Ocado is don't expect much on the financial side." Steiner brushes off the criticism, saying Ocado is growing faster than ever and he's getting calls from around the world. "No one has put together what we have," Steiner says. "Once people understand the economics, the question is, 'Can I have it?'" —*Sam Chambers*

THE BOTTOM LINE As Amazon steps up its focus on groceries, Ocado has inked deals with Kroger and other overseas supermarket chains after years of struggling to sell its distribution systems abroad.

COURTESY OCADO

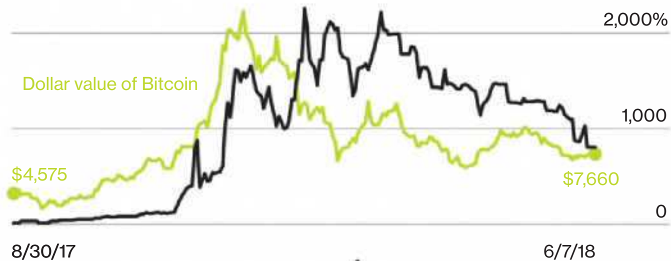
Fads

Just Add Crypto

From late 2017 to early 2018, dozens of small- and mid-cap companies tried to use the hype surrounding Bitcoin to goose their stock market value. Fruit-juice enterprises touted ties to blockchain while tobacco businesses pivoted to cryptocurrency mining. “You may get an initial pop in the stock, but generally you’re going to see these things lag behind,” says Steven DeSanctis, a strategist at Jefferies LLC. “The market is going to figure out whether or not it has the appropriate growth profile.” —*Lily Katz and Mark Glassman, with Tom Lagerman*

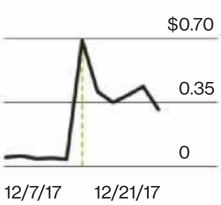
A hypothetical portfolio of 45 companies, equally weighted, that from Aug. 30 to Jan. 18 incorporated cryptocurrency or the blockchain into their businesses would have gained 800 percent since the start of that period, outpacing the S&P 500 and Bitcoin, the largest cryptocurrency by market value. Below are five of those companies that saw a pop in stock price soon after their switch:

Change in the value of a portfolio of companies that tied themselves to crypto or blockchain



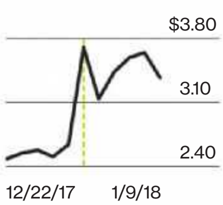
Rich Cigars Inc.

The maker of cigar products proposed changing its name to Intercontinental Technology Inc. on **Dec. 14** to focus on cryptocurrency mining.



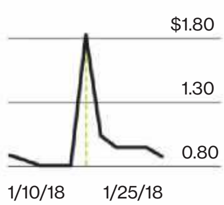
Chanticleer Holdings Inc.

The owner of Hooters and other restaurant brands said on **Jan. 2** it was planning a cryptocurrency rewards program.



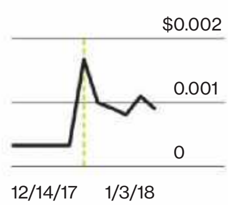
THC Therapeutics Inc.

The company that develops technology for drying and sanitizing herbs rebranded itself as Millennium Blockchain Inc. on **Jan. 18**.



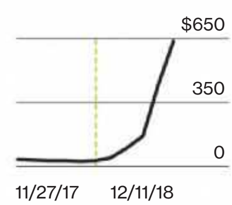
Sycamore Entertainment Group Inc.

The film company said on **Dec. 26** that it was going to launch a “blockchain project.”



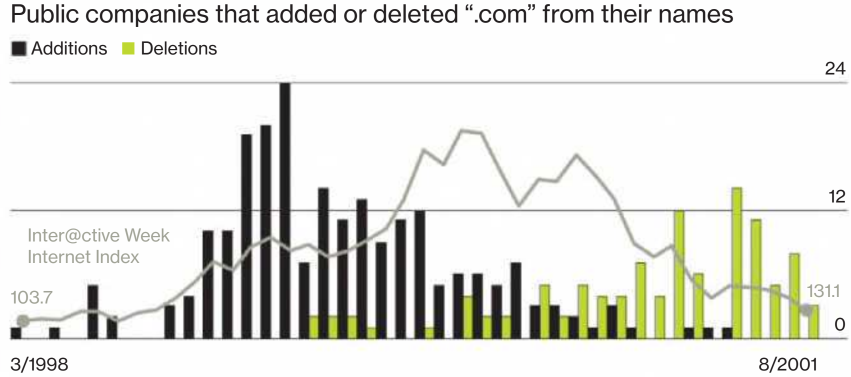
The Crypto Co.

Once a sports-bra business called Croe Inc., the company said on **Dec. 4** that it would trade cryptocurrencies.



Using buzzwords to boost returns is not a novel strategy. In the 19th century, railroad companies began using the term “air line” even though they didn’t operate airplanes. During the tech bubble, scores of companies saw their values soar then plummet after adding “.com” to their names. The tactic became so tired that some companies rallied after dropping the suffix.

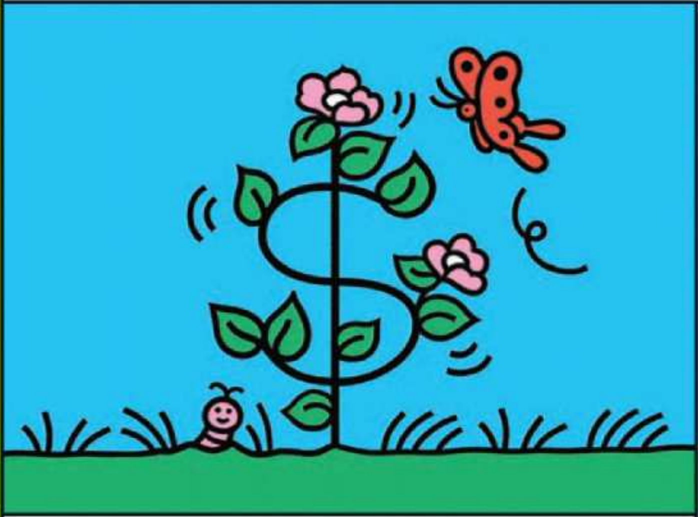
Public companies that added or deleted “.com” from their names



DATA: BLOOMBERG, JOURNAL OF CORPORATE FINANCE

Niche Investments

Is there a market for mid-cap ETFs with an ESG twist?



It's not easy being the middle child. Just ask the category of exchange-traded funds, or ETFs, tracking U.S. mid-cap companies. The SPDR S&P MidCap 400 ETF Trust, or MDY, is the largest mid-cap ETF. Despite grossly outperforming its large-cap and small-cap fund competitors, it has the least amount of assets among the three. To take that a step further, if you compare the performance of all ETFs that have ever existed, MDY would have been the best bet, according to Bloomberg Intelligence ETF analyst Eric Balchunas. "Mid-caps are the Jan Brady of the stock market, the forgotten middle child," he says. "I continue to be amazed by mid-caps, and I continue to forget about them."

Perhaps one way to lure investors to the category would be to add some sexy investment theme that's popular with millennials—such as ESG, a metric used to evaluate companies' environmental, social, and governance characteristics. That's just what Nuveen LLC did in December 2016 when it launched two mid-cap exchange-traded funds based on ESG criteria. The idea was to offer something that wasn't on the market, and clients were also clamoring to infuse their portfolios with ESG, according to Martin Kremenstein, head of retirement products at Nuveen.

ESG has drawn increasing interest in recent years from investors looking for ways to connect their values to their investments. But investors can have very different views on what constitutes a socially responsible investment, and many analysts believe avoiding companies that don't meet ESG criteria can hurt returns. "ESG can squeeze the juice out of the best-performing sectors," says Josh Lukeman, head of ETF market making in the Americas for Credit Suisse Group AG.

Also, adding an ESG strategy doesn't automatically boost interest in the mid-cap category for ETFs, Balchunas says. Some investors may express a desire for such products to appear virtuous, he says, but don't really want to risk hurting their returns by putting money in them.

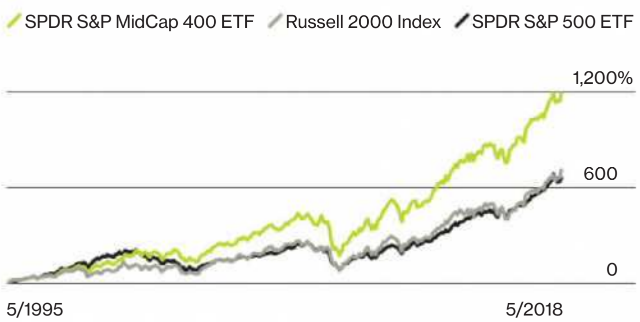
Neither of the Nuveen funds, which are marketed as NuShares, has been able to attract even $50 million in assets. One, known by the ticker NUMV, has returned less than 1 percent this year, while a broad benchmark for mid-cap companies has climbed 5.7 percent. Nuveen says the fund's benchmark is a mid-cap value ETF known by the ticker IWS, which is up just under 1 percent this year.

For now, Nuveen is sticking with the funds. One key factor is the commitment of Nuveen's owner, TIAA, the giant money manager, to ESG. "It's not something we cobbled together in the past couple of years, it's been pretty core to our DNA for a long time," Kremenstein says. TIAA has managed ESG strategies since 1990.

Nuveen's commitment is good news to some investors. Dan Juechter, chief executive officer and founder of Hunter Financial Advisors Inc., who holds client money in both of the firm's ESG mid-cap funds, says he's not looking for quick profits. "Over long periods of time, I think we're going to see that not only is it advantageous for the corporate culture to embrace this, but it's going to show in performance," Juechter says. "At the end of the day, you have to have a certain degree of faith."
—*Carolina Wilson, with Tom Lagerman*

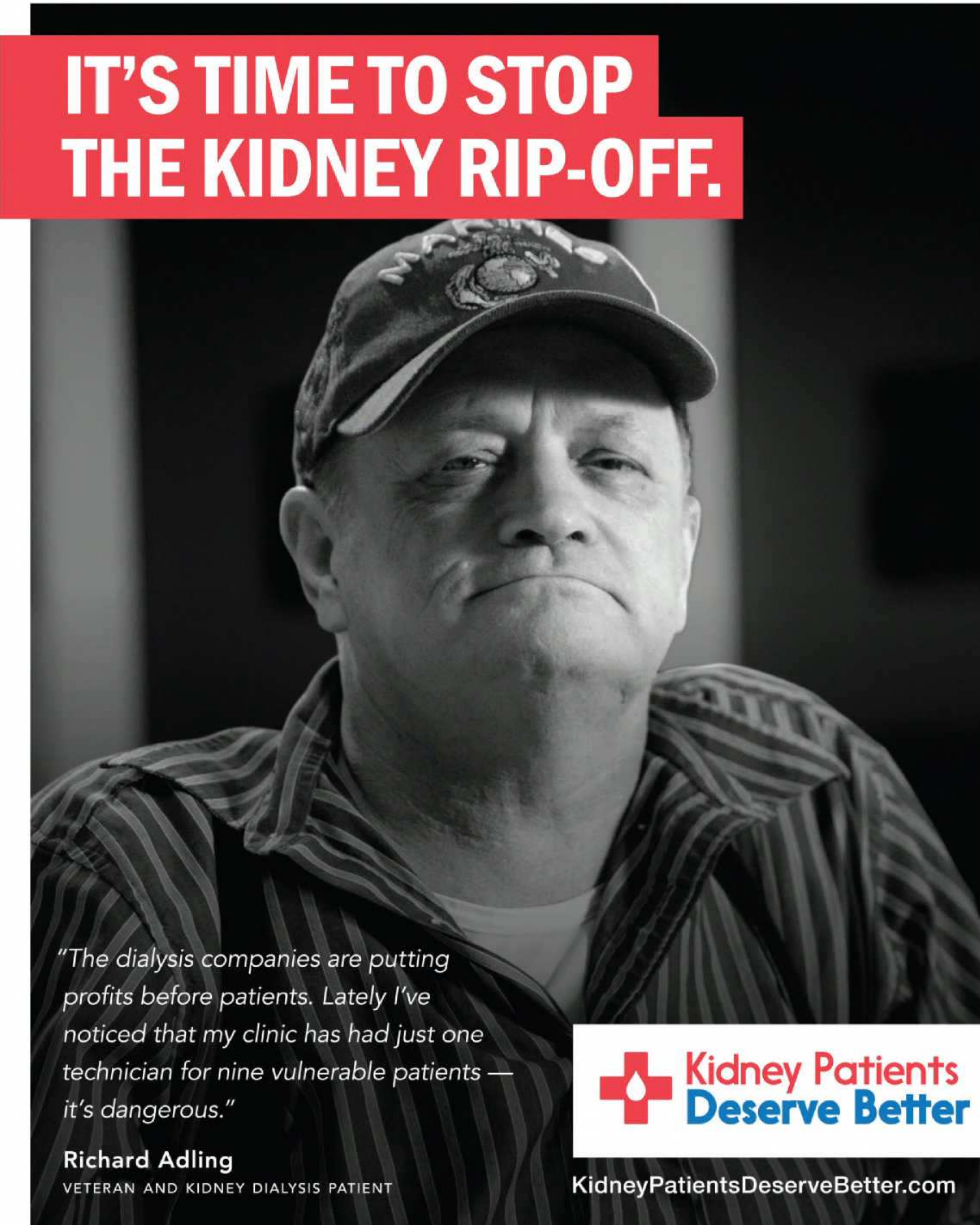
Outsize Returns for Mid-Caps

Total return at month's end since May 31, 1995



THE BOTTOM LINE Investors want more mid-cap exposure in their portfolios, but ESG criteria in mid-cap ETFs have weighed down performance and spooked away buyers.

DATA: COMPILED BY BLOOMBERG


IT'S TIME TO STOP
THE KIDNEY RIP-OFF.
"The dialysis companies are putting profits before patients. Lately I've noticed that my clinic has had just one technician for nine vulnerable patients — it's dangerous."
Richard Adling
VETERAN AND KIDNEY DIALYSIS PATIENT
Kidney Patients Deserve Better
KidneyPatientsDeserveBetter.com

The Female Libido Pill Is Back

Nothing about this billion-dollar drug's journey was easy

By Cynthia Koons
Photograph by Victor Prado

This past January, when Cindy Eckert got back the keys to her old office in Raleigh, N.C., she walked into a time capsule. An empty water glass still sat on the receptionist's desk. Piles of marketing materials were gathering dust. Boxes with three-year-old FedEx labels had never been shipped. It was the first time Eckert had entered the office since she sold—and was then pushed out of—her company, Sprout Pharmaceuticals Inc. She and her then-husband started the company to bring to market the first drug to enhance female sexual desire. Since that moment, the story of Addyi, the pink pill, has been frozen in time.

Addyi, the brand name for flibanserin, hit the market in 2015 and the buzz was instant. Inevitably, the media dubbed it "female Viagra." But Valeant Pharmaceuticals International Inc., which had just bought Sprout for $1 billion, almost immediately faced a distribution scandal having nothing to do with Addyi, and the drug was dragged down with the rest of the company. It's languished ever since. In a typical month, about 600 prescriptions are filled, compared with almost 800,000 for erectile dysfunction drugs Cialis, Viagra, and Viagra's generic equivalent.

Advocates for Addyi are quick to point out that it's far from a female Viagra, and not just because it's generating a fraction of the sales. Viagra is used as needed to improve a man's erection; it's a question of blood flow, not necessarily desire. Addyi, on the other hand, is taken daily to restore a woman's appetite for sex and treats a specific medical condition: hypoactive sexual desire disorder, or HSDD. The drug's approval in 2015 came after years of opposition and two rejections by the U.S. Food and Drug Administration. Believers said the world's women had long been waiting for a treatment of this kind, addressing a condition that had until recently been dismissed by the medical community.

"I've watched how deeply held our beliefs are around women and sex," Eckert says. "This condition is so personal, it's incredible to me that others would continue to pile on shame by saying it's not real."

The counterattack against the drug has been furious, and in many instances led by women. These forces contend that one woman's sexual abnormal is another woman's normal, and it's not uncommon for a woman's desire to wax and wane throughout her life. They say it's more typical for women to respond to their partners' overtures rather than spontaneously feel desire for sex—and that these women shouldn't be shamed by drugmakers into thinking there's something wrong with them.

"It's the story of disease mongering. The creation of a condition that's really not a condition," says Leonore Tiefer, a sex therapist and former co-director of the department of psychiatry at New York's Montefiore Medical Center. Tiefer has spent much of the past decade arguing at regulatory meetings and with op-ed pieces that there's a wide spectrum of normal sexuality. A woman with a low libido, she argues, doesn't need medication. "What's been going on for the past 10 years is a campaign on the part of Big Pharma to recruit doctors as front people and spokespeople to promote a condition that doesn't exist," she says.

Addyi all but disappeared from view in the wake of Valeant's implosion. Now it's back—and so is the debate. Eckert regained control of the drug late last year after settling one of the more bizarre lawsuits in pharma history. Valeant not only wound up handing the drug back to her at no upfront cost, it also advanced her a $25 million loan to help get the business restarted.

On June 11, Sprout relaunched Addyi with an online prescription service. Whether it becomes a blockbuster this time or fizzles, its reappearance is inspiring a public discussion of an intensely private subject: What is a healthy sex drive? And who gets to decide the answer? Is low sexual desire a medical problem or simply a fact of life? Should we give these women a drug? Is this the right one?

Until roughly 40 years ago, a woman lacking sexual desire wouldn't have had many options. She was frigid, and that was life. Scientific literature largely focused on excitement and orgasm, not desire or the absence of it. (William Masters and Virginia Johnson's groundbreaking work, *Human Sexual Response*, published in 1966, didn't get into desire disorders.) The discussion began to shift in 1977 when Helen Singer Kaplan, who'd established a prominent sexual disorder clinic in New York, wrote a paper titled "Hypoactive sexual desire" for the *Journal of Sex & Marital Therapy*. It planted the seeds for today's diagnosis: a total or near-total lack of libido that a person finds distressing. That last part is crucial: The diagnosis applies only to someone who's unhappy with her state.

Kaplan hypothesized that sexual desire originated in the circuits of the limbic brain, which governs emotions, and focused in particular on the role of neural transmitters. Decades later, brain scans would show she was on to something. Neuroimaging of patients with HSDD showed different responses to erotic stimuli from those of people who didn't have the condition. The prevailing thinking is that flibanserin works in patients with HSDD on three chemicals in the brain: serotonin, dopamine, and norepinephrine. In simple terms, it alters the relationship between inhibitory chemicals in the brain (serotonin) and excitatory ones (dopamine and norepinephrine). The drug counters the effects of serotonin to reduce inhibition signals.

Studies showed that flibanserin had a positive effect on restoring sex drive in laboratory rats. James Pfaus, a professor of psychology at Concordia University in Montreal, found that after 21 days on the drug, female rats whose sex drive had been diminished through hormone alteration started soliciting male rats for sex six to eight times in 30-minute tests, or about normal levels of desire for rats. (A "full solicitation," in rat terms, is when a female rat kicks a male in the face and runs away.) Flibanserin seemed to work in humans, too: The drug didn't increase a woman's sex drive exponentially, but rather restored it to a more normal state for her.

"If you have somebody who's depressed, and you give them an antidepressant, you don't want the drug to make them joyous and turn them into a manic state. You want the drug to return them to normal function," says Leonard Derogatis, an associate professor of psychiatry at Johns Hopkins University School of Medicine. "That's exactly what the goal is with all the sexual drugs. You don't want to have women dragging men off the street into the bushes. You want women—and women want—to return to their normal state of sexual desire."

Montefiore's Tiefer had been an animal sex researcher herself, but she dropped that line of study after she came to believe that the most important influences on human female sexuality were things pharmaceuticals couldn't touch: namely, culture and society. She got her Ph.D. in experimental and physiological psychology at the University of California at Berkeley in 1969, and her thinking is informed by the feminism of that era. "I was one of these people who was hit on the head with a meteor," she says of the movement's influence on her view of treating sexual dysfunction. "It was obvious female sexuality was about culture."

The pharmaceutical industry is much less interested in culture, of course, than it is in creating drugs to sell. Viagra, introduced by Pfizer Inc. in 1998, was an instant success, and so the company began testing it on women. The findings were inconclusive. Procter & Gamble Co. tried to get approval for a testosterone patch to help improve women's sex drives, but an FDA advisory panel recommended the agency turn it down in 2004 out of concern about side effects. A company called Palatin Technologies Inc. has been working for more than a decade on a female sexual dysfunction treatment; North American rights have been licensed to AMAG Pharmaceuticals Inc., which will go to the FDA for approval within the year. This drug, an injectable, is meant to produce desire on an episodic basis—in which case it may in fact be something like a female Viagra.

Eckert, now 45, was 16 years into a career in the pharmaceutical industry, primarily in business and marketing, when she first came across flibanserin. It was at a 2010 meeting of the Sexual Medicine Society of North America, where she was representing the company she owned at the time with her then-husband, Bob Whitehead. (The company, called Slate, brought an injectable testosterone pellet to the market, and in 2010 ran into trouble with the FDA for allegedly making misleading marketing claims. The issue was "fully resolved," Eckert says.) Flibanserin had recently been rejected by the FDA, and Boehringer Ingelheim GmbH, the German pharmaceutical company that developed the drug in the 1990s, was giving up on it. Still, when Eckert ran into Irwin Goldstein, a urologist and prominent sexual health researcher, he asked her to look at some videos he'd recently recorded of clinical test subjects ▶

Eckert at the offices of Pink Ceiling, her incubator for women-run businesses

PREVIOUS SPREAD: PYROTECHNICS: MIKE MYERS/NYSPFX; ASSISTANT: WILL JACOBSON/NYSPFX; THIS PAGE: PHOTOGRAPH BY ELINOR CARUCCI FOR BLOOMBERG BUSINESSWEEK

◀ for whom the drug worked. He'd had to ask the women for the pills back when Boehringer pulled the plug on the trial. You need to see their reactions, he told Eckert.

The women sat in his office, dejected, telling him stories about how the drug had revived their sex lives. Eckert was moved by Goldstein's recorded testimonials. She also saw an opportunity. In April 2011 she and Whitehead flew to Germany to talk with Boehringer about acquiring flibanserin. The deal they later struck was unconventional, to say the least: Eckert and Whitehead would own the drug without paying anything upfront. Boehringer got a stake in Sprout, which was created to market and sell flibanserin, and the right to royalties.

Eckert embraced the role of public crusader, attending FDA hearings and encouraging women's organizations to join the cause and fight for what the media had taken to calling the little pink pill. Eckert found the nickname patronizing; later she adopted pink as a statement of ironic rebellion. Her outfits invariably incorporate hues of searing pink, with nails to match. At investor conferences with rooms full of men in dark suits, she's easy to spot.

Initial trial results under Boehringer hadn't satisfied regulators because they didn't show that the pill improved desire when measured on a daily basis. Flibanserin backers thought that was an implausible goal. Sprout had new data for the FDA showing that the drug achieved what the company considered a more realistic outcome: Women who took it experienced increased desire on a monthly basis and also experienced from one-half to one more sexually satisfying experience (SSEs, in the lingo) per month than those taking a placebo. These were median results, reflecting that the drug didn't work for everyone. For those for whom it did work, the response was sometimes more dramatic.

Flibanserin was back in front of the FDA in 2013. That same year the American Psychiatric Association erased hyposexual desire disorder from its diagnostic manual, merging the condition with arousal dysfunction. It was a blow. Flibanserin critics used the decision to put Sprout on the defensive. If HSDD was no longer even a medical condition recognized by the APA, how could the FDA condone approving a drug to treat it? The FDA rejected flibanserin for the second time, saying it was insufficiently effective to justify its risks.

This is the point at which most drugmakers go away. A company is typically free after a rejection to come back for another shot after acknowledging the agency's terms for further consideration. But not a lot of drugs get approved after two rejections, and there's a perception in the industry that it's unwise to push back too hard.

Sprout not only didn't give up, it also contested some of the FDA's requirements for continuing, and the agency backed down from one of the most onerous, another large-scale trial. Still, Eckert and her allies saw a system that was hostile to even the premise of the drug. "I said, 'You're going to have to go after the sexism,'" says Anita Clayton, chair of psychiatry and neurobehavioral sciences at University of Virginia Health System, who's worked with Sprout as an adviser. "And so they started looking at advocacy."

In early 2014, leaders from organizations including the National Organization for Women and the National Consumer League descended on the FDA office in Silver Spring, Md., and met with agency officials. Lawmakers also lobbied the agency. "You currently have a large data package under review at the Agency for what could represent a first approval for the treatment of the most common form of female sexual dysfunction," Democratic Representatives Debbie Wasserman Schultz, Chellie Pingree, Nita Lowey, and the late Louise Slaughter wrote in a letter to the FDA. "We urge careful review."

Eckert and her allies saw a system that was hostile to even the premise of the drug. "I said, 'You're going to have to go after the sexism,'" says one adviser

Patients who'd been taking the drug in trials joined in. Amanda Parrish, a medical sales worker who lives in a suburb of Nashville, testified at an FDA hearing in October 2014 and at a meeting of the FDA advisory committee the following June. A divorced mother of four, she was in a relationship that she considered healthy, except that she had no interest in having sex. Then she read about the clinical trials.

"It was so painfully awkward," Parrish says of the couple's life before she tried flibanserin. "He was beginning to suspect I was having an affair or that I no longer loved him." Two or three weeks into starting treatments, Parrish, in her mid-40s at the time, discovered she was flush with desire. "All of a sudden, I felt the flutter, and I'm stunned, and it's noon, and I'm in my car." She asked her partner, in what she thought was a provocative way, to meet her at lunchtime. "He was so nonsuspecting that he was like 'I already ate.' And I was like 'That's not what I'm suggesting.'"

Women who didn't have access to the drug showed up, too, including some younger ones. Katherine Campbell traveled to the hearing (at the expense of organizations including Sprout) and the advisory committee meeting (at Sprout's expense). She'd had her first child at 27, and her interest in sex bottomed out soon after. "I just pleaded with the FDA," she says of the hearings. As soon as the drug was approved, she got on it. "After about a week and a half, two weeks, of using it, I noticed a difference. It was modest, it was subtle, but for me it meant I went from maybe having sex zero times, maybe once every three months, to about once or twice a month," Campbell says. "It didn't turn me into some kind of sex-crazed nympho, but here I am: I'm still married, I have a third kid."

As Sprout went on the offensive, critics of flibanserin also turned up the volume. Emily Nagoski, a sex educator, wrote an op-ed in the *New York Times* in February 2015 arguing that low sexual desire isn't a disease. "It turns out many people (perhaps especially women) often experience desire as responsive, emerging in response to, rather than in anticipation of, erotic stimulation. Arousal first, then desire," she wrote. Others focused on the potential hazards of taking the pill, particularly after release of the results of an FDA-mandated drinking study. Twenty-three men and two women were given a dose of flibanserin and then a specified amount of alcohol (the equivalent of either two or four glasses of wine, depending on their weight). Some experienced declines in blood pressure; others had to lie down. The significance of that was intensely debated.

In June 2015 an FDA advisory panel, after hearing arguments from both sides, voted 18 to 6 to recommend approval of flibanserin. In August the agency approved the drug, with the brand name Addyi. There was a caveat. Women on the drug would have to agree to forgo all alcohol.

The approval was bound to be controversial, but the alcohol ban made it much more so. Two writers for the *New York* magazine website The Cut characterized it as "more like a roofie than a love potion ... when mixed with alcohol." The drug can cause dizziness and sleepiness for some women, so much so that it has to be taken at bedtime. Proponents say, however, that the FDA went overboard with its restrictions. "It's beyond absurd. Nothing is completely safe, but we take practical precautions with any medications that have this risk," says Sharon Parish, a professor of medicine in clinical psychiatry at Weill Cornell Medicine. "There's so much scrutiny to it and so much gender bias—or so much antisexuality."

Then, two days after the approval, Eckert and Whitehead announced they'd sold their company to Valeant for $1 billion in cash. For the anti-Addyi camp, there was no better proof that Eckert was more about cashing out than helping women. "The big news was Valeant. It proved the whole thing was a sham," Tiefer says. "Selling it to a company with a record of gouging, I mean, please. I could hang up my shoes."

Eckert's defense is that she doesn't need to defend herself. "At that moment in time, given all the information that I had, it was the best outcome," she says. Valeant's chief executive officer, J. Michael Pearson, "was going to keep all my people on my team. It was going to be decentralized. We were going to get to be Sprout. And we were going to have a bank account that we had never operated under."

The arrangement was short-lived. Not long after the deal closed, Pearson told Eckert it was time to think about moving on. Slowly but surely, other Sprout employees were let go until the Raleigh office was empty.

That might have been the end of Addyi. But when Sprout sold itself to Valeant, Eckert struck a royalties deal based on the expectation that sales could hit $1 billion in the drug's first two years on the market. Instead, Addyi was on track to take in less than $10 million in 2016. In a lawsuit, Sprout investors accused Valeant of not fulfilling its commitment to market the drug. The two sides settled late last year in an unusual agreement: Valeant, which not much earlier had made Eckert a very wealthy woman, would hand back Sprout and Addyi in exchange for the investors' dropping the suit. Valeant also gave her a $25 million loan to get things started in exchange for a small cut of royalties from future sales. For a second time, she'd won control of the drug without having to write a check.

Eckert is doing everything she can to keep tight control of Addyi's rebranding. Her first move is slashing the monthly price—it will fall to $400 from $800, and patients without insurance coverage will pay no more than $99 for a monthly prescription. That's a virtually unprecedented move for a brand-name drug; drugmakers generally raise prices annually. She's also presenting new data to the FDA that she hopes could lead to loosening of the drinking restriction. Canada approved the drug earlier this year with far less stringent rules around drinking.

To sell Addyi, Eckert is turning to telehealth. Through a website designed in—what else?—hot pink, women will be put in contact with doctors affiliated with an independent network. The doctors will conduct consultations by phone and, for those whom they diagnose with HSDD, write prescriptions. Women will be able to fill them at drugstores or through a mail-order pharmacy.

The telehealth approach is efficient and private. It also seems likely to produce a lot of positive diagnoses for HSDD—which will further inflame the debate. Eckert's view is that her customers, rather than engaging with a medical establishment that tends to view women's desire problems with skepticism, will be turning to doctors sympathetic to their condition and trained to recognize it.

The model (minus the skepticism) already exists for men. Sites such as Hims and Roman peddle the generics for Viagra and the hair loss drug Propecia. The marketing pitch for those businesses is straightforward: Now you can get these pills without talking to your regular doctor about your sexual problems.

Popping a little pink pill may never be the answer for some women. "It's selling a Band-Aid for a case of sepsis," Tiefer says. Try telling that to women who've already gotten their sex drives back thanks to Addyi, Eckert would say. And those who may be about to. "My simple answer is if you don't have HSDD, lucky you," she says. "If you have it and you don't want to take Addyi, good for you. It's all about choice." Ⓑ

For more on the future of health and the business of getting there, go to: bloomberg.com/prognosis

Bibi's Blues

Buoyed by strong approval ratings, beset by corruption allegations, Benjamin Netanyahu could be heading for his fifth term as Israel's prime minister—or to court

By Matthew Campbell and Gwen Ackerman

Illustration by Garrett Young

As the main weapons buyer for the Israel Defense Forces, Shmuel Tzuker spent years selecting everything from trousers to drones for the country's troops. Just about anything the IDF buys will be used in action sooner or later—probably sooner—a reality that Tzuker, a ramrod-straight former infantry officer, understood better than most. He'd spent 31 years in the army, overcoming a severe wound from an Egyptian artillery shell to go on to fight in virtually every Israeli theater.

In the summer of 2014, Tzuker was preoccupied with a request from the navy for four patrol vessels suitable for policing the Mediterranean coastline, protecting natural gas platforms, and assisting in Israel's next conflict. Surface ships play a minor role in the country's defense doctrine—Hezbollah and Hamas are not maritime powers—so the size requirements were modest. The plan was to spend about $400 million on ships that displaced 1,200 tons of water. (By comparison, the U.S. Navy's front-line destroyers displace about 9,000 tons.) Few European or U.S. builders would bother with such a contract, so Tzuker began soliciting bids from South Korea.

One afternoon, Tzuker got a call in his office, behind the high walls of the Kirya, the central Tel Aviv compound that is Israel's equivalent to the Pentagon. A senior officer was on the line: The navy's commanders had changed their minds. They wanted to give the order directly to a longtime supplier, Germany's ThyssenKrupp AG, and increase the ships' size to 2,000 tons—far larger than anything in the current fleet, but a size that would be attractive for the company to build.

In six years on the job, Tzuker had never seen the IDF change course so completely. Canceling the tender could expose Israel to lawsuits from prospective bidders. And larger ships would mean spending more to operate them and to expand the jetties at the IDF's naval base in Haifa. Alarmed, he started writing letters of protest to defense officials, demanding to know what justified a sole-sourced deal with ThyssenKrupp.

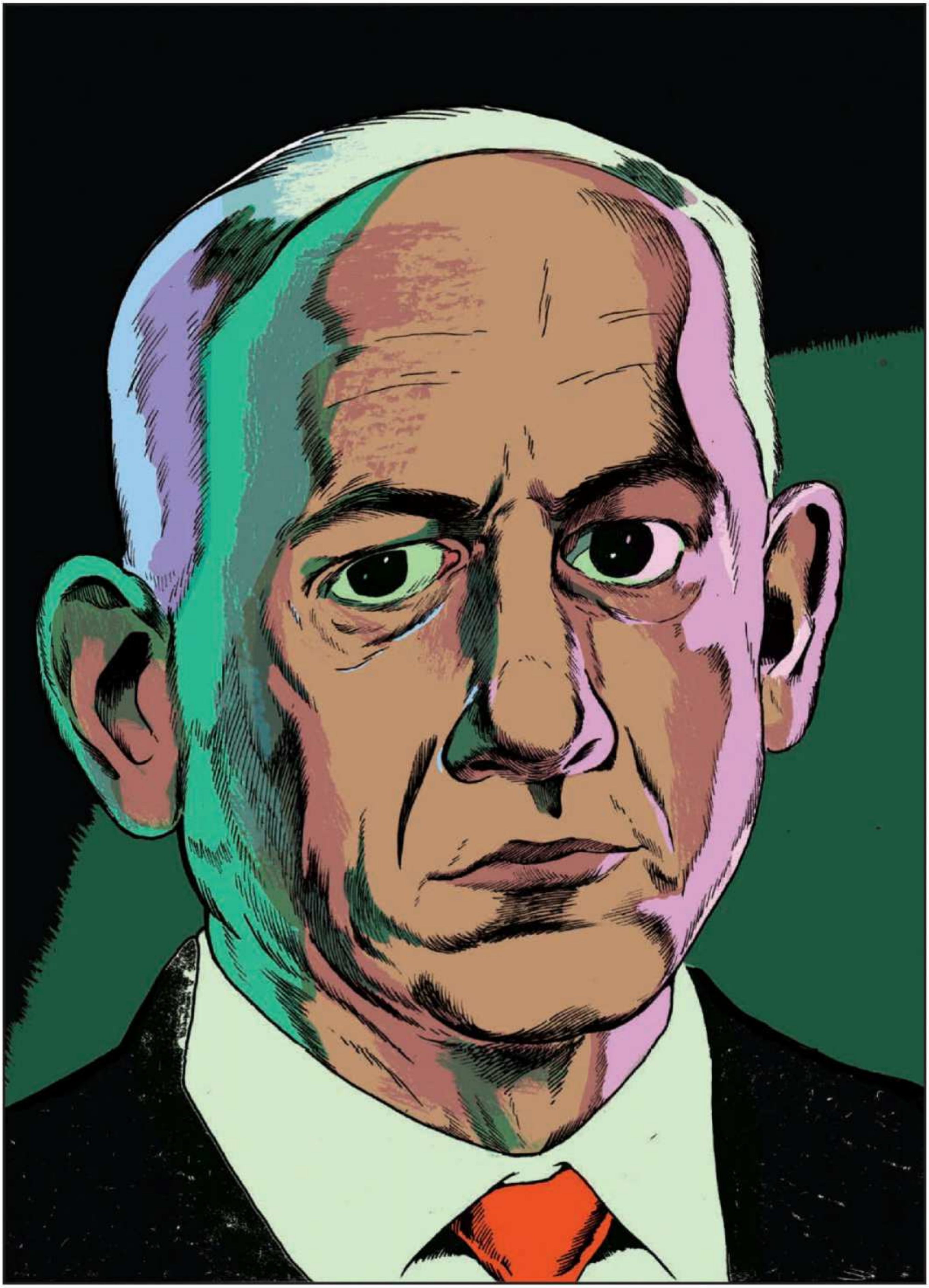
The pressure on Tzuker to sign off soon became immense. At one point he was summoned to meet with a top security adviser to Prime Minister Benjamin Netanyahu, who Tzuker says told him that if the deal didn't go ahead, it could cause a diplomatic rupture with Germany. Overwhelmed, he eventually gave in. The order, worth about $500 million, was announced in 2015. The following year, Israel agreed to buy three more ThyssenKrupp submarines, more than a decade before the old ones would need to be replaced.

What Tzuker didn't know was that Netanyahu and ThyssenKrupp's local salesman, Miki Ganor, had a friend in common: David Shimron, the prime minister's personal legal adviser, second cousin, and longtime confidant, who was also serving as Ganor's lawyer. Shimron's brother-in-law and legal partner, Yitzhak Molcho, meanwhile, was serving as Netanyahu's primary foreign policy emissary. Today, Shimron and Molcho are entangled in a sweeping police investigation into possible corruption at the highest levels of Israel's security apparatus, even as their lawyers deny wrongdoing on their behalf and say the men weren't involved in naval negotiations.

Prosecutors say Netanyahu isn't a target of the naval investigation, but police have recommended he be indicted in two other criminal inquiries and have questioned him in a third. In all, four investigations into the prime minister or his closest associates are under way. The allegations encompass bribery, influence-peddling, and exchanging regulatory favors for positive media coverage. Together they amount to the most sprawling set of corruption scandals in Israel's 70-year history and the greatest political threat Netanyahu has faced.

Although the prime minister remains popular, he seems genuinely vulnerable, and not only to losing his job. If prosecutors proceed with charges and win, he could be jailed. Netanyahu has denied any wrongdoing, proclaiming, "There will be nothing, because there is nothing." He's stuck to that line even as three former advisers have cut deals to testify in the investigations. In a response sent to *Bloomberg Businessweek* on Netanyahu's behalf, his office wrote: "Prime Minister Netanyahu's decisions are based exclusively on considerations of Israel's national interests, foremost its security, and not on favors to anyone."

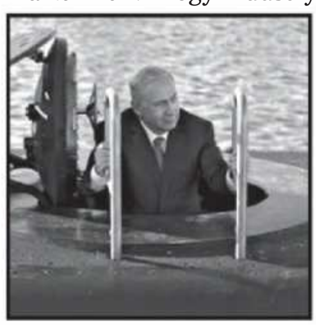
With legal threats mounting, Netanyahu has lashed out against the very system he leads, accusing investigators of being unethical, biased, and determined to bring him down regardless of the evidence. His allies in the Knesset, Israel's parliament, have proposed laws that would restrict the powers of police and judges to hold politicians to account. To his ▶



◀ critics, this assault risks undermining Israel's claims to being a vibrant, Western-style democracy—one that shares crucial values with its closest allies. Remove those common principles, and the relationships Israel needs to survive in a dangerous neighborhood could become much harder to maintain.

Netanyahu has been a dominant figure on Israel's right since the early 1990s, when he became leader of the Likud party after a decade as a diplomat. Compared with most high-ranking Israeli politicians, Netanyahu—who's ubiquitously referred to in Israel by his nickname, Bibi—was something new: perfectly fluent in English thanks to a childhood spent in the Philadelphia suburbs, educated at MIT, and an alumnus of Boston Consulting Group Inc. He'd also served in Sayeret Matkal, an elite special-forces unit.

His rise coincided with seismic developments in Israeli politics. Prime Minister Yitzhak Rabin of the Labor Party concluded the Oslo accords in 1993, committing Israel for the first time to reaching a final settlement with the Palestinians. Netanyahu stridently opposed the deal, warning in a *New York Times* op-ed that it would give the Palestinians an opportunity to eliminate Israel using "Lebanese-style terror havens" in the Gaza Strip as bases.



Netanyahu inspecting a submarine in 2016

He narrowly won the election that followed Rabin's 1995 assassination, embarking on a term that saw little diplomatic progress but significant economic change, with the government working to lift foreign exchange restrictions and privatize state-controlled companies. His ruling coalition collapsed after three years, and in 1999 he was defeated by Labor's Ehud Barak. After stretches as a senior minister in the next right-wing government, then back in opposition, Netanyahu returned to the prime minister's office in 2009. He's proven since to be expert at uniting the unruly constellation of religious voters, security hawks, and free-market conservatives who make up the Israeli right.

He has also operated with unprecedented attention to image-making. At the outset of his first term as prime minister, a colleague recounts, he complained about his portrayal in the media, adapting a line from Lyndon Johnson: "If I walked across the Sea of Galilee, the headline in *Yedioth Ahronoth*"—the establishment paper of record—"would be, 'Bibi Can't Swim.'" He treats his job as one to be performed in all senses of the word, sometimes rehearsing speeches and television appearances down to the hand gestures. A former adviser recalls observing as a Likud minister arrived at a media briefing and sat down in one of two chairs at the front of the room. A Netanyahu aide quickly asked the minister to switch to the other one. Watching the news that night, the adviser saw why: The first seat was higher, making Netanyahu, who's a little under 6 feet, look taller on camera.

Netanyahu's tenure has also been marked by the outsize influence of his wife, Sara. She accompanies her husband on virtually every foreign trip—highly unusual for an Israeli political spouse—and once sparked controversy when she was formally identified as "First Lady," a title that doesn't exist in Israel. Reporters accompanying Netanyahu on a visit to Canada in 2010 were astonished to find Sara huddled with her husband's closest aides after an ill-fated naval raid in the Mediterranean produced a crisis in relations with Turkey—an unheard-of level of access. A few years ago, she told one adviser—who at first thought, mistakenly, that she was joking—that she believed her husband was the greatest-ever leader of the Jewish people. Moses and Judah Maccabee would, presumably, compete for second place.

While Netanyahu's accomplishments aren't biblical in scale, they're nonetheless considerable. The economy is booming, growing at an annualized rate of 4.2 percent in the first quarter of 2018, and unemployment is at its lowest level since the 1970s. The country boasts a vibrant technology industry, with hundreds of domestic startups competing for brains with Apple, Facebook, Google, and Intel, all of which have large research and development operations there. Tel Aviv, which experienced its last suicide bombing in 2006, feels these days more Miami than Middle East, studded with skyscrapers and jammed with smartly dressed overseas visitors.

Netanyahu has been most transformative as a diplomat. Even as he allows the steady expansion of West Bank settlements, he's engineered a wide-ranging, if unofficial, detente with Saudi Arabia and other Arab states, which appear to care more about challenging Iran than about the fate of the Palestinians. When Israel launched strikes on Iranian forces in Syria in May, it did so with the tacit support of much of the region. The enormity of this shift is hard to overstate. An Israel quietly cooperating with Saudi Arabia would have seemed inconceivable to the founders of a country that fought four wars with its neighbors in its first 25 years of existence.

With the average Israeli richer and safer than ever before, under normal circumstances Netanyahu would be coasting to reelection in 2019. But as Israelis have been discovering, these aren't normal circumstances.

In February, Israeli police recommended that Netanyahu be charged with fraud and bribery. If prosecutors agree, an indictment will follow. The recommendation stems from two cases, one of which traces to July 2016, when police detained a U.S.-born man named Ari Harow at Ben-Gurion International Airport. They were investigating whether Harow, a former chief of staff to Netanyahu who'd recently sold a consulting firm he owned, had inflated the price to cover an illicit payment.

BAZ RATNER/REUTERS

"If I walked across the Sea of Galilee, the headline

Searching Harow's home computer, they found something remarkable: a recording of Netanyahu in conversation with Arnon Mozes, the owner of *Yedioth Ahronoth*. On it, the prime minister complained about *Yedioth*'s criticism of him and seemed to suggest that, were the paper's line to soften, the government could provide legislative benefits to Mozes.

Police concluded that Netanyahu had offered to back a bill that would kneecap *Israel Hayom*, a rival paper that generally supported him. Owned by Las Vegas billionaire Sheldon Adelson and distributed for free, it had grown large enough to challenge *Yedioth* as the country's most popular daily. At the time, the Knesset was considering a law that would ban the large-scale circulation of free papers, ostensibly to protect traditional media. The legislation never passed, and *Yedioth* continues to be critical of the prime minister, but the tape provided the basis for the police to recommend charges for Netanyahu and Mozes, both of whom deny wrongdoing. Should prosecutors decide to indict, the state will have a crucial witness on its side: Harow has agreed to testify in the investigation of his former boss.

The second case turns on gifts of cigars, pink Champagne, and jewelry, collectively worth as much as $235,000, that the Netanyahus received primarily from Arnon Milchan, an Israeli-born film producer, as well as from James Packer, an Australian billionaire. Police allege that the prime minister worked to advance Milchan's interests, for example by asking the finance ministry to extend the period that expatriates are eligible for a tax break that shields their overseas income when they return home—a regulation so closely identified with the producer that it's nicknamed the Milchan Law. (The change hasn't been implemented.)

The Netanyahus in Addis Ababa

ZIV KOREN/POLARIS

In addition to the fraud and bribery recommendation for Netanyahu, police have advised that Milchan be charged with bribery. In a statement, Milchan's lawyer said his client "did not receive nor expected to receive any consideration for his gifts whatsoever" and that "there was no fault in his conduct." Netanyahu's office called claims that the prime minister advanced Milchan's interests "absurd." A spokesman for Packer said, "There is no allegation of wrongdoing on Mr. Packer's behalf."

But it's a third ongoing police investigation involving Netanyahu that may prove most damaging for him. The same month that police recommended he be charged in the other two cases, they picked up Shaul Elovitch, the controlling shareholder of Bezeq, Israel's largest telecommunications provider, along with Elovitch's wife. Investigators were looking into a possible quid pro quo involving regulatory decisions and favorable media coverage.

The case centers on an unusual decision Netanyahu made, shortly after being reelected in 2015, to appoint himself minister of communications. According to Israel's state comptroller, he neglected to disclose his 20-year relationship with Elovitch. Then he installed as the ministry's top bureaucrat Shlomo Filber, an aide whose reputation for discretion is so total that he's been nicknamed "the black box."

One of the ministry's first moves under Filber was to grant approval for Bezeq to buy a satellite-TV provider also controlled by Elovitch, allowing him to exit a money-losing investment. Filber also allegedly let Bezeq executives read and propose changes to confidential policy documents and moved toward scrapping costly regulations that forced Bezeq to keep its mobile and fixed-line operations separate. At the same time, Israeli media have reported, the editor of Bezeq's popular news site was pressured to become more favorable to Netanyahu.

According to a report by Israel's Channel 10 News, investigators have obtained text messages between Netanyahu's and Elovitch's wives suggesting that Sara Netanyahu was demanding changes at the news site and referring to aid the government had provided to Bezeq. (Representatives for the two women said the report was misleading.) The comptroller's office has said it's found documents indicating Netanyahu had wide influence over decisions related to Bezeq while he was communications minister. He resigned from the position in February 2017.

Through their lawyers, the Elovitches denied wrongdoing. Netanyahu was questioned by police for several hours in early March; Sara was grilled simultaneously in a different location to prevent the pair from coordinating their stories. They were interrogated again a few weeks later. More ominous for the prime minister: Filber has agreed to be a state's witness, too.

Netanyahu's office denied that his relationship with Shaul Elovitch constituted a conflict of interest. "Mr. Elovitch is an acquaintance, not a friend," its statement read. "The Prime Minister never made decisions on behalf of Elovitch or Bezeq Telecom, not for favorable coverage or anything else."

In terms of sheer financial scale and symbolic import, none of the three cases compares with the investigation into the more than $2 billion in contracts Netanyahu's government has awarded to ThyssenKrupp. Tampering with defense is, for obvious reasons, unforgivable in Israel. That's especially true when the infrastructure in question relates to what officials obliquely call the country's "most important strategic assets"—Israel's never-declared nuclear arsenal.

ThyssenKrupp has been an important military supplier to Israel for decades, encouraged by Germany's postwar policy of unconditional support for Israeli defense. The company built Israel's current six-vessel undersea fleet, with the ▶

… would be 'Bibi Can't Swim'"

◀ cost partly borne by the German government. (In keeping with a national taboo on nuclear weapons, Germany officially professes ignorance of the subs' purported capabilities.) As Netanyahu was returning to the prime minister's office in 2009, ThyssenKrupp ditched its longtime representative in Israel, a former air force general. Its new salesman would be Ganor, a real estate investor with limited military experience.

Two years later, Ganor hired Shimron, Netanyahu's cousin and lawyer, to represent him in a range of dealings. Shimron is viewed in political circles as the prime minister's unofficial right-hand man, entrusted with the Netanyahus' legal affairs for decades and even with leading coalition negotiations after the 2013 election. The partners at Shimron's law firm include his brother-in-law, Molcho, who until recently served as a volunteer special envoy for the prime minister's office, handling sensitive discussions with the U.S., the Palestinians, and others.

ThyssenKrupp enjoyed extraordinary success with Ganor as its representative. In 2012, Israel ordered its sixth submarine from the company, over the objections of generals who said the existing fleet was sufficient. In 2015 it placed the surface-ship order opposed by Tzuker, the procurement chief. Around this time, Netanyahu proposed acquiring three more ThyssenKrupp submarines—to be ordered immediately even though they wouldn't be needed until the late 2020s. Moshe Ya'alon, then the defense minister, was furious at the idea and, backed by senior IDF figures, refused to support the purchase. After a series of further disputes, Netanyahu pushed out his recalcitrant minister in May 2016. Shortly afterward, the Israeli cabinet moved to proceed with the order, with the German government again picking up part of the tab.


Meni Naftali, Netanyahu's former bodyguard, leads a protest against him

Obstacles to ThyssenKrupp seemed to be dropping away rapidly. At one point, Israeli generals got wind that the company was in advanced discussions to sell submarines to Egypt. They were surprised not to have heard earlier: Germany typically seeks to determine Israel's position before providing sophisticated military equipment to its neighbors. Defense officials were concerned enough that they deputized Israel's president, whose duties are largely ceremonial, to inquire with Chancellor Angela Merkel during a planned visit to Berlin. Merkel was surprised, according to a former government official with knowledge of the meeting, and responded that Germany believed it had received a green light. While neither government has disclosed who signed off, Yair Lapid, a rival party leader who previously served as Netanyahu's finance minister, told Channel 12 News, "The people who dealt with this were the partners Shimron and Molcho—the people closest to the prime minister."

An investigation into the naval deals was under way by early 2017. Shimron was detained for questioning last year, as were a range of senior military officers and other Netanyahu advisers, while Molcho has been interrogated. Ganor, who through his lawyer declined to comment, has agreed to become a state's witness.

In an emailed statement, Shimron's lawyer said his client "did not represent either Mr. Ganor or ThyssenKrupp Marine Systems in their negotiations with the State of Israel." Molcho's lawyer said the envoy "was not involved in any way with any matter related to submarines," whether Israeli or Egyptian. A representative for ThyssenKrupp wrote that when the corruption allegations emerged, the company "suspended our business relationship with our sales representative Mr. Ganor." ThyssenKrupp is cooperating fully with Israeli authorities, the representative said, adding, "It is very important to us to get to the bottom of the allegations."

The possibility that taxpayer money might have funded a corrupt arms deal has spooked Germany enough that, according to a person with knowledge of the negotiations, officials came close to terminating the three-submarine deal before it was concluded last year. Instead, they inserted a provision into the contract allowing it to be canceled if Israeli investigators determine it was the product of corruption.

Netanyahu was questioned in the ThyssenKrupp case on June 12, although police have reiterated that he isn't a suspect. "Prime Minister Netanyahu does not know Mr. Ganor and knew nothing of Shimron's contacts with him or with [ThyssenKrupp]," Netanyahu's office wrote. "David Shimron and Yitzhak Molcho never mentioned such contacts to the Prime Minister."

In private, even some political figures who believe Netanyahu's professions of ignorance say that such inattention would reflect badly on him. His critics are considerably more skeptical. Ya'alon, who declined to be interviewed for this story, has said there's "no way" Netanyahu wasn't involved.

On a cool Saturday night in March, a few hundred protesters gathered outside a shopping center in Petah Tikvah, an eastern suburb of Tel Aviv. Most were middle class and secular, some holding placards with one hand and dogs on leashes with the other. Others came with pink, inflatable plastic bunnies harking to the perceived timidity of Avichai Mandelblit, Israel's attorney general, who lives nearby. It was the 29th consecutive week protesters had gathered to demand that Netanyahu be tried for corruption.

A few days earlier, police had announced a state's witness agreement with Netanyahu's former head of communications, bringing the tally to four—a lot for an Israeli probe. "We will fire Netanyahu, and not by elections," Meni Naftali, a former bodyguard of Netanyahu's and manager of his official residence, bellowed from a small stage. "We will continue to fill the streets!" Periodically the crowd broke into a simple chant, meant to be heard across the neighborhood: "The people demand justice!"

The fact that no Israeli is above the law has long been a point of pride for both left and right—former Prime Minister

PHOTOGRAPH BY JONAS OPPERSKALSKI FOR BLOOMBERG BUSINESSWEEK

"We will fire Netanyahu, and not by elections"

Ehud Olmert recently finished a jail term for a bribery charge dating to his time as mayor of Jerusalem, and a former president did time for rape. But critics say that Netanyahu's actions in recent months have risked undermining that norm. In a video posted on Facebook in March, he claimed, without evidence, that police were telling prospective state's witnesses "there is one way out–smear Netanyahu. It doesn't matter that what you say are outrageous lies." In another online missive, he accused the national police chief, whom he'd appointed, of repeating "delusional and deceitful" allegations. (Netanyahu's office said he "has not criticized the police except on the matter of incessant leaks.") And at a raucous Likud rally last year, he claimed journalists were fomenting a "governmental coup" by applying "unrelenting pressure on law enforcement agents so they'll serve an indictment at all costs."

The ruling coalition has also discussed legislation that would bar investigations of a sitting prime minister for most crimes, including corruption. In December the Knesset passed rules constraining the police's ability to recommend indictments and comment publicly on their work. (Current inquiries are exempt.) Another piece of proposed legislation would allow parliament to overrule Supreme Court decisions striking down laws.

Miki Ganor in court in Petah Tikvah last July

Combined with Netanyahu's bucking of other taboos–his coalition also passed restrictions on foreign-funded nongovernmental organizations, and he bitterly divided IDF veterans by calling for the pardon of a soldier who killed a subdued, disarmed Palestinian attacker–critics see a systematic effort to undermine what were once broadly agreed-upon values. Attacks on law enforcement or the press used to be advanced only "on the extreme margins of those who weren't elected," Tzipi Livni, an opposition politician and former foreign minister, recently told lawmakers. "The minute a red line is crossed, it no longer exists."

What worries Netanyahu's opponents most is that his legal troubles aren't harming his popularity. His approval rating has only grown amid the recent bloody clashes on Israel's borders with Syria and Gaza and the decision to move the American Embassy to Jerusalem. For the time being he's likely to leave office only if he resigns or his parliamentary colleagues oust him. According to the justice minister, he wouldn't have to step down even if he were indicted.

His popularity is all the more distressing to the millions of Palestinians who live isolated behind a network of walls, fences, and electronic surveillance equipment. The Palestinian territories' per-capita gross domestic product is just under $3,000, less than one-tenth that of Israel proper, according to the World Bank. In Hamas-ruled Gaza, the unemployment rate is above 40 percent. No serious peace talks are on the agenda, and relations have settled into a grinding status quo, with each side blaming the other for the lack of progress. "If he's going to leave now," Nabil Shaath, a senior Palestinian Authority foreign policy adviser, says of Netanyahu, "I'm not going to mourn him."

If the Israeli leader's obsession with image, illiberal tendencies, and legal troubles have echoes with those of his American counterpart, they've also forced similar reckonings. Prominent Likud members and other would-be Netanyahu allies are asking such questions as: What moral flaws are acceptable in a prime minister whose agenda one otherwise supports? Which institutions must be shielded from partisan attack? When does political combat start to damage the fabric of the democracy?

Yoaz Hendel has grappled with these issues more intimately than most. Over breakfast in a Jerusalem cafe, the slim former naval commando explained how he went from serving in Netanyahu's inner circle to becoming one of his most outspoken critics. Seven years ago, Hendel was a 36-year-old reserve officer and university lecturer who'd recently published a book called *Let the IDF Win* when he was summoned to a meeting at the prime minister's residence.

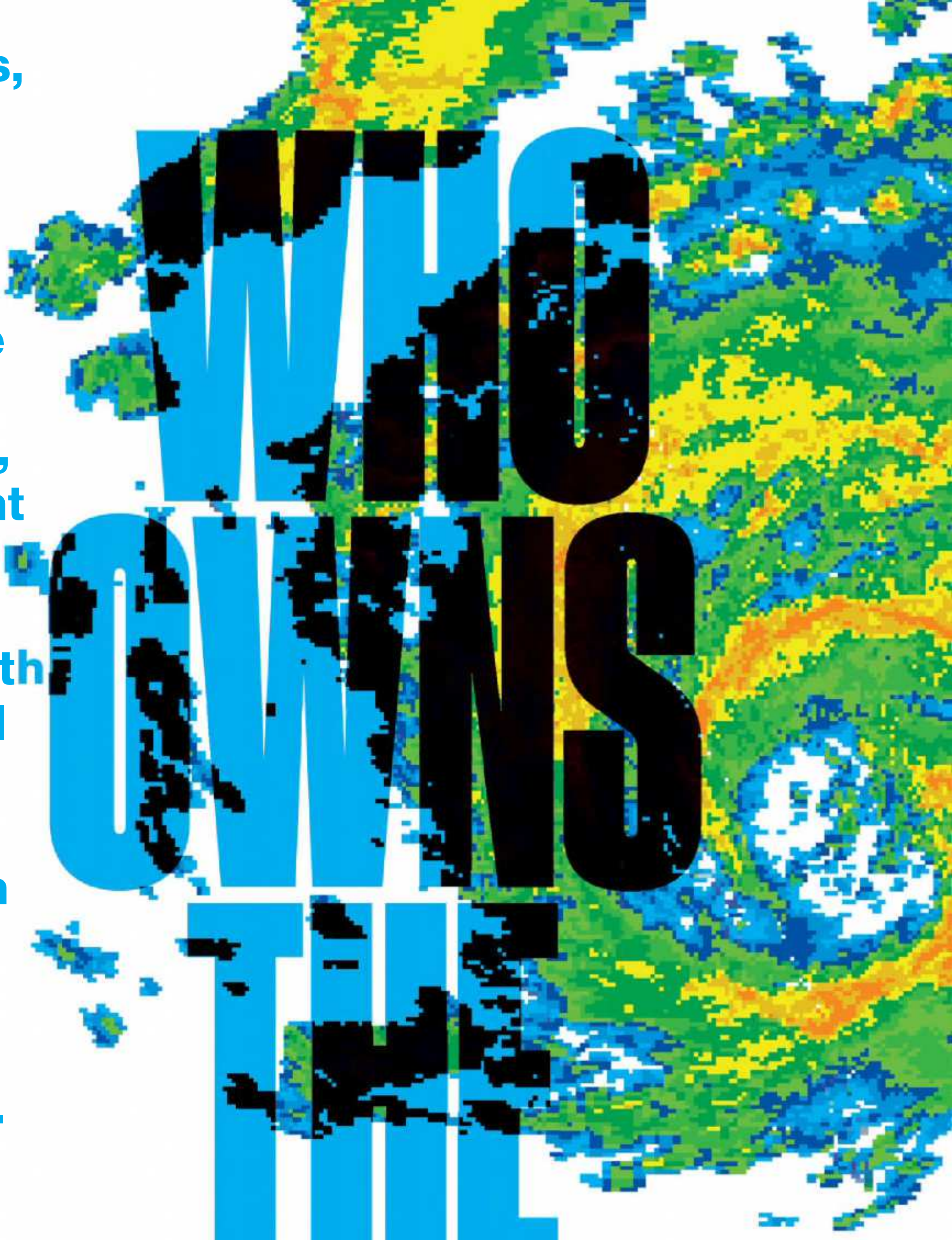
Netanyahu, it turned out, had been impressed by a talk show appearance Hendel had made, seeing in him a telegenic advocate for hawkish views on Israeli security. The prime minister had a surprising offer: How would Hendel like to become his director of communications? Hendel was dumbfounded. He was a military historian with no political experience; before accepting, he had to Google the position to see what it involved.

Hendel spent eight months working for Netanyahu, initially relishing the opportunity to see politics firsthand as he wrote speeches and led Israel's public diplomacy efforts. But he quickly grew concerned that his boss was becoming overconfident of his own instincts and those of people who shared his views. He left in 2012, after a clash with Netanyahu, and now runs a center-right think tank. Late last year, he organized a rally in Jerusalem so Israeli conservatives could protest Netanyahu's assaults on law enforcement.

"I feel the need to protect the state from the right," he lamented at breakfast. Israel, he said, "is a young society," still defining the shape of its democracy and the extent to which it will remain faithful to founding values that were never codified in a written constitution. The dilemma for Hendel is whether to continue supporting a leader whose economic and security policies he believes in, but whose actions are otherwise deeply troubling. "We can't ignore his successes," he said, "and we can't ignore his failures." B —*With Yaacov Benmeleh, Fadwa Hodali, and Udi Segal*

TOMER APPELBAUM

WHO OWNS THE WEATHER?



Barry Myers, President Trump's pick to lead the agency responsible for weather predictions, doesn't want the government to compete with commercial forecasting companies. Like his own

By Devin Leonard and Brian K. Sullivan

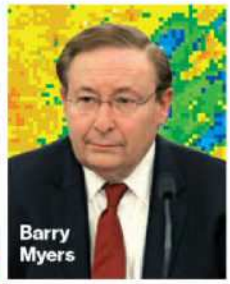
In 2005 a representative of AccuWeather, the commercial fore-casting company, visited the office of then-U.S. Senator Rick Santorum. It might have been Joel Myers, AccuWeather's founder, or his brother Barry Lee Myers, the company's general counsel. Santorum can't remember, even though they look nothing alike: Joel is thin, with wavy black hair and Clark Kent glasses; Barry, stocky with thinning brown hair, is the sharper dresser. Still, neither brother would have been a stranger. AccuWeather Inc. is based in State College, Pa., and Santorum, a Pennsylvania Republican, had known the two for years through politics and Penn State University's alumni network. "If you're a Penn Stater, you know Joel and Barry Myers," Santorum says.

What Santorum does recall about the meeting is that his visitor had a gripe about the National Weather Service. The NWS was giving away forecasts on its website, radio stations, and elsewhere, when businesses such as AccuWeather charged its clients for theirs—never mind that AccuWeather relied on the service's free data to formulate its own predictions. Santorum agreed that commercial weather companies deserved protection. That year he introduced a bill calling for the NWS to issue forecasts via "data portals designed for volume access by commercial providers." Critics said the NWS would have been barred from making any public predictions beyond severe storm warnings, which private forecasters didn't want to be responsible for. Bob Ryan, a veteran TV meteorologist, says, "A lot of people were very concerned. They said, 'AccuWeather wants to take over the weather service.'" The legislation died in committee.

Santorum and AccuWeather downplay what the bill's effects would have been, but it's the boldest attempt by the Myers family in a three-decade quest to undercut the scope of the service's mission. The NWS is the best-known branch of the National Oceanic and Atmospheric Administration, which has toys that anyone in the private sector would envy: 18 satellites, some of which gather data on things like cloud formations and lightning strikes; low-flying planes that calculate the amount of water trapped in snow to predict the chances of havoc-wreaking spring floods; and, in extreme cases, three "hurricane hunter" planes to fly into storms and take measurements. Twice daily, the agency releases weather balloons that chart wind speed, air pressure, and temperature.

In all, NOAA collects 20 terabytes of data a day; NWS computers spit out a free, global forecast every six hours. Fishermen and other sailors rely on it to determine if it's safe to go out to sea. Natural gas traders check it because millions of dollars are at stake if the weather changes suddenly. Commercial forecasters such as AccuWeather use it to provide specially tailored analyses for home-improvement stores.

After the bill's collapse, Barry, now AccuWeather's chief executive officer, took a more conciliatory approach, proselytizing about the need for all parties involved in forecasting—the government, academics, businesses—to collaborate. Yet he remains a champion of limiting the agency's public role, opposing its use of social media to spread warnings. "We fear that he wants to turn the weather service into a taxpayer-funded subsidiary


Barry Myers

MARK WILSON/GETTY IMAGES

of AccuWeather," says Richard Hirn, attorney for the National Weather Service Employees Organization.

Myers may soon be in a position to do that. In October 2017, President Trump nominated him to be NOAA's administrator. In December the Senate Committee on Commerce, Science, and Transportation, which oversees the NWS, approved him on a party-line vote. "If confirmed, I think he will serve as an outstanding administrator," Senator Patrick Toomey, a Pennsylvania Republican, said when he introduced Myers at his November confirmation hearing.

Adversaries say that in the grand tradition of Trump administration members blurring the line between personal interests and public ones, Myers will use the position to enrich AccuWeather while muzzling an agency that people rely on to make life-or-death decisions. And unlike Environmental Protection Agency Administrator Scott Pruitt, who merely has close ties to companies he regulates, Myers co-owns one that could directly benefit from his policies. "He has a track record of working to undermine NOAA's ability to keep people safe," says former NOAA Administrator Jane Lubchenco, who served under President Obama. "And he has egregious and unreconcilable conflicts of interest due to his family business."

Barry Myers, 74, grew up in Philadelphia, the son of a former union shop steward at a local RCA Corp. factory. When he was 19, his father committed suicide, and the family was evicted from its home. "We survived with the help of government surplus food," he said during his hearing.

Myers and his two brothers went to Penn State. Joel, who's four years older than Barry, went on to get a Ph.D. in meteorology at the school and founded the company that became AccuWeather in 1962 while still there. After getting his undergraduate degree in business and later a law degree from Boston University, Barry became AccuWeather's general counsel in the late 1970s. A former AccuWeather executive, who spoke on the condition of anonymity, says Barry was responsible for policies such as suing workers who left before their employment contracts expired. (AccuWeather wouldn't comment on this.) Evan, the youngest brother, joined the company in 1968, rising to chief operating officer in 1997. (The brothers declined to be interviewed for this story.)

Using NWS data, AccuWeather created forecasts for climate-sensitive clients such as ski slope operators. It factored in the amount of moisture in the air, which could determine if snow would be powdery or slushy. The company also pioneered the business of crafting local forecasts for newspapers, repackaging government data with stylish graphics, and provided spiffed-up material to radio and TV stations, too.

Today the business contracts with 700 newspapers, 900 radio stations, and 100 TV stations. (Bloomberg LP is a client.) A private company, it doesn't disclose profits. ▶

◀ No one knows what the commercial weather industry is worth—even the American Meteorological Society (AMS) lacks reliable stats. A 2008 study by an NWS-sponsored program valued the industry at $5 billion. Barry, in a 2016 interview with Bloomberg News, said, "Five billion is severely underdone."

From the get-go, AccuWeather went after the NWS, promising clients that its forecasts were more accurate. The service has to publicize all likely outcomes of a storm's path, but AccuWeather has the luxury of offering laserlike projections for private clients. The claim of superiority is "part of their business model," says Edward Johnson, a former NWS policy director. "It annoyed the forecasters at the weather service." The way Myers saw the competition, "it was like the Post Office and Federal Express"—AccuWeather was FedEx—"except that it would be like the Post Office offering to carry every letter without postage," he recalled in 2013 congressional testimony on improving NOAA's forecasting.

Myers began a lobbying campaign to corral his nemesis. In 1990 he helped found the Commercial Weather Services Association. The Weather Channel, AccuWeather's main competitor, didn't join. "We had a good relationship" with NOAA and the NWS, says Raymond Ban, a former Weather Channel executive vice president.

Jeff Wimmer, CEO of FleetWeather and another of the association's founders, remembers prowling the halls of Congress with Barry looking for ears to bend about their issues with the NWS. "We'd say, 'Hi, we are from the private weather industry,'" he remembers. "The senators and their staffs would say, 'The what?'" He says he and Myers explained that the NWS was threatening private companies by giving away forecasts for nothing.

The message resonated in Washington, where Newt Gingrich and the Republican Revolution stormed into power in 1994. The next year, Representative Dick Chrysler, a Michigan Republican, proposed doing away with not only the weather service but also the Department of Commerce, of which NOAA is a part. Chrysler said he didn't need the NWS when he could turn on the Weather Channel—not realizing, apparently, that the network got its weather data from the service.

Joel told a Senate committee looking at NOAA's privatization opportunities in 1997 that it didn't need to jettison the NWS. But he said the U.S. could save money if the agency focused on its "core mission," which included climate observation and generating computerized forecasts. It should leave the dissemination to companies such as AccuWeather, he added, which would provide predictions to clients at a "very modest cost" and to the public via newspaper or cable subscriptions. Rhonda Seaton, an AccuWeather spokeswoman, says that today, the vast majority of the public gets its weather not directly from the government, but instead from companies like AccuWeather, which has an ad-supported website and mobile app. If you don't want to see an ad on the app, you can make a one-time payment of $3.99.

Barry tried to rally the industry around a bill that critics feared would handcuff the NWS. At a 2004 AMS panel discussion, he said, "When some say I advocate laws to govern and control the National Weather Service, they are right." A year later the Santorum bill was introduced. Senator Bill Nelson, a Florida Democrat, said it would force the NWS back to the "pre-internet era." Meanwhile, the *Record*, a New Jersey newspaper, detailed $13,740 that AccuWeather workers had given to Santorum and the Republican Party in the three most recent congressional elections, along with $60,000 the company spent on Washington lobbying. Bryan Gulley, a Nelson spokesman, says the senator persuaded colleagues on the Commerce Committee to kill the bill. Santorum and Seaton deny that he did the company's bidding in exchange for contributions. "It was not an AccuWeather-inspired bill," says Seaton.

"We fear that he wants to turn the weather service into a taxpayer-funded subsidiary of AccuWeather"

After the measure failed, AccuWeather started trolling the NWS, says Gulley. He says it began using nationalweatherservice.org, which directed visitors not to the NWS, but to the company's products and services. Even though the NWS complained, Gulley says the site remained active until last fall. "It's deceitful," says Hirn, the attorney for the NWS union. "A guy who comes up with that should not be running a federal agency." Myers recently told the Commerce Committee that he had nothing to do with the site's creation, which he says predates the Santorum bill, and that he did his best to respond to the NWS's requests to deactivate it.

In 2007, Barry succeeded Joel as AccuWeather CEO. (Joel stayed on as chairman.) Under Barry's leadership, AccuWeather became more of a media company, with a larger presence online and on smartphones. Its app is the world's third-most downloaded one for weather, according to App Annie, a company that tracks the market. He introduced products such as 45- and 90-day weather forecasts, which many in the profession find laughable.

Barry also launched an AccuWeather cable network on Verizon FiOS to compete with the Weather Channel. The companies had never gotten along. AccuWeather accused the Weather Channel of degrading the meteorological profession when it started naming winter storms. Now their rivalry took on a sharper edge: The Weather Channel mocked AccuWeather's network for missing a tornado in Oklahoma because it was airing a segment on a baby hippo. Seaton calls the knock "misleading."

In 2008, AccuWeather named Conrad Lautenbacher, a recently departed NOAA administrator appointed by President George W. Bush, to its board. Myers was soon appointed to a NOAA working group that gave him a role in shaping policy. He helped fashion one in 2012 that restricted the organization's ability to develop mobile apps for the public. "Barry was very helpful in drafting that," says Johnson, the former NWS policy director. While Myers discouraged expansion into smartphones at the NWS, he promoted it at AccuWeather. Several years later he negotiated a deal between the company and a subsidiary of the China Meteorological Administration to put forecasts on smartphones. According to AccuWeather, its predictions can be accessed on 2 billion mobile devices worldwide.

At an AMS meeting in 2013, when an NWS employee spoke enthusiastically about how the service used social media to alert people during Hurricane Sandy, Myers was less excited. He complained that the NWS was enriching Twitter Inc. and Facebook Inc. by sharing information on their platforms—"government contracting without going through the contracting process," he called it. At another society gathering, says a former Obama appointee to NOAA who declined to be named, Myers protested that fog forecasts for the nation's 175 major ports—intended to prevent collisions involving large commercial ships—were yet another example of providing a service that the private sector should be doing instead. AccuWeather disputes this account.

After Trump's win, NOAA employees worried about the damage that the president-elect, who famously dismissed climate change as a hoax, might do to the agency. At a post-election gathering, says the Obama appointee, a colleague joked that Trump might put someone such as Myers in charge. Everybody laughed. "We were like, never in a million years!" says the appointee. They were mortified to discover that Myers was a candidate. It may have helped that AccuWeather spent $100,000 on Washington lobbying in 2016.

Democrats on the Commerce Committee, worried that Myers would try to reduce the role of the NWS to that of a back-end provider for AccuWeather, told the White House that he was an unacceptable choice. Trump nominated him anyway last October. Myers promised to sell his AccuWeather shares if confirmed. When committee staff members pressed him privately for details, says one who spoke on condition of anonymity, Myers told them that he planned to sell them back to the company and that AccuWeather's board was working to value his ownership stake. (According to a document obtained by *Bloomberg Businessweek*, Myers values his stake at just more than $57 million. AccuWeather declined to comment.) The staffer says Myers promised to give the committee details once they were available, along with names of directors, few of which are public besides Barry's two brothers, Lautenbacher, and Joel's son, Dan Myers. Seaton says AccuWeather won't elaborate on who serves on its board "out of respect for the privacy of its directors."

Myers arrived for his Nov. 29 confirmation hearing wearing a blue suit and red tie. He assured the senators that he believed human behavior caused climate change. He also vowed to sever his ties with AccuWeather. "If confirmed, I will be joining a new team," he said, adding that his wife, Holly, AccuWeather's director for executive projects, would also leave her post. Myers shrugged off the Santorum controversy. "People say I was trying to privatize" the NWS, he said. "My advocacy was always [for] a level playing field." After the hearing, committee staffers again asked Myers about divesting. According to the staffer, Myers said AccuWeather hadn't authorized him to divulge that information.

The next month, three former NOAA administrators appointed by Democrats—Lubchenco, Kathryn Sullivan, and D. James Baker—told the *Washington Post* that they were worried about Myers's nomination. "Resigning and selling his shares does not alleviate the conflict of interest," Lubchenco tells *Bloomberg Businessweek*. "These are family businesses." She notes that Joel owns a hedge fund, Weather Prophets, that makes financial bets on the weather and would benefit greatly from advance notice of pending NWS announcements. (Seaton says Myers disputes that there's a conflict of interest and describes Joel's operation as a "family investment fund.") Baker is concerned that AccuWeather's deal with China could have national security implications.

The one former NOAA administrator who actively supports Myers is Lautenbacher. "It's the right guy for the right time," he says. Of course, Lautenbacher is paid to be on AccuWeather's board, and he's likely to have business before Myers if the Senate confirms him. Lautenbacher is CEO of GeoOptics Inc., a private satellite company that won a $695,000 contract in 2016 to provide data to NOAA and employs the same lobbying group, Capitol Meteorologics, as AccuWeather does.

The White House had to resubmit Myers's nomination in January because he wasn't confirmed in 2017. Again, the Commerce Committee approved him on party lines. Because several Democratic senators are contesting his nomination, Majority Leader Mitch McConnell must schedule as many as 30 hours of debate before the full Senate can vote on him. In the interim, the Trump administration tried to reconfigure NOAA without Myers. Earlier this year the White House proposed shaving $1 billion from the agency's $5.7 billion budget. Trump signed a $5.9 billion spending plan for NOAA instead.

If Myers is growing impatient, he's not showing it. In January, at the AMS's annual meeting in Austin, he strolled through the cavernous hall by himself like just another vendor—which, for now, he is. Myers headed for AccuWeather's bright orange booth at the edge of the hall, where one of his smartly dressed meteorologists sat at a computer asking visitors where they were from and providing local forecasts. He deflected questions about the confirmation process with a simple "no news." A Commerce Department spokesman said, "Despite not one but two favorable votes out of the Senate Commerce Committee, Barry Myers still is awaiting a floor vote on his nomination."

Myers had more to say in early February when AccuWeather itself was in the news again. On Feb. 6 users on the East Coast, the Gulf of Mexico, and the Caribbean got an early morning alert that a tsunami was headed their way. The NWS took to Twitter to say it wasn't true—and later, without naming AccuWeather, said a test warning had been mistakenly forwarded. Myers blamed the mishap on the government, saying the warning had been mislabeled. The following day, the NWS told the Associated Press that it had looked into the matter and found the warning was properly coded after all. Myers and the NWS were—surprise—tussling again. Ⓑ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PURSUITS

The Be-All, End-All Guide to Summer Parties

Chefs, DJs, shopping experts, and even a "professional introducer" share advice for hosts and guests alike

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Edited by
Chris Rovzar

Businessweek.com

Dinner Party Do's and Don'ts

Flynn McGarry, the chef boy wonder, dishes out eight tips for a fabulous feast
By Kate Krader

If you're looking for dinner party advice, the last person you'd think to ask would be a teenager. Unless it's Flynn McGarry: The celebrated 19-year-old chef started his first dining club at 12, cooking French Laundry-inspired dishes out of his tricked-out bedroom at home. His new restaurant, Gem, on Manhattan's Lower East Side, features a family-style vibe, and each meal is served to no more than 18 guests. Here he offers his well-honed advice for summer entertaining.

DO A PRACTICE RUN

"Rule No. 1: Never make a dish cold for a party. You need to have tried that recipe at least once before you put it out there for others."

PICK A MOTIF

"I like to theme a dinner around a dish, like paella or fondue. It's easier to plot the rest of the meal from there. And when people ask the inevitable 'What should I bring?' you can steer them toward a matching bottle of wine or booze. (Think: German riesling with schnitzel.) But mix it up: You don't want to be known for just one thing. It's boring for guests, and it's even more boring for you."

MAKE UP YOUR OWN HOUSE RULES

"Let guests choose their own seats, but partners cannot sit together. Encourage people to change places at some point. I like movement."

LET 'EM WATCH

"Guests tend to gravitate toward the kitchen. Prepare for that—you should have snacks and a bar set up for guests who wander in."

REMEMBER THE LAW OF THREE

"My rule of thumb is go with three dishes that are simple and tasty,

ILLUSTRATIONS BY JACI KESSLER LUBLINER

rather than trying too hard on a single dish that may not work out. Have a big platter of cheeses and meats for snacks, then a big bitter green salad with fruit, walnuts, and a cheese in there. Then a meat, probably a roast, with salsa verde, because it always looks and tastes good. Add a couple of roasted vegetables on the side, maybe a bowl of pasta. And for your hungrier guests, keep a helping of good bread on the table."

STOCK, STOCK, STOCK YOUR BAR

"I can't legally drink in the U.S., so these are just my own observations: Don't assume people are going to bring enough wine, even if they say they are. It's also good to have a well-stocked, or even moderately stocked, bar cart. Do not attempt wine pairings at home. Leave that to the professionals. Just pour wide-ranging bottles that will pair with the most dishes. And if you really want to impress, be prepared to serve a good coffee or tea afterward."

EMBRACE FAMILY-STYLE

"Individual servings are a recipe for disaster. But don't assume one big platter for a group will work, either. The dish will get cold and beaten up as it moves around the table. Plan a platter of food for every four guests. (Make sure you have enough platters, large plates, and serving utensils.) Put any sauces in a bowl to serve on the side, otherwise everything suffers. And always be prepared to add a guest. Dinner parties are the most fun when there's too many people."

DON'T MAKE DESSERT

"It's one more thing to do, and no one really needs it. Plus, it's the chance for a guest to bring one and feel like the hero."

Limit Yourself To Three

Different times of day call for very distinct cocktails. To make a host's life easy, the co-founder of New York's PDT bar, Jim Meehan, shares a trio of simple strategies to last until the final guest leaves

DAYTIME
Serve a spritz

THE NEO-VENETIAN

2 oz. Aperol
1 oz. chilled prosecco
1 oz. chilled club soda
½ oz. San Pellegrino Aranciata or other sparkling citrus drink

Add ingredients in order to a chilled rocks glass. Add ice. Garnish with half an orange wheel. Drink all day.

EVENING
Mix 'n' match G&Ts

PLYMOUTH GIN & TONIC

2 oz. Plymouth gin
4 oz. chilled East Imperial Burma tonic water

Use a chilled Collins glass, ice, and a lime wedge for this highball, a mix of juniper-forward gin and citrusy tonic.

HENDRICK'S GIN & TONIC

2 oz. Hendrick's gin
4 oz. chilled Fentimans Botanical tonic water

Replace lime with cucumber here and garnish with a dried rose. (Hendrick's is distilled with both.) The result is a cooling, sweet, and floral mix.

FORDS GIN & TONIC

2 oz. Fords gin
4 oz. chilled Fever Tree Mediterranean tonic water

Use a chilled red wine glass and garnish with a lemon wheel. You'll enjoy the earthy, herbal aromas almost as much as the lightly spicy flavor.

AFTER DARK
Liven up your Negroni

STOPLIGHT

1½ oz. Tanqueray 10 gin
1 oz. Dolin dry vermouth
¾ oz. Campari
¼ oz. Strega

This Negroni riff is named for the colors of a traffic light—the red Campari, yellow Strega, and green Tanqueray bottle—you see while mixing it. Stir with ice and strain into a chilled coupe, twist a lemon peel over the surface, and garnish with a cucumber wheel.

The key to a successful taco spread is variety in textures and flavors: spicy vs. cool, creamy vs. crunchy. It's also an ideal time to mix homemade sides with store-bought ones such as pickled onions and pepitas (pumpkin seeds without shells).

It's Taco Time!

Paul Kahan and Julie Warpinski from Chicago's Big Star share three core recipes, plus rich trimmings so your guests can build their own
Photograph by Paola + Murray

CARNE ASADA TACOS
Makes about 10

3 lb. flank steak
1 cup salsa de molcajete (recipe on page 74), plus more for serving
Vegetable oil
Salt and pepper
Warm tortillas

In a baking dish, cover steak with salsa de molcajete. Refrigerate for 1 to 8 hours. Heat grill to medium-high and brush the grates with a little oil. Season steak on both sides with salt and pepper. Grill steak for 7 to 10 minutes per side, turning once, until medium rare. Transfer to a cutting board; let rest for 5 minutes to allow juices to settle. Thinly slice steak on the diagonal and serve with additional salsa de molcajete and warm tortillas, plus toppings of your choice.

MOLE CARROT TACOS
Makes about 10

½ cup mole spice (recipe on page 74), plus more to taste
2 lb. carrots, stemmed and cut lengthwise into quarters
Olive oil
Juice of 1 lime
Warm tortillas

In a pot of boiling water, stir in ½ cup mole spice blend. Add carrots to water and simmer until al dente, about 3 minutes. Drain and let cool. Toss carrots in olive oil; add more mole spice to taste. Heat grill to high. Carefully arrange carrots on it and lightly char for about 4 minutes. Let cool, then cut into 1-inch chunks and toss with lime juice. Serve with warm tortillas and choice of toppings.

FOOD STYLIST: MAGGIE RUGGIERO. PROP STYLIST: ANNA SURBATOVICH

MEXICAN-STYLE ASPARAGUS
Serves 6 to 8

1 lb. asparagus, tough ends discarded
2 tbsp. olive oil
Salt and pepper
Juice of 1 lime
2 tbsp. mayonnaise or aioli
1 tbsp. crumbled Cotija or grated Parmesan
1 tsp. preferred chile spice blend

Heat grill to high. Toss asparagus with oil and season with salt and pepper. Arrange on grill or use a grill basket. Cook until lightly charred, about 5 minutes. Transfer to platter, top with lime, mayonnaise, cheese, and spice.

LIME YOGURT
Makes 1 cup

8 oz. plain Greek yogurt
1 finely grated garlic clove
½ chopped shallot
2 limes, zested and juiced
Salt

In a bowl, mix yogurt with garlic, shallot, and the lime zest and juice. Season with salt and whisk to combine.

BIG STAR SALSA VERDE
Makes 4 cups

8 tomatillos, husked and rinsed
4 serrano chiles
1 garlic clove
1 tbsp. vegetable oil
1½ tsp. lime juice
Salt

Heat grill to high. Char tomatillos. Transfer to a bowl and let residual heat soften them. In a small saucepan, cover chiles and garlic with water. Simmer over medium heat until tender. Drain, transfer to blender with tomatillos, and blend until slightly chunky. In a sauté pan, heat oil over medium heat. Add tomatillo sauce and simmer until slightly thickened, about 5 minutes. Add lime juice and season with salt.

Recipes continue ▶

◀ Continued from previous page

ACHIOTE GRILLED FISH TACOS
Makes about 10

2 lb. firm skinless white-fleshed fish fillets, such as snapper, grouper, or striped bass, cut into 4-inch strips
Salt
1 cup achiote paste (recipe follows)
Vegetable oil
2 limes, halved
Warm tortillas

In a baking dish, coat fish pieces with achiote paste. Let stand for 20 to 30 minutes. Heat grill to medium-high and brush grates with oil. Grill fish until it's cooked through and flakes easily, 3 to 5 minutes per side. Transfer to a platter and squeeze lime on top. Serve with warm tortillas and choice of toppings.

ACHIOTE PASTE
Makes 2 cups

Note: You can substitute store-bought achiote paste for this one. Then add orange juice, lime juice, cinnamon, and cumin to taste.

3 tbsp. annatto seeds
¾ cup orange juice
3 tbsp. coriander seeds
3 tbsp. cumin seeds
8 cloves
8 allspice berries
3 tbsp. black peppercorns
1½ tbsp. ground cinnamon
3 tbsp. dried oregano
¼ cup lime juice
6 garlic cloves

In a small bowl, soak annatto seeds in orange juice until softened, 15 minutes. In a small skillet, toast coriander, cumin, cloves, allspice, peppercorns, and cinnamon over medium heat until fragrant, 2 to 4 minutes. Let cool, add oregano, then use a spice grinder to finely grind. Transfer to a small blender and add annatto seeds, orange juice, lime juice, and garlic and blend to a paste. Add water if necessary to thin.

CHIPOTLE YOGURT
Makes 2 cups

1 tbsp. honey
1 canned chipotle in adobo, mashed to a paste
¼ cup buttermilk
1 cup lime yogurt or plain Greek yogurt
Salt
Lime juice (optional)

In a bowl, combine honey with chipotle and buttermilk. Mix in yogurt. Season with salt and lime juice if necessary.

SALSA DE MOLCAJETE
Makes 4 cups

2 or 3 jalapeños
5 plum tomatoes
1 Spanish onion, halved
4 garlic cloves, skins on
2 tbsp. lime juice
Salt

Heat grill to medium-high. Grill jalapeños, tomatoes, and onions until skins are charred. Transfer to a bowl and cover with plastic wrap. Carefully grill garlic in a grill basket until skins darken. Let cool, then peel and add to bowl. Using a food processor or mortar and pestle (the molcajete), blend until lightly chunky. Add lime juice and salt to taste.

BIG STAR GUACAMOLE
Makes about 5 cups

5 avocados, skinned and pitted, in large chunks
1 small red onion, diced
1 minced serrano chile
1 minced garlic clove
¼ cup lime juice, plus more to taste
¼ cup chopped cilantro
Salt
Radishes, julienned (optional)

In a bowl, combine avocado with red onion, serrano chile, and garlic clove. Mix well with a fork until still chunky. Add lime juice and cilantro and season with salt. Garnish with radishes and more cilantro. Serve with chips and salsa.

MOLE SPICE
Makes 2 cups

½ cup granulated sugar
¼ cup brown sugar
¼ cup garlic powder
¼ cup salt
2 tbsp. paprika
2 tbsp. ancho chile powder
2 tbsp. pasilla chile powder
1 tsp. chile de árbol powder
¼ tsp. ground coriander
1 tsp. ground cinnamon
2 tsp. black pepper
2 tsp. dried oregano, preferably Mexican

In a bowl, combine all ingredients.

Can't Cook? No Problem

With private chef startups and meal-by-mail services, there's never been a better time to outsource your party prep

MEALS AS GOOD AS THE FRENCH LAUNDRY

The Bay Area's **Componere Fine Catering** was started by Ethan Mantle, who worked under Thomas Keller at his Yountville, Calif., restaurant. Mantle can bring his team of highly trained chefs anywhere in the U.S. and whip up a Tuscan picnic or a South Carolina barbecue. Most require a minimum of $5,000 and can start at $200 per person. *componerefinecatering.com*

AN ITALIAN FEAST

Major Food Group's **Carbone at Home** experience, says co-founder Jeff Zalaznick, is a customizable meal that includes restaurant highlights such as carpaccio Piemontese, tortellini al ragu, and veal Parmesan. It's cooked by a Carbone chef, with service led by one of the restaurant's famously charming captains. *events@majorfood.com*

$10,000 WORTH OF PASTRAMI

For its 130th anniversary, **Katz's Delicatessen** premiered a $10,000 VIP Experience that will feed 150 people and includes 100 pounds of its slow-smoked 30-day pastrami, plus 30 pounds of corned beef. The deli will even fly two veteran cutters to your event to slice and serve on-site. *katzsdelicatessen.com*

ENDLESS OYSTERS

West Coast oyster king **Hog Island** has been delivering bivalves for almost 35 years, directly from Pacific farmers. An order of 1,000 oysters with two shuckers starts at $2,800. *hogislandoysters.com*

YOUR OWN BURRATA BAR

The **Culinistas**, a network of private chefs in the New York tri-state area, offer five dinner packages that start at $8,000. Special flourishes include a build-your-own-burrata "bar" with toppings such as grilled peaches or toasted pistachios. *theculinistas.com*

A MEAL BOX FOR THE WHOLE GANG

If you really want to cook but don't want to do the shopping yourself, try the latest from **Blue Apron Inc.** In May the food delivery startup introduced a dinner-party box for six, starting at $99, that features recipes for strip roast or salmon fillet. *occasions.blueapron.com*

ILLUSTRATIONS BY JACI KESSLER LUBLINER

Help! I'm At a Party Alone

A professional introducer shares the secrets of social navigation
By Mark Ellwood

After a divorce from her law partner husband a decade ago, Rachel Fay found herself floundering at gatherings. "I was given a glass of wine and left to get on with it," Fay, 59, recalls. "And I would leave parties feeling that I hadn't met anybody. It wasn't very much fun." So Fay, who lives in London, began introducing herself around and rapidly recognized her innate aptitude for social lubrication; eight years ago, she turned the skill into a full-time job. (You can find her services at rachelfay.co.uk). Since then, she's eased the way at events like London's prestigious Queen Charlotte's Ball. Here's her advice on how to tackle a party solo.

Holding two drinks can be your best offense—and defense. Grabbing two glasses of wine from the bar can provide "social armor," Fay says. Scan the room as if you're waiting for someone; that'll make people more likely to chat with you. And when someone does open up a conversation, you can offer them the second glass. (On the flip side, if an unwanted conversationalist pops up, you are already holding your excuse to go looking for someone else.)

Read body language before stepping in. If people are calm, laughing, and leaning in, don't interrupt. But, Fay says, "if you can see from their body language that two people have got stuck talking to each other—they're usually standing farther apart with their bodies facing outward, toward the room—they'll be delighted to have you come up and say hello."

Not sure how to introduce yourself cleverly? You don't need to. "My usual opener is, 'May I say hello?' because—guess what?—no one ever says go away." Also, the oldest tricks are sometimes still the best: "I like to compliment people," Fay adds. "Say, 'That's a pretty brooch,' for example, because a compliment usually draws a smile." Plus, she'll feel compelled to say something kind back.

Don't just stand there. "Find the host and ask them to introduce you to someone," Fay says. That's the simplest solution to having no one to talk to. "If the hosts are shy, too, the best thing is to choose someone who's standing on their own," approach him, and note that you're in the same situation, she adds. Conversation will flow easily, "as they will be glad of the company." Worst-case scenario, you can talk about how awkward the party is.

Escape conversations courageously. If you get trapped, "you don't have to say you're going to the loo or to get a drink," Fay says. "Just ask the person you're stuck with, 'Do you know other people in the room?' If they say, 'Yes, I know Ed Jones over there,' you can say, 'Would you be kind enough to introduce me?' And if they say no, you respond, 'Well, let's go and say hello to that group over there.'" Then you've helped out the both of you, Fay says. "Be brave!"

Oh, but what if you've forgotten someone's name? No one cares. Just apologize and ask for it again.

Which Grill Is Right For You?

There's one for every type of backyard boss
By Matthew Kronsberg

FOR THE TECHNOPHILE

Your grilling style: Constantly monitoring

If you want the ease of gas but the flavor of wood, a pellet grill is still an underappreciated option. The **Traeger Timberline 1300** will automatically feed more fuel to maintain your desired temperature, so you don't have to do it yourself. You can even monitor the action on your phone over a WiFire app. (Downside: Now the Russians can get you through your grill, too.) *$2,000*

FOR THE SOCIAL BUTTERFLY

Your grilling style: More style than grill

Good looks and great-tasting food shouldn't be an either-or proposition. The **Everdure Cube**, released under the aegis of British chef Heston Blumenthal, comes in fun colorways that are enhanced with practical touches such as bottom venting to keep it from overheating whatever it's standing on. *$200*

FOR THE CLASSICIST

Your grilling style: Easy, low, and slow

The latest 24-inch **Weber Summit** updates the famed kettle design with a black porcelain-enameled finish and air-insulated, double-walled construction, so it can hold its temperature for as long as 10 hours. A liquid propane self-ignition system upgrades it further, but people will still think you're chill. *$1,700*

FOR THE SHOWOFF

Your grilling style: Fickle

The Kalamazoo K1000HT Hybrid Fire can burn charcoal and wood, or you can leave the drawer empty to turn it into a turbocharged gas grill. Customize one of the four laser-cut surfaces with your initials, so every steak and burger comes off the fire monogrammed. It's sure to impress your son's friends from boarding school. *$28,880*

FOR THE CULTIST

Your grilling style: Patient

We all know at least one insufferable **Big Green Egg** evangelist. The heavyweight, thick-walled grills have incredible heat retention with relatively little fuel, which means your food can grill deeply over a long period. This MiniMax is nominally portable at just 19.5 inches tall. But it still weighs a stout 76 pounds and can roast a 12-pound turkey (or cook four burgers at a time) on its 13-inch grill. *$598*

PHOTOGRAPHS COURTESY BRANDS

What Should

Thirteen useful gifts that you
treasure long after you're gone. B
Photograph by Janelle

Always err on the side of consumable gifts; you don't want to add clutter to your host's home. If you know her well, a personalized item you know she'll use, such as a monogrammed chef's knife, is a tasteful choice.

CB2
Potted aloe plant
cb2.com
$19.95

JOHN DERIAN
Cake pedestal
johnderian.com
$220

SANTA MARIA NOVELLA
Potpourri
buy.smnovella.com
$50

TRUDON
Napoleon bust candle
trudon.com
$175

AREAWARE
Totem candles
areaware.com
$12 and up

WUSTHOF
Personalized chef's knife
chefsarsenal.com
$149.95, plus $5 per engraving

PROP STYLIST: RACHEL STICKLEY

You Bring?

r hosts will
y Chris Rovzar
Jones

GEORG JENSEN
HK pitcher
georgjensen.com
$550

CAPEZZANA
Olive oil
markethallfoods.com
$35.95

BELA
Portuguese sardines in olive oil
food52.com
$29 for 12

GROVE 45
Extra virgin olive oil
grove45.com
$45

CLAUS PORTO
Mini deco soap set
clausporto.com
$75 for nine

HERMES
Poker card box
hermes.com
$140

SEL MAGIQUE
Salt blends
selmagique.com
$50

And If You Really Want To Be Invited Back

On those longer weekend stays at a friend's house, "that's when you want to spend more money," says Carla McDonald, founder of the entertaining website the Solonnière. Think about how much you'd be paying if you were at a hotel. You don't need to spend quite that much, she says, "but you're not going to just bring the item you would to a normal cocktail party." If you want to really surprise and impress your hosts, try one of these varsity moves.

ORDER A CASE OF WINE TO ARRIVE BEFORE YOU DO
You'll be the most favored visitor before you step through the door and shame anyone who dared show up with just a bottle. *Whispering Angel rosé, $198.11 a case; 67wine.com*

TAKE A PHOTO OF THE GROUP, BUT THEN SHAKE IT UP
A framed memory is always nice—but the expert play is to turn the image into a puzzle that can be enjoyed every summer. *1,000-piece photo puzzle, $45; puzzleyou.com*

PROVIDE EDIBLES. YES, THAT KIND
Depending on where you live, it may be legal to bring a marijuana product. Three rules: Know your audience, be clear on what your friends can expect, and bring enough for everybody. *Check your local distributors—and legal statutes.*

TAKE CARE OF BREAKFAST
The best hostess gift McDonald remembers receiving was a morning basket. "The whole night I just thought, This is so great," she says. "I'm going to wake up and have this wonderful breakfast waiting for me." The key is to choose items that don't require work—bagels and lox, premade quiches, scones, croissants. *Deluxe ham brunch banquet, $99.99; wolfermans.com*

DON'T FORGET ABOUT FIDO
"Bring something for everyone in the home," suggests McDonald. "You're imposing on everybody, even the dog." *BarkBox six-month gift subscription, $149; barkbox.com*

Master the Playlist

Tips from Shanon Cook, Spotify's trends expert

- Try separate playlists for each part of the evening: one for cocktails, one for the sit-down dinner, and another for post-dinner revelry or chilling. Just be aware that if you go this route, you're committing to keeping track of when to switch the music, and you'll probably already be juggling a lot.

- Give your guests a thrill: If a friend is obsessed with Mumford & Sons, why not add one of the band's songs to your playlist? She'll appreciate the thought.

- At smaller gatherings, play DJ and take requests. It brings people together and sparks conversation, particularly when there are memories attached to songs.

- Look to other playlists: Spotify has a whole section devoted to entertaining. The "Wine & Dine" playlist features old-school R&B, and "Dinner With Friends" is a good option for contemporary.

Go to bloombergpursuits.com for more playlists, by Ronnie Madra of 1 OAK, Steven Rojas of Edition Hotels, Lisa Jelliffe and Alex Oxley of Fleetmac Wood, and Jon Tanners of Keep Cool records.

TOP 50 SONGS FOR ENTERTAINING

Spotify Technology SA parsed 220,000 playlists based on party themes such as "dinner" and "cocktail." These are the most-included tracks:

1. Ed Sheeran, *Thinking Out Loud*
2. The Lumineers, *Ho Hey*
3. Norah Jones, *Don't Know Why*
4. Norah Jones, *Come Away With Me*
5. George Ezra, *Budapest*
6. Daft Punk, *Get Lucky* (radio edit)
7. Fleetwood Mac, *Dreams* (2004 remastered edition)
8. Sam Smith, *Stay With Me*
9. Vance Joy, *Riptide*
10. Van Morrison, *Moondance*
11. Etta James, *At Last* (single version)
12. Jack Johnson, *Better Together*
13. Van Morrison, *Into the Mystic*
14. Leon Bridges, *Coming Home*
15. Adele, *Make You Feel My Love*
16. Amy Winehouse, *Back to Black*
17. Fleetwood Mac, *Go Your Own Way*
18. Robin Thicke, *Blurred Lines*
19. Hozier, *Take Me to Church*
20. Frank Sinatra, *Come Fly With Me*
21. John Legend, *All of Me*
22. Al Green, *Let's Stay Together*
23. Adele, *Someone Like You*
24. Tracy Chapman, *Fast Car*
25. Sam Smith, *I'm Not the Only One*
26. Nat King Cole, *L-O-V-E*
27. Foster the People, *Pumped Up Kicks*
28. Jason Mraz, *I'm Yours*
29. Of Monsters and Men, *Little Talks*
30. Adele, *Hello*
31. Van Morrison, *Crazy Love*
32. Edward Sharpe & the Magnetic Zeros, *Home*
33. Amy Winehouse, *You Know I'm No Good*
34. Mark Ronson, *Uptown Funk*
35. MGMT, *Kids*
36. Ed Sheeran, *Photograph*
37. The Killers, *Mr. Brightside*
38. Bon Iver, *Skinny Love*
39. Nina Simone, *Feeling Good*
40. Mumford & Sons, *The Cave*
41. MGMT, *Electric Feel*
42. Ray LaMontagne, *You Are the Best Thing*
43. Coldplay, *Magic*
44. OneRepublic, *Counting Stars*
45. Coldplay, *Yellow*
46. Mr. Probz, *Waves* (Robin Schulz radio edit)
47. Empire of the Sun, *Walking on a Dream*
48. Justin Timberlake, *Can't Stop the Feeling!*
49. Earth, Wind & Fire, *September*
50. Gotye, *Somebody That I Used to Know*

Wicked Games

Naughty decks of cards are a big business. Which one is right for your crew?
By Cliff Kuang

Four years ago, Noah Mayer, still a sophomore in college, got a call from his father, a semiretired book publisher, who was browsing the gift tables at Urban Outfitters. The elder Mayer noted that every gag item seemed to mention weed or booze. "He said, 'You know, a great title for a game would be Drunk, Stoned, or Stupid,'" Noah recalls.

Inspired by the breakout hit **Cards Against Humanity**, Noah and his younger brother Trevor started play-testing a game in which players vote for the one among them who best represents a demented prompt that's displayed on a card drawn from the deck: "Was a fat kid." "Peaked in high school." "Is down to cook a little meth."

Drunk Stoned or Stupid has gone on to sell more than 500,000 sets at \$18 each, thriving in a racy corner of the \$3.2 billion tabletop gaming industry, which has grown 40 percent since 2012. The surge is being driven by a segment of the 18-and-over market made up of people who haven't played Uno in years and are looking for a way off their phones. There have been a few wins in the children's market, says Matthew Hudak, a games analyst at Euromonitor International. "But most of the growth has been among adults."

Since the success of Cards Against Humanity, party games have been trying to out-NSFW one another. They feature titles including **WTF Did You Say?!?** and **Go Bleep Yourself** or come with packaging that broadcasts "Uncensored" versions of already popular games. Some have parental advisory warnings, as if they were an album by 2 Live Crew.

If your party guests are more strategic thinkers, there's **Exploding Kittens**, a far less dangerous riff on Russian roulette in which players must outsmart one another to avoid drawing a game-ending card. An adults-only twist on the game was quickly released, featuring card illustrations that were "too horrible to include in a kid-friendly version." But either one lends itself well to trash talk. In the popular game **Utter Nonsense!**, players combine silly accents with outrageous phrases and vote on their favorite. It, too, is now available in a "Naughty Edition."

For boozier late nights, try the forthcoming **Body Talk**, a tricky reimagining of charades. In it, players try to act out a phrase using only an arm or a leg until the group guesses it. **Dictitious** rewards those who get creative with sexual innuendo, making up the most humorous definitions for invented words such as "scrodumb" or "farticulate."

If your choice of intoxicant is more plant-based, **What Do You Meme?**, the pop-culture alternative to Trivial Pursuit, has a "Stoner Expansion Pack" to go with its "Basic Bitch" version.

The Mayer brothers, meanwhile, are doubling down on silly concepts, even as insiders swear the category must eventually mature. Their newest one is **Dick Match!**, based on the face-matching classic Memory, except with hand-drawn illustrations of… well, not faces. But they maintain that their audience is just people who want good, clean fun, Noah says. "People tired of going out, at home for wine night or craft beers."

ILLUSTRATION BY JACI KESSLER LUBLINER

The Hottest Cooler in Town

Dolce & Gabbana and Smeg team up to design a festive little fridge
Photograph by Jessica Pettway

When it comes to iceboxes, as with people, it's usually what's on the inside that counts. But with the Smeg Frigorifero d'Arte, it's also about the outside. The 70-year-old Italian appliance company joined with design house Dolce & Gabbana to create a series of $50,000 compact fridges, hand-painted with folk motifs inspired by the brightly colored carts of co-founder Domenico Dolce's native Sicily. The shape takes its cues from the past, with a single door, a height of almost 5 feet, and a rounded 1950s profile.

THE COMPETITION
To be fair, there aren't a lot of rivals in the $50,000 novelty refrigerator market. But another cooling device with personality is the $44,000 Dacor Atelier Edition, which has a painted porcelain interior and an outside made of the aramid fiber used in bulletproof body armor. Explicitly built for outdoors, the $3,700 Alfresco fridge is 7.2 cubic feet and made of stainless steel. An optional beer dispensing tower easily converts it into a keggerator.

THE BOTTOM LINE
Choosing one of these is more like shopping for fine art than an appliance: This design, by artist Michelangelo Lacagnina, is inspired by the tarantella, a traditional Italian dance. It's not suited for day-to-day family use—an internal freezer compartment needs occasional defrosting—but it's perfect for keeping the bubbly chilled by the pool. *$50,000; smeg.com*

PROP STYLIST: KODY PANGBURN

Angela Dimayuga

The genre-busting chef of Mission Chinese Food in New York takes on trendy hotels. By Arianne Cohen

ILLUSTRATION BY SAM KERR

As the new creative director of food and culture at Standard Hotels, Angela Dimayuga is charged with producing events that merge cuisine, design, fashion, and sound. At the Standard's High Line outpost in New York, she's already enlisted the queer Asian collective Bubble_T to transform the Jacuzzi at Le Bain into a "haute pot" art installation with floating sculptures of fish cakes and shrimp for a semimonthly dance party. And in Miami, during July's Swim Week, she's going to make an edible swimsuit sculpture out of kombu.

Dimayuga is best known as the founding executive chef of Mission Chinese Food in New York, an outpost of Danny Bowien's cult San Francisco hole in the wall. The hit restaurant, with its rotating art installations and giddy Sichuan-inspired food, opened in 2012 when Dimayuga was only 26 years old. Her inventive cooking earned her a 2016 Rising Star Chef of the Year nomination from the James Beard Foundation. "She's a force to be reckoned with, because her food goes beyond a restaurant," says food writer and former collaborator Ligaya Mishan. "She doesn't feel hemmed in by categories."

Dimayuga grew up cooking for her five siblings in the Bay Area, where her father, an immigrant from the Philippines, managed a McDonald's. In 2006 she moved to Brooklyn to work in restaurants, but she quickly realized she was different from her fellow cooks. "They'd go out to a local bar, go to bed, and do the same thing the next day," she says. "I would go to art shows."

In 2017 a writer for Ivanka Trump's lifestyle website reached out to Dimayuga to profile her as a strong female entrepreneur. She posted a response that said, in part: "As a queer person of color and daughter of immigrant parents, I am not interested in being profiled as an aspirational figure for those that support a brand and President that slyly disparages female empowerment." It went viral.

Last October, Dimayuga abruptly resigned from her post at Mission Chinese. During the next six months she helmed several food pop-ups, including a "dystopian tea party" in New York, and ran cooking workshops for kids at a Los Angeles art gallery. She's even helped the New York City Department of Health establish safety regulations for fermented foods. "If you look at the projects I've done, they're all multidisciplinary," she says. "So I'll do a food pop-up, and I'll think about music, about performance."

Currently, Dimayuga is consulting on design for renovations at the six Standard hotels and developing projects such as Chefs Stand Up, a series of themed meals supporting the American Civil Liberties Union. "I am really excited that the brand is pushing for the level up," she says. "That was the draw." B

b. 1985, San Jose
-
Collects vintage Jean Paul Gaultier and Prada
-
Loves to yo-yo
-
Her grandfather was known as the "father of Kundiman," or Filipino love songs

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