October 3 — October 9, 2016 | **bloomberg.com**

Bloomberg Businessweek

The AccuVote-TSX. California decertified this voting machine in 2007. It's still in use in at least 18 other states

I Voted*

* On a 10-year-old machine with outdated software that's liable to lose my ballot

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The Start of a New Legacy

As businesses move communications to the cloud, the days of multiple vendors with outmoded infrastructures are ending

Businesses are hanging up on legacy, on-premises communications systems and taking their phones, text and conferencing to the cloud. Instead of having to deal with multiple hardware vendors and their archaic infrastructures, enterprises are increasingly seeing the value of cloud solutions that offer improved flexibility, low maintenance and enhanced mobility through the use of cost-effective software solutions that can be deployed easily.

"At a high level, using cloud takes away all the complexity of integrating a very complicated system for the enterprise customer and their IT personnel, and gives companies a new way to rethink their business communications that better meets the demand of mobile workers, a distributed workforce and a global marketplace," says Vlad Shmunis, founder and CEO of RingCentral, which provides cloud-based Software as a Service (SaaS) alternatives to legacy communication systems.

Since its founding in 1999, RingCentral has become the leader in the Unified Communications as a Service (UCaaS) market. With more than 350,000 customer accounts, the company is now targeting an estimated $50 billion global market that exists in replacing legacy voice support systems—and that's apart from the potential revenue from the many innovative communication products, such as team messaging and video conferencing, that are possible on the user-friendly RingCentral platform.

Proprietary solutions are no longer adequate for the modern workplace, as highlighted by one of RingCentral's customers. "We had a PBX legacy system that was like an old man with chains on his legs trying to move around, and we just couldn't go anywhere with it," says Dr. Ravi Patel, founder, President and Managing Director of the Comprehensive Blood & Cancer Center, the largest privately held cancer center in the country. "We felt that RingCentral was the solution for us, particularly because it is cloud-based, giving us the versatility of a mobile office."

"Legacy systems are not doing very well in distributed environments," Shmunis adds. "They struggle with mobility, and they're incredibly complex and expensive to deploy, use and manage. A cloud solution is better all around."

Judging by analysts' estimates of cloud adoption, the market agrees. According to research firm Gartner, unified communications end-user spending is projected to grow from the current $37.2 billion to $42.1 billion in 2020, and cloud UC end-user spending is forecast to grow from 28 percent of UC spend in 2015 to 41 percent in 2020.

"We cover a lot of the globe today, and will continue to focus on expanding," Shmunis says. "There is a constant push to extend our footprint globally to provide a better, tighter communication experience with a better user experience, as well as full end-to-end service for the customer."

RingCentral has designed its cloud offerings on an open platform that integrates seamlessly with other applications such as Salesforce, Google for Work and Microsoft. Its app was selected as one of eight business applications endorsed in the "Recommended for Google Apps for Work" program, commended for its reliability and performance.

The accelerating transition to cloud translates into a significant opportunity for RingCentral, which has been selected as a leader in Gartner's Magic Quadrant for UCaaS two years in a row.

"Enterprises don't want multiple vendors; they want a simplified experience on a secure platform," Shmunis says. "With RingCentral, customers get even more functionality than they'd get from their legacy systems, while saving 30 to 50 percent in total cost of ownership. They get to work with a single vendor, and if something doesn't work, they only need to call one number—and that's us."

— John O'Mahony


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Standard Life Investments

WORLD CLASS AS STANDARD

Making the Right Choice

As The Ryder Cup gets underway this week, the play of the captains' picks will tell whether their analysis of potential will equal performance when it counts

A typical golf press conference is as entertaining and informative as watching a dentist perform a root canal. The lone exceptions occur when Ryder Cup captains reveal their wildcard selections. When Darren Clarke, captain of the European Team in this week's Ryder Cup, announced his choices on Aug. 30, it was the culmination of a year of careful consideration and evaluation on his part—not to mention an equal amount of speculation by the media and fans.

Clarke chose two Ryder Cup veterans in Lee Westwood and Martin Kaymer, and one player new to the event, Belgium's Thomas Pieters. At his presser, Clarke offered a hint of what the process felt like for him. "The past few days have been some of the toughest in my career," he said. "It has been wonderful to see the team take shape. I've probably watched more golf and paid attention to more stats than I ever have, watching how all the possible contenders were playing."

Two weeks after Clarke, it was U.S. captain Davis Love III's turn, when he announced three of his four wildcard choices: Rickie Fowler, J.B. Holmes and Matt Kuchar. Love, who was the U.S. captain once before, called the selection process nerve-racking, and said, "The only time I've ever really gotten nervous both times as captain is this press conference." This past Sunday evening, Love added the final member to the U.S. Team, Ryan Moore, completing the lineups for golf's greatest thrill ride, which begins Friday at Hazeltine National Golf Club, in Chaska, Minn.

Importance of a 'good fit'

Throughout the year, Clarke was careful to point out that his choices would strike a balance between current performance and experience, and that's precisely what he accomplished with the three players he tapped. "I was always going to look for experience," said Clarke. "In Lee and Martin, I've got two former world number-ones, and guys that bring a wealth of it to the team. That matters because it's just not about playing; it's about what goes on in the team room, and the dynamics of the entire team."

Clarke sees Kaymer as a "cool, calculating player" who plays golf in a "meticulous fashion." In his longtime Ryder Cup partner and friend Westwood, Clarke has someone who "will be somewhat like the general amongst the team. Anything he says, everybody sits up and listens. That's what makes Europe the team that we are—there's always guys who want to learn and want to get better."

In describing Kaymer and Westwood, Clarke also hints at the world-class attributes of Standard Life Investments, the first Worldwide Partner of The Ryder Cup. Standard Life Investments prides itself on deep and thorough analysis—à la the meticulous Kaymer—that helps uncover potential and drive performance for investors, the way Westwood's leadership might help less experienced players up their game under pressure.

Selecting a player that's a perfect fit for

"I've probably watched more golf and paid attention to more stats than I ever have, watching how all the possible contenders were playing."

— Darren Clarke, announcing his captain's picks for the European Ryder Cup team

ANDREW REDINGTON/GETTY IMAGES

a team has parallels to selecting the proper data that, combined with superb analysis, is the backbone of informed investment decisions. "Not all data is equally useful," says Jeremy Lawson, Chief Economist, Standard Life Investments. "Some data is poorly constructed and sometimes data is more noise than signal. The first step in high quality analysis is collecting the right data sets. The worst thing that you can do is identify spurious relationships that you won't be able to rely on in the future."

This is especially true in volatile markets, which Lawson says "are not just reasons to become cautious, but actually can be reasons to take additional risks if your data and analysis are strong."

An analytical assist

Assessing his selection of J.B. Holmes, Love agreed with Clarke that it's how the parts come together to create the whole that matters. "There are different reasons we pick players," said Love. "J.B. is a guy that every guy on the team wants to play with. He's a great match-play personality. We kept saying: 'Do you want to play against that guy in singles?'"

Love also said that this turn as captain has seen "a lot more time spent planning and strategizing." Especially interesting is the role Tiger Woods is playing in assisting Love; the U.S. captain calls Woods a "tactician" in the way he approaches the game.

Woods spent countless hours leading up to this week's showdown creating various potential pairings and lineup orders for Love to consider. "Tiger looks at things from maybe a little bit higher viewpoint than the rest of us sometimes," Love said.

Even Woods' longtime rival Phil Mickelson, who will be playing in his 11th Ryder Cup, has been taken by the analytical efforts of Woods, including possible pairings and order of play for the Ryder Cup's distinct formats of four-ball and foursomes.

"Tiger has really thought all of this through," said Mickelson. "I'm really impressed." ●

Find out more at www.standardlifeinvestments.com/rydercup

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"We've all come here for drinks with our bank, which is utterly crazy"

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"It used to be Adidas came out with a shoe and they had only a few styles. Now it's 31 flavors at Baskin-Robbins"

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"There's no way you could ever achieve high-speed, world-class service with the right of way we have today. This train is like a Ferrari driving on a dirt path"

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Bloomberg Businessweek

October 3 — October 9, 2016

COVER AND COVER TRAIL: DOMESTIC VERSION: JULIAN BERMAN FOR BLOOMBERG BUSINESSWEEK; INTERNATIONAL VERSION: REUTERS

Cover Trail

How the cover gets made

Domestic Cover

1 "The story is on voting machines. They have a history of malfunctioning and have even lost votes."

"Great. As if this election weren't scary enough. How is this even possible? We have virtual reality and electric cars, but we can't count votes?"

"Well, some of the technology was made when the BlackBerry was one of the top-selling phones."

International Cover

1 "The cover is on how Goldman Sachs went into business with Libya during Qaddafi's regime and turned a huge profit."

"Finally, we've caught a global financial institution doing something naughty."


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TECHNOLOGY
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EVEN MORE
HUMAN

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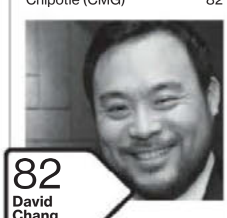
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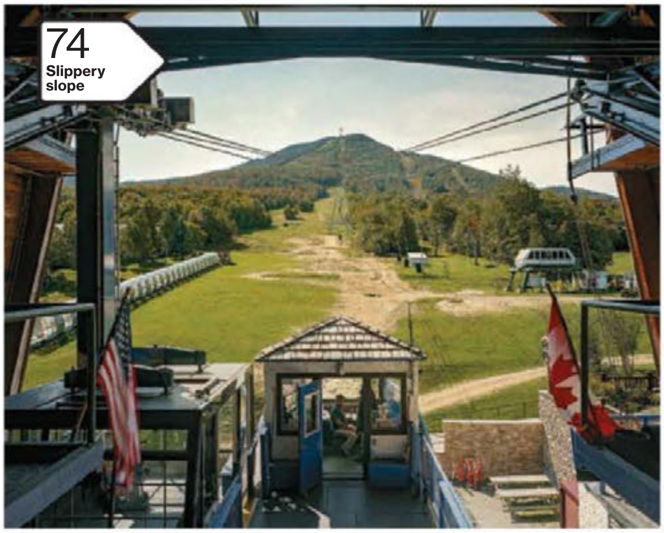
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Corrections & Clarifications
President Obama won 5 million more votes than Mitt Romney in 2012, not 3.5 million as reported in "The Little Blue Dot Irritating Nebraska's GOP" (Politics/Policy, Sept. 26-Oct. 2, 2016). B "Cartier's Watch Dreams Run Out of Time" (Companies/Industries, Sept. 26-Oct. 2) should have stated that Richemont, Cartier's parent company, is based in Switzerland.

PHOTOGRAPH BY ANDREW MOORE FOR BLOOMBERG BUSINESSWEEK; GETTY IMAGES(2)


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High Financial Anxiety

It's quite common for clients to feel anxious when they meet with their financial advisors. The better that financial advisors deal with that anxiety, the more likely it is that they'll have long-lasting relationships with those clients, says Dr. Kristy Archuleta, a Hartford Funds Human-Centric Insights panelist, Program Director of Personal Financial Planning at Kansas State University and a past President of the Financial Therapy Association.

How anxious about their finances are typical financial advisor clients?

We know that 72 percent of adults say they feel stressed about money at least some of the time, according to the American Psychological Association's 2015 Stress in America survey. And they might be stressed simply because they're seeking the advice of someone, and opening up to a financial advisor.

In a recent study published in the *Journal of Financial Therapy,* people were hooked up to machines that measure physiological responses, like palm sweat and body temperature. These people said they weren't stressed about their financial situations, yet when they talked about money, a physiological response was produced. The lesson: People are clearly more anxious about their finances than they say they are.

How does the Financial Anxiety Scale that you've developed work?

It's patterned after the Generalized Anxiety Disorder criteria contained in the American Psychiatric Association's *Manual of Mental Disorders.* Each indicator is assessed on a scale from 1 [never] to 7 [always].

For some financial advisors, the Financial Anxiety Scale might be a very normal thing to use with their clients, and can be used as a tracking tool to see if a client's feelings about their financial situation change over time. Others may only want to use it when their clients appear very tired or very nervous at their first meeting, to try and determine whether those physical symptoms of anxiety are tied to their financial situation, or something else in their life.

THERE'S NO THRESHOLD SCORE BEYOND WHICH ONE IS "ANXIOUS"; THE HIGHER THE SCORE, THE MORE ANXIOUS YOU ARE. THERE ARE SIX INDICATORS:

1. **I have difficulty sleeping because of my financial situation.**
2. **I have difficulty concentrating on my school/work because of my financial situation.**
3. **I am irritable because of my financial situation.**
4. **I have difficulty controlling worrying about my financial situation.**
5. **My muscles feel tense because of worries about my financial situation.**
6. **I feel fatigued because I worry about my financial situation.**

Are there some clients so anxious that financial advisors can't really help them?

Yes. There's a group of people for whom the anxiety is so strong, they are having difficulty making good decisions about their financial futures. For them, it may be a good idea to put off the planning process until their anxiety is treated by a mental health professional.

How can financial advisors deal with a couple when one partner feels high levels of anxiety, but the other doesn't?

They should make sure they are spending time talking to both partners about the anxiety. They should ask the person with the anxiety about what things they have control over that might reduce their anxiety. And they should ask the anxious person's partner how they can help reduce the anxiety.

Seventy-two percent of adults say they feel stressed about money at least some of the time.

The focus has to be on things the couple is in control of. They're not in control of the market. So if the market dips, what can they do to lessen the anxiety that produces? Often, couples can come up with their own solutions, simply if someone prompts them to.

To learn more about investor psychology and how financial advisors can better communicate with their clients, go to the Hartford Funds' **HumanCentricInvesting.com**

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Dr. Barbara Nusbaum

Clinical Psychologist, Ph.D., expert and speaker, specializing in the intersection of money, psychology and life

Dr. Nusbaum works with individuals, families and organizations on the impact of the emotional/psychological side of money. She has appeared as an expert for *The New York Times*, *CBS News*, *Forbes*, *The Wall Street Journal*, *Bloomberg*, *Money Magazine* and *Daily Worth*.

Dr. Kristy Archuleta

Program Director of Personal Financial Planning at Kansas State University

Dr. Archuleta's research relates to the area of financial therapy and includes dyadic processes influencing financial and marital satisfaction.

Dr. Vicki Bogan

Professor and Director of the Institute for Behavioral and Household Finance (IBHF) at Cornell University

The mission of the IBHF is research and education in the areas of behavioral finance and household finance with the goal of better understanding and modeling financial behavior.

Tim Sanders

Author and expert on motivation, emotional talent and sales innovation

Tim is the author of five books including the New York Times bestseller, *Love Is the Killer App: How to Win Business & Influence Friends.* He was the Chief Solutions Officer for Yahoo, as well as their Leadership Coach.

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Opening Remarks

The Right To Run Sex Ads

By Dune Lawrence

Besieged on several fronts, an online classified site wraps itself in the First Amendment

1 0 0 % _ _ _ REAL GIRL _ _ _ _ REAL FUN _ _ _ _ CARAMEL BOMBSHELL - 21

Backpage.com's business is an online classified marketplace, providing a forum for people who want to sell cars, rent an apartment, or find a baby sitter. But the site is far better known as one of the biggest web platforms for sex advertising—the descendant of

☆LeTs ☆PL@Y☆ - 21

the raunchy ads that used to be found at the back of alt weeklies such as the *Village Voice*. As such, Backpage is tied to the ills of that business: prostitution and human trafficking. It's also become a fierce standard-bearer in the war over online free speech, wrapping its business model in the First Amendment to fend off enemies in law enforcement and government.

Those foes are persistent, and understandably so: It's easy to support the ideal of free speech but rather more complicated when faced with for-profit companies like Backpage, whose constitutionally protected activities have contributed to horrific harm to minors and

Bety - 25

women. That's the backstory to the battle between Backpage and Sheriff Thomas Dart, who's hoping to take his fight to the U.S. Supreme Court in the term that starts on Oct. 3. To get at Backpage, he's trying to do an end run around the immunity protecting online businesses from liability for what their users do.

Dart, the sheriff of Cook County, which includes Chicago, has made the fight against prostitution a signature issue. In 2009 he sued Craigslist—Backpage's biggest rival in the online classifieds market—over its adult services section. Craigslist, he argued, was creating a public nuisance by facilitating the sex trade, which consumed the time, money, and resources of law enforcement. The case was dismissed under Section 230 of the Communications Decency Act (CDA).

Section 230(c)(1) is the fairy godmother of the internet. It reads: "No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider." That one-liner in a 1996 law has ballooned into an expansive shield that insulates Google, Facebook, and Twitter from liability for what their users say and do. This has mostly been a good thing, because those services wouldn't exist if they had to police everyone's every word. In

Let Me C

Dart's efforts against Craigslist, however, it meant that though pimps might choose to post barely disguised ads for prostitutes and johns might buy the services advertised, the site wasn't liable for any of that illegal activity.

Craigslist decided to get rid of its adult section in 2010, giving Backpage a big boost as escort advertisers shifted over to its adult category—one of the few services for which Backpage charged a fee. Dart turned his attention to Backpage, urging changes to the site to cut down on prostitution. Backpage, though, didn't "cave"—the word it later used to describe

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Craigslist's decision to drop out of the adult market.

On June 29, 2015, Dart sent letters to Visa and MasterCard that began, "as the Sheriff of Cook County, a father and a caring citizen, I write to request that your institution immediately cease and desist from allowing your credit cards

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NO DRAMA

to be used to place ads on websites like Backpage.com, which we have objectively found to promote prostitution and facilitate online sex trafficking." He made clear his frustration with the CDA: "For years, law enforcement agencies and advocacy organizations have screamed and howled about Backpage.com and similar sites to no avail. But Congress is too hamstrung to act and the Courts continue to follow antiquated laws to the point of nonsensical outcomes. But such absurdity is no excuse for institutions to ignore their own rules, precedents and their own sense of decency."

Both companies swiftly did as Dart asked. (American Express had ended its service to Backpage in April 2015,

Cater To Your Needs💋💋💋💋 - 23

citing its terms of use, which forbid brand damaging or illegal transactions.) Backpage responded almost as swiftly with a lawsuit, calling Dart's actions censorship of the free speech rights of the site and its users "through an informal process of coercive threats or insinuation." The company sought a preliminary injunction, compensation for lost revenue, and punitive damages to deter Dart from "conduct recklessly indifferent to protected rights."

Backpage lost in district court, largely because Dart showed that not only had American Express taken action on its own but that MasterCard was beginning to do so as well. Visa submitted an affidavit saying it didn't consider Dart's letter a threat, though it did act on it.

Backpage, however, won the next round. The U.S. Court of Appeals for the

ETT¥ KITT¥ 🐯💜😛 - 35

Unforgettable time with Jordan👄💖🌺 - 18

Seventh Circuit reversed the lower court, interpreting Dart's letters as coercive and a restraint of protected speech regardless of whether or not the credit card companies acted because of them.

Don Herzog, a First Amendment specialist at the University of Michigan Law School, thinks the Seventh Circuit got it right. "It's completely facetious to say Dart is not using his power as a cop as a threat," Herzog says. "His position seems to be, 'I didn't cause the credit card companies to do this at all.' But imagine a cop says to you, 'Lady, get that Clinton sign off your lawn, or I'll bust you.' Just because you choose not to, that doesn't make the threat OK."

Dart has appealed to the Supreme Court (which accepts a tiny percentage of the petitions it receives). While he waits, he continues to battle Backpage in Illinois district court. The site dropped its claims for damages in August and is seeking summary judgment. Dart is pushing for

◆(Y_O_U_R'_E) °°•★•°° (G_O_N_N_A) °°•★•°° (L_O_V_E_) °°•★•°° (M_E_) CALL N♥W! °•★•° - 23

further discovery related to Backpage's business—particularly how many of the ads are for prostitution. His office said in an e-mail, "The relief Backpage is seeking—to enjoin the Sheriff's speech—would be an improper restriction of Sheriff Dart's own First Amendment Rights." Backpage

$40 $70 $100 Lets play - 21

declined to comment for this story.

Backpage faces another possible Supreme Court showdown, one that addresses Section 230 immunity more explicitly. The plaintiffs in the case include three women trafficked via Backpage ads in Massachusetts, beginning at age 15. The U.S. Court of Appeals for the First Circuit in Boston found the plaintiffs made a persuasive case that Backpage tailored its services to facilitate sex trafficking, a criminal violation of federal and state law aimed at those who knowingly aid in sex trafficking. Nevertheless, the court held that even in this context, Section 230 conferred immunity on the site. The plaintiffs want the Supreme Court to clarify the extent of Section 230's protections, specifically whether a website can ever be sued for

The sheriff of Cook County got the major credit card companies to take his side in the battle

its own criminal conduct when content created by a third party was part of the "chain of causation" of the injuries.

Even if Backpage prevails against Dart and the women, it's still got problems. For one thing, it seems unlikely the credit card companies will reinstate services; none have since the Seventh Circuit ruling in November. (After Visa and MasterCard pulled out, Backpage began running sex ads for free, charging only for extra visibility on a page, via bitcoin, check, or money order.)

In March, a U.S. Senate committee sued Backpage Chief Executive Officer Carl Ferrer to compel him to appear before the committee and to comply with a subpoena in its investigation of sex trafficking. Backpage argued this was simply one more assault on its First Amendment rights and yet another plot to shut down its business. A judge has ordered Ferrer to cooperate. The Supreme Court rejected Backpage's request to stay the court order.

One broader worry is how all of this might erode Section 230—and alter the internet. "We're seeing some judges who are just so concerned about harm to victims online that they'll twist law in whatever direction it needs to be twisted," says Eric Goldman, an expert on free speech and technology at Santa Clara University School of Law. He sees Section 230 as key to protecting First Amendment rights online and also fundamental to the rise of startups that challenge the status quo. "The question," Goldman says, "is what do we need to do to preserve the next disruptive technology that's going to make our lives better?" B

Bloomberg View

To read Mark Gilbert on how not to run a central bank and Matt Levine on Merrill Lynch's too-fast traders, go to Bloombergview.com

Don't Pardon Edward Snowden

He performed a service by revealing NSA methods but should still face a jury

The movement to pardon National Security Agency leaker Edward Snowden is picking up momentum, with human-rights groups, editorial boards, the Libertarian Party candidate for president, and some former intelligence officers hopping on board. Even Eric Holder, the former attorney general, has said Snowden performed a "public service."

But to show leniency for the man now enjoying Vladimir Putin's hospitality in Moscow would be to ignore the great damage he's done to U.S. national security. It would also set a bad precedent.

It's true that the public interest was served by Snowden's revelation that the government was collecting telephone metadata without a court order, and that U.S. intelligence services have responded with positive reforms. But Snowden also released classified information on many other intelligence programs that were clearly within the law, exposing sources and methods to America's enemies. This included details of U.S. information-gathering on his Russian hosts.

Snowden claims he tried to report his concerns to his bosses. But considering that he was able to flee the country with more than 1.5 million documents, it's odd that he hasn't provided any e-mails or other evidence to corroborate his story.

Unlike others who have been charged with leaking under the Espionage Act and have stayed in the U.S. to stand trial—including former CIA officer John Kiriakou, who served almost two years in federal prison for disclosing the agency's use of "enhanced interrogation techniques"—Snowden has accepted asylum from one of the world's most repressive regimes. And while the administration has sometimes been too willing to exploit the Espionage Act, Snowden committed exactly the sort of acts it was intended to punish.

Snowden's lawyers claim that he wouldn't get a fair trial under the Espionage Act. Many aspects of the trial would be classified and not open to the public, and it's unlikely he would be able to raise the defense that his intentions were good. But it would still be a jury trial, with its inherent presumption of innocence and constitutional protections, not a military tribunal.

Some of Snowden's supporters suggest the U.S. Department of Justice should offer him a deal: leniency in exchange for returning to the U.S. and giving back classified materials not yet released. But a charge of, say, theft of federal property rather than espionage would not fit the magnitude of his crime.

The fight against global terrorism will always require tradeoffs between national security and privacy. With its metadata program, the NSA went too far. But so did Snowden, in revealing such a vast cache of materials. If he truly feels he's done nothing deserving of punishment, he should make that case to a jury in the U.S.

Europe's Google News Tax Makes No Sense

Publishers have tried licensing fees before and failed. That result is unlikely to change

A "digital single market," like a single currency, is one of those grand European ideas that sounds better than it works. Take, for example, the European Commission's clumsy attempt to use copyright law as a cudgel against U.S. interlopers such as Google and Facebook.

One provision of a new bill proposed by the commission accords publishers the right to a license fee whenever a news aggregator such as Google News uses even a snippet of the publisher's content. Currently aggregators pay no such fee. Who would it benefit? Not readers. It would only make the publishers' work harder to find. Not aggregators, whose value proposition is offering customers the widest array of information.

Publishers seem to think they will be the main beneficiaries—they lobbied heavily for the fee—but it's not at all clear they will be. When German publishers tried to force aggregators to pay fees in 2014, applying legislation that came into effect the year before, Google News refused and stopped carrying snippets of German articles. Publishing giant Axel Springer found that traffic from Google News plummeted by 80 percent during the two-week cutoff. Publishers relented and waived the fee. Spain tried a similar approach in 2015, with predictable results.

News aggregators are disrupters, of course, but they're also saviors: They can expand (and globalize) a small local audience. Publishers have to find new ways to make a profit, but seeking protection under the guise of copyright law isn't the way.

The commission's proposal isn't completely without virtues. It would allow for cultural heritage institutions to distribute works no longer available to the public, for example, and would clarify the legal uncertainty around the use of copyrighted materials by teachers and researchers. But making these exceptions is different from creating new rights. The commission needs to take a lighter touch. Ⓑ

KAYANA SZYMCZAK/THE NEW YORK TIMES/REDUX

Movers

By Kyle Stock

$24.5t

▲ **U.S. retirement assets** reached a record high in the second quarter.

▲ West Elm, a home furnishings unit of Williams-Sonoma, said it will develop boutique hotels. Rooms will cost up to

$400

a night; **guests will also be able to buy the furniture.**

▲ Jose Cuervo, **the world's largest tequila maker, filed plans for an IPO** in Mexico. The company had sales last year of $1 billion, up about 25 percent from 2014. It rebuffed an offer from Diageo in 2012.

▲ In September, U.S. **consumer confidence rose to its highest level in nine years.** Most encouraging: 7.7 percent of consumers plan to buy a washing machine, another high point since the recession.

▲ A chorus from the Revolutionary Armed Forces of Colombia performed after **the rebel group signed a peace accord with the government** to end more than five decades of conflict.

▲ Walt Disney joined Salesforce.com in crunching the numbers on a potential bid for Twitter. The micro-messaging site has hired investment bankers to evaluate its options, as **sales chatter briefly drove its market value up to $16.5 billion.**

CBOE bought BATS Global, creating an exchange giant

$3.2b

Lanxess purchased Chemtura, adding chemicals to its rubber and disinfectants

$2.7b

Women's retailer Aritzia had the largest Canadian IPO of the year so far

$400m

FreshDirect, a New York grocery delivery service, raised

$189m

Truman Capote's ashes were sold at auction

$43.8k

▲ **NBA owners started to go long on competitive video gaming.** The Philadelphia 76ers snapped up Team Dignitas and Apex Gaming. And a group including Magic Johnson and Ted Leonsis, owner of the Washington Wizards, bought Team Liquid. This year, e-sports should generate almost $500 million in revenue.

Ups

"African American history is not somehow separate from our larger American story.... It is central to the American story."

▲ President Obama, speaking at **the opening of the Smithsonian National Museum of African American History and Culture** in Washington.

Downs

▼ Soup-and-sandwich empire **Cosi filed for Chapter 11 bankruptcy protection.** It plans to sell its chain of 74 restaurants to its lenders.

▼ Pit bulls in Montreal remained stoic as municipal **lawmakers approved a citywide ban of the breed.** Animal rights advocates are calling for tourists to boycott the city.

▼ **U.S. attorneys said they're trying to figure out how much they can fine Volkswagen** for emissions cheating without putting the company out of business. VW has liquid assets of about $32 billion.

▼ **BlackBerry said it will stop making its once-ubiquitous smartphones,** outsourcing the work to focus on software and services. Sales in the recent quarter fell

32%

from the year-earlier period.

▼ Hedge fund savant **Richard Perry called it quits** after almost three decades. Perry's funds have slumped for three years, despite a long run of 15 percent annual returns. He said his strategy no longer works.

▼ Fighting to keep his job, Wells Fargo CEO **John Stumpf said he'd forfeit**

$41m

in stock and salary.

▼ Lands' End CEO **Federica Marchionni was pushed out** after just 19 months on the job. Among the board's complaints: She spent only about a week a month at the Wisconsin headquarters.

RBS settled claims that it sold toxic mortgage securities

$1.1b

Acres of land destroyed by wildfires near Los Angeles

2.3k

A dismal sales forecast for Tempur-Sealy resulted in its shares crashing on Sept. 28

–24%

The World Trade Organization cut its trade growth forecast for 2016 by more than one-third, to its lowest estimated rate since the crisis

1.7%

CLOCKWISE FROM TOP: RICARDO MAZALAN/AP PHOTO; JIM SPELLMAN/GETTY IMAGES; ERIC ISSELEE/GETTY IMAGES; ILLUSTRATIONS BY 731

THE MYTHS OF ETFs

Exchange traded funds (ETFs) have more than $2 trillion in assets under management in the United States.[1] They've been around for 23 years, ever since State Street Global Advisors (SSGA) launched the first SPDR ETF, SPDR® S&P 500® ETF (SPY), in 1993. But some investors are still confused about the key attributes of ETFs, such as their risk profile, suitability, cost and performance. Here are the most common myths and facts that set the record straight.

MYTH #1: ETFs ARE RISKIER THAN MUTUAL FUNDS

With both mutual funds and ETFs, there are two kinds of risk: the risk that your investment will decline in value, and risk tied to a fund's operations. As for investment risk, the performance of the underlying securities determines the fund's risk profile. So, if you have an ETF and a mutual fund that are designed to track the same index, both investments should have similar investment risk.

As for operational risk, ETF liquidity, transparency and tax efficiency compare favorably to those of traditional mutual funds, says Tim Coyne, Head of Global SPDR Capital Markets at SSGA. ETFs are traded throughout the day and priced in real time, while mutual funds are priced once daily at the market close. ETFs disclose their holdings daily, while most mutual funds only disclose their holdings on a quarterly basis. Trading activity can generate additional transaction and tax costs for mutual fund shareholders, while the creation/redemption mechanism of ETFs can reduce these costs.

MYTH #2: ACTIVELY MANAGED ETFs GENERALLY HAVE HIGHER RETURNS THAN PASSIVELY MANAGED ETFs

It all depends on your time horizon. Over certain time periods, passive ETFs have outperformed actively managed ETFs. Over other time periods, the reverse is true.

It is certainly true that actively managed ETFs have become more prominent. "ETFs started out very much as a passive strategy, however, they continue to evolve," says Coyne. "For example, we're seeing a lot of focus on smart beta products in the ETF market, an approach that represents an effective bridge between passive and active management."

Additionally, SSGA has brought to market their own active strategies, as well as partnered with industry leading active managers, to bring active management to the transparent, low cost and more tax efficient ETF wrapper. "Whether clients are looking for passive, smart beta or active solutions, ETFs are increasingly being used as the vehicle of choice by investors of all types," says Coyne.

MYTH #3: WHEN MARKETS ARE EXTREMELY VOLATILE, ETFs OFTEN FAIL TO TRACK THEIR INTRINSIC VALUE

This myth misses the point: ETF pricing is dependant upon accurate market data and liquidity of their underlying securities. When there are market-wide disruptions, equity or fixed income, ETFs may experience temporary deviations from their instrinsic value. However, in some cases, instrinic value itself may be compromised due to lack of real-time market data. That being said, ETFs trade continuously on exchange and, in some cases, can provide price discovery for an asset class. For example, on August 24, 2015, despite market data being unavailable for several of its underlying securities, SPY efficiently traded roughly 507 million shares, or $97 billion, throughout the day at an average premium or discount of 0.0053%.[2]

SSGA continues to work with regulators and other market participants in an effort to prevent similar future pricing disruptions, and to minimize their impact if they do occur. ●

(1) Morningstar and SSGA, as of December 31, 2015.
(2) Bloomberg, NYSE Arca as of 8/31/2016.

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The Push and Pull Of Politics

► **Yellen can't hide the dissent inside the Fed**

► **"We do not discuss politics at our meetings"**

At the presidential debate on Sept. 26, Republican candidate Donald Trump accused Federal Reserve Chair Janet Yellen of inflating "a big, fat, ugly bubble" by keeping interest rates too low. Yellen couldn't just shrug off the accusation, because only five days earlier three members of her own rate-setting group, the Federal Open Market Committee, had expressed the same idea in more delicate language. Loretta Mester, Esther George, and Eric Rosengren dissented from the FOMC decision to stand pat on rates, the committee announced, because they "preferred" to raise the federal funds rate a quarter percentage point at the meeting.

It isn't easy running a central bank, especially during an election campaign, and even more so during this campaign, when there's a deep division within the economics profession over whether U.S. interest rates are too low. As the uneven record of central banking goes to show, setting interest rates is a bewildering business. But exposing that bewilderment to the public makes the Fed seem ineffective, which renders it more vulnerable to attack from the likes of Trump, who said in the debate that the Fed "is being more political than Secretary Clinton" and is keeping rates low to help President Obama until he hits the golf courses in January.

The difficulty for Yellen is that although the Fed's motivations aren't political, its actions are inherently political in the sense that they affect the economy and thus create winners and losers. Keeping interest rates low helps incumbents by stimulating growth—but at the risk, some say, of generating unacceptably high inflation that would have to be quelled with high rates later. That's what Trump was getting at in the debate when he said, "You're going to see some very bad things happen."

Raising rates now presents its own difficulties. It could disrupt financial markets, shaking confidence. The next meeting of the FOMC concludes on Nov. 2. As of Sept. 28, financial markets saw only a 17 percent chance that the Fed would raise rates on that date, vs. a 53 percent chance of raising rates on Dec. 14. Why the low expectations for November? One reason is that there's no press conference scheduled then, and Yellen uses press conferences to explain rate moves. But another reason is that markets don't seem to think the Fed will call attention to itself by hiking rates six days before the election. Of course, not hiking could itself be read as a political decision.

The point is that anything the Fed does or doesn't do is viewed through a political filter, even though Yellen said after the Sept. 21 FOMC meeting that "we do not discuss politics at our meetings, and we do not take politics into account in our decisions."

Close watchers of the Fed say Yellen is right that politics never comes up at FOMC meetings. Michael Gapen, chief U.S. economist at Barclays, says he doesn't think the Fed would hesitate to raise rates on Nov. 2 if the time is right. "You have to go back to Arthur Burns," who held office from 1970 to 1978, "to find a Fed chair who is deliberately goosing the economy to help

PHOTO ILLUSTRATION BY BRAULIO ADEUS AMADO; PHOTO: CHIP SOMODEVILLA/GETTY IMAGES

an incumbent president," says Michael Dorf, a professor at Cornell Law School.

Yellen is putting the best face on Fed dissent. She told reporters she thinks "it's a very good thing that the FOMC is not a body that suffers from groupthink." It's true that vigorous internal debate can produce smarter outcomes. But it's not so good for her when the internal debate becomes external. On the hawkish side on Sept. 21 were three Reserve Bank presidents—Mester of Cleveland, George of Kansas City, and Rosengren of Boston. On the dovish side, three unnamed FOMC voters tugged in the opposite direction by indicating in the economic projection that they don't think any hike is appropriate this year. Judging from recent speeches, two of them were probably Governors Lael Brainard and Daniel Tarullo. A third might have been Chicago Fed President Charles Evans.

"Modern central banking is all about communication," says Barclays's Gapen. "The committee prefers to communicate with a unified voice." If the Fed is seen as directionless, he says, markets could "lose confidence in the institution itself."

The deeper problem for the Fed is that its underregulation before the financial crisis and its overoptimism about the recovery have dulled its aura of expertise, says Robert Johnson, president of the Institute for New Economic Thinking. "The legitimacy of experts is just smashed. They're viewed as marketing agents for power," he says. The flailing that's on display is not an easy problem to solve, because speaking with one voice would only hide the uncertainty of Fed voters, not resolve it. "I'm empathetic," Johnson says. "They're trying to control a system that's uncontrollable." —*Peter Coy*

The bottom line The Fed chief is facing political pressure from the outside while struggling to quell discord within.

Government

Philippine Leader Scares Off Investors

▶ **The president angers the West while tilting to Beijing**

▶ **"We need to counter this adverse international press"**

Since taking office at the end of June, Philippine President Rodrigo Duterte has managed to insult U.S. President Barack Obama, the U.S. ambassador, and United Nations Secretary General Ban Ki-moon. Speaking on Sept. 20 in his hometown of Davao ▶

◀ City, Duterte found a new target, rejecting the European Union's condemnation of his crackdown on alleged drug dealers, which has led to thousands of vigilante-style killings. "I'll tell them, 'F--- you,'" Duterte said.

Now the former crime-fighting mayor is looking for friends in new places and ramping up his attacks on domestic critics. On Sept. 27 he accused the U.S. of "undermining" the Philippines and said he will visit China and Russia to pursue what he called "new alliances" in trade. Duterte has also expressed interest in acquiring weapons from China, even though the two countries have been at odds for years over islands in the South China Sea (known in Manila as the West Philippine Sea).

There is "growing concern over developments that could harm the long-standing optimism of American business to invest in the Philippines." —*American Chamber of Commerce of the Philippines*

At home, Duterte is tightening his control. After a terrorist attack in September killed 14, he declared a nationwide state of emergency. On Sept. 20, Duterte and his allies in the Senate ousted his critic Senator Leila de Lima from her post as head of the justice and human rights committee. "Our bill of rights is under threat," de Lima said on Sept. 26 on Bloomberg TV Philippines. Speaking to reporters the same day, **Duterte** said he expected de Lima to be jailed for what he claims are ties to traffickers. "She screwed the nation," he said. She denies his accusations.

Duterte seems to be betting his provocative actions won't scare away businesses. When Benigno Aquino, his predecessor, left office, the economy was in the best shape it had been in in decades. Gross domestic product grew 7 percent in the second quarter from a year earlier, foreign reserves are at a record high of $85.9 billion, and inflation is tame at less than 2 percent. Fewer Filipinos than before have to travel abroad to seek employment, with the unemployment rate this year falling to 5.9 percent, according to a Standard & Poor's forecast, down from about 7 percent from 2010 through 2013. As wage costs rise in India, the Philippines has become the destination for companies looking for an inexpensive emerging-market country with low-cost English-speaking workers. On Sept. 16, **Visa** opened a customer support center in Manila that will have 570 employees. Outsourcing operations of all kinds employ more than 1 million people in the Philippines.

The American Chamber of Commerce of the Philippines on Sept. 8 issued a statement expressing "growing concern over developments that could harm the long-standing optimism of American business to invest in the Philippines." S&P Global Ratings warned on Sept. 21 of increased uncertainty in the country, saying extrajudicial killings since Duterte took office "could undermine respect for the rule of law and human rights."

Foreign investors sold Philippine stocks for 27 days, the longest outflow since 2007. On Sept. 26 the Philippine peso sank to a seven-year low of 48 pesos to the dollar. The currency's fall is "mainly due to politics with the Philippine president's war on drug dealers and his intent to seem to alienate all of [the country's] major trading partners," says Jeffrey Halley, a market strategist at Oanda Asia Pacific, a provider of foreign exchange services in Singapore.

At a meeting of bankers in Manila on Sept. 15, Socio-economic Planning Secretary Ernesto Pernia said, "We need to counter this adverse international press because that will dampen the appetite of foreign direct investors." To keep the business community on his side, Duterte is following through on a pledge to build infrastructure. On Sept. 14 the government approved projects worth 171.2 billion pesos ($3.5 billion), including plans to upgrade Manila's airport. "As long as the economic team can push through with their plans, the economy will remain strong," says Gundy Cahyadi, an economist with DBS Group in Singapore. "For the time being, we still think there [are] plenty of positives to look at." —*Bruce Einhorn, with Ditas Lopez, Karl Lester Yap, and Y-Sing Liau*

The bottom line President Duterte can afford his gaffes as long as the solid economic foundations built by his predecessor are left in place.

Gaming

Australia Battles Its Gambling Addiction

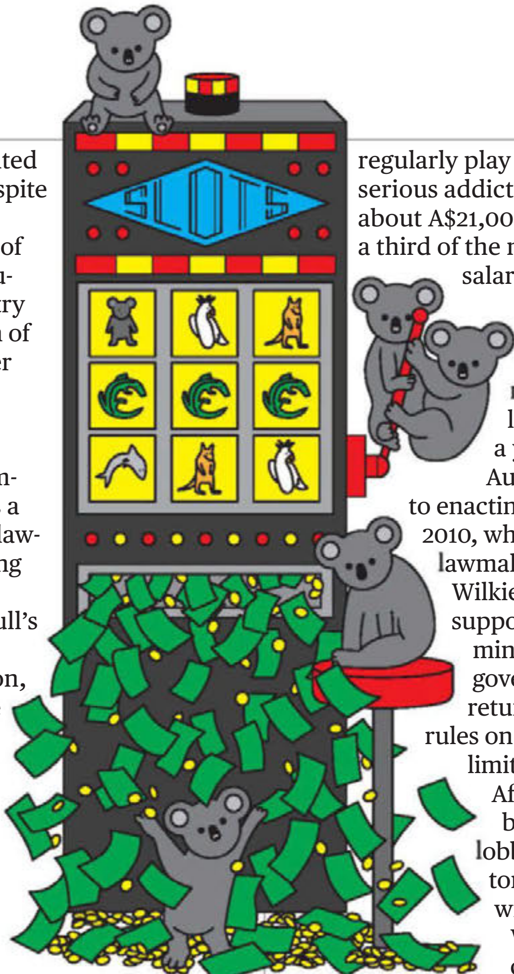
▶ **Slot machines provide billions in tax revenue at a high social cost**

▶ **"The No. 1 jackpot junkies are state governments"**

In 2012, after struggling with a gambling addiction for 13 years, Kate Seselja was ready to kill herself. The 37-year-old mother of six in New South Wales was contemplating driving her car into a tree after losing more than A$500,000 ($384,000) playing slot machines. "At first they were a bit of fun," Seselja says of Australia's ubiquitous slots, referred to as "pokies." But soon what had been enjoyable became a painful obsession she couldn't escape. "There's machines on just about every street corner," says Seselja, who sought treatment rather than become one of the estimated 400 Australians with gambling-related problems who commit suicide each year.

Australia is trying to come to grips with its gambling problem. Last year the country's $761 (A$585) in per capita gambling losses were the highest in the world, beating Hong Kong and Finland. More than half of the A$23 billion Australians gambled away in fiscal 2015 was sunk into slot machines throughout cities, suburbs, and rural towns. Gambling in most countries is restricted to casinos and betting shops, but Australia allows it in corner pubs

DUTERTE: SOE ZEYA TUN/REUTERS. ILLUSTRATION BY SIMON ABRANOWICZ



and family-oriented sports clubs. Despite having less than half of 1 percent of the world's population, the country is home to a fifth of the world's poker machines.

There's scant political will for change: The gambling industry is a major donor to lawmakers, including Prime Minister Malcolm Turnbull's ruling Liberal-National coalition, and has become a big part of the nation's economy. Australian states and territories reaped A$5.8 billion in taxes from gambling in 2015, easing the pressure on the federal government, which is presiding over a budget deficit made worse by low commodity prices and political gridlock.

The July election of antigambling lawmaker Nick Xenophon, an independent, to the upper house of Parliament has reignited talk of curbing the gambling industry, but even he sounds despondent. "The hoteliers and clubs are powerful lobbyists, and the No. 1 jackpot junkies are state governments," he says, adding that lawmakers are "terrified" of the gambling industry. "The federal government could wean them off their dependency, but it doesn't look like that will happen."

Slot machines started proliferating in Australia in the 1950s when they were legalized in New South Wales, the nation's most populous state. Their evolution from clunky one-armed bandits to sophisticated video game machines encouraged other states to adopt them in the early 1990s, as governments sought new sources of revenue in the wake of a recession. Some 200,000 slot machines later, pokies are the biggest driver of the gambling industry.

About 1 in 6 Australians who regularly play the slots has a serious addiction and loses about A$21,000 a year, or about a third of the nation's average salary, government data show. The social cost of gambling is estimated to be at least A$4.7 billion a year.

Australia got close to enacting safeguards in 2010, when independent lawmaker Andrew Wilkie agreed to support Julia Gillard's minority Labor government in return for stricter rules on slots, including limiting bets to A$1. After a campaign by gambling lobbyists, Gillard tore up her deal with Wilkie. When Turnbull's coalition took power, any chance of reform died.

On the local level, stricter laws introduced by the Australian Capital Territory government, which oversees the national capital of Canberra, have lowered the revenue of some of Australia's biggest gaming companies, such as the Vikings Club, by limiting withdrawals from ATMs inside poker-machine venues to A$250 a day. Anthony Hill, Vikings' chief executive officer, dismisses the need for further legislation. "Most customers are consenting adults happy to be entertained and are educated enough to know what their odds are," he says.

Francis Markham, who researches gambling at the Australian National University, says industry lobbying is slowing reform. "There's a correlation between a spike in political donations from these groups just when there's more talk about gambling reform," he says. "Neither of the major parties are willing to countenance reform."

Seselja, the former gambling addict, now gives antigambling talks in the same clubs where she sometimes lost her monthly salary in a couple of hours. She agrees the industry has too much sway and says the government has an obligation to act, as it did following the 1996 Port Arthur massacre, when 35 people were killed by a gunman. The event prompted tighter gun laws. "We haven't been protected from this obvious, preventable harm by the government," she says. "This creates at least 400 suicides a year. Why is that OK?" —*Jason Scott*

The bottom line Australians gambled away A$23 billion in fiscal 2015, mainly on slot machines, the highest per capita total of any country.

Debt Crisis

Greece's Least Wanted Man Lives in Maryland

▶ **He fixed the country's fake stats. Now he faces criminal charges**

▶ **"This would be funny if it weren't so tragic"**

For 21 years, Andreas Georgiou worked in relative obscurity as an economist at the International Monetary Fund in Washington. When the European debt crisis hit and his home country of Greece began teetering toward bankruptcy, Georgiou felt a patriotic urge to help. In early 2010 he applied online to run a newly created office designed to clean up Greece's much maligned economic statistics. He got the job, and in August 2010 he moved to Greece for a five-year term as president of the Hellenic Statistical Authority.

Six years later, rather than being seen as a hero who helped fix Greece's broken finances, Georgiou is vilified there. His review of the country's public accounting exposed years of bogus statistics and along the way made him a target for critics who blame him for the strict austerity measures Greece's creditors imposed. Last year, Georgiou, 55, moved back to suburban Maryland and now faces a variety of civil and criminal charges in Greece, including one that could put him in prison for life. "This is beyond my wildest imagination," says Georgiou, who says he feels at times as if he's living in a Kafka novel. "This would be funny if it weren't so tragic."

After arriving in Greece, Georgiou quickly realized that entrenched forces were aligned against him. Within ▶

Georgiou lives in suburban Maryland. He's appealing a criminal slander conviction in Greece.

months he discovered his e-mail had been hacked after a member of the board that oversaw the statistics office, known by its acronym, Elstat, showed him a copy of a message he'd written. Although that board was later replaced, its members were especially upset, Georgiou says, that they didn't get to vote on the stats before he released them. "I told the staff that we are going to draw a line in the sand," he says. "I don't care what you did before. We are going to go by the book."

Georgiou uncovered lots of problems: Payment obligations weren't being counted; social security payouts were being improperly calculated; interest on government bonds had been misstated. He required 17 government-owned entities, including railways, bus companies, and the state-run TV network, all of which were losing money, to be put on the books. That alone added €18.2 billion ($20 billion) to Greece's debt.

Eventually, Georgiou restated Greece's 2009 budget deficit to 15.4 percent of gross domestic product, 1.8 percentage points higher than the ratio the country used in negotiating its first bailout with the European Union and the IMF. Politicians claimed Georgiou had inflated Greece's deficit so creditors could impose tougher austerity measures such as pension cuts and tax increases. Georgiou says the EU's statistical arm consistently endorsed his numbers, after years of calling into question Greece's stats.

The political furor that followed left Georgiou, who has a black belt in jiujitsu, fearing for his life. One critic publicly suggested he be hanged. Protesters broke into his office building. Accusations that Georgiou purposefully inflated the numbers led to a series of criminal investigations.

Georgiou is fighting an array of cases, including several that prosecutors dropped, only to be reinstated after outcries by politicians and the media. One editorial referred to him as "the executioner" of the Greek people. In June, Georgiou was convicted of criminal slander for calling Greece's previous statistics fraudulent and given a one-year suspended sentence. His appeal is slated for Oct. 31. He also faces a related civil slander suit, as well as two other criminal cases. One, for "complicity against the state," could carry a life sentence.

He's represented by two lawyers in Greece, but Georgiou does much of the work on his defense himself to save money. A crowdfunding website set up by a group of international statisticians has raised more than €8,000 on his behalf. A second fund has raised about $17,000. A single father of a 6-year-old daughter, Georgiou is looking for consulting work but has no full-time job. "He is depressed," says Edwin Truman, a former Federal Reserve and Treasury Department official, who is part of an ad hoc group of "friends of Georgiou" who are mounting an international lobbying effort to raise awareness of his plight and improve his image in Greece, where he is portrayed as an unyielding, politically naive statistician.

Truman first took an interest in Georgiou after noticing they both were Amherst College alums. Robert Kyle, the husband of one of Georgiou's Amherst classmates, is also part of the group. A partner at the Hogan Lovells law firm and a former White House staffer under President Bill Clinton, Kyle is serving as Georgiou's pro bono U.S. lawyer. Nicolas Véron, a French economist, does much of the EU side of the campaign. "A man refuses to participate in cooking the books and paid a very heavy personal price," Véron says.

Georgiou's friends are reaching out to former colleagues at the Fed, the White House, and the IMF in hopes of getting the U.S. to pressure Greece to stop its persecution of Georgiou and recognize the legitimacy of his stats. As difficult as the last six years have been, he takes pride in the work he did—setting numbers that Greece's creditors have relied on to give the country almost €300 billion in bailout funds. "I can tell you that I don't regret anything, not one iota of what I have done," he says. "I am actually quite happy, because I helped my country." —*Robert Schmidt*

The bottom line The former head of Greece's economic statistics agency faces criminal charges for the work he did rectifying its public accounting.

Edited by Matthew Philips and Christopher Power
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Welcome to Pride Night

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▶ Pro sports leagues fly the rainbow flag, hoping to cultivate a new market

▶ "It totally makes sense that teams are being more proactive"

A rainbow flag unfurled during the national anthem at a **D.C. United** soccer match in August was a signal to Robert York that the team was throwing out the welcome mat to people like him. "It was a powerful symbol," says York, a lifelong soccer fan who's gay. "It's about the fact that love wins overall, more so after what happened in Orlando," he says of the June 12 shooting at Pulse nightclub that killed 49 people.

Professional U.S. sports leagues, long seen as a bastion of homophobia, are increasingly sending the message that lesbian, gay, bisexual, and transgender fans are welcome at the ballpark. So far this year, about three dozen professional baseball, soccer, and women's basketball teams have hosted pride nights, inviting members of the LGBT community to throw first pitches or participate in coin tosses, handing out commemorative merchandise, and donating a portion of ticket sales to LGBT causes.

"From the NBA standpoint, this is a core value and a core strategy of how we are running our business and ultimately growing the game," says Oris Stuart, the NBA's chief diversity and inclusion officer. More teams will be hosting such events in the coming season, he says. The NBA's **Orlando Magic** will honor the victims of the Pulse shooting at their home opener on Oct. 26 and are planning a pride night for later in the season. The Detroit Regional LGBT Chamber of Commerce will host its second pride event, on Oct. 23 at Detroit's Ford Field, when the NFL's **Detroit Lions** play the **Washington Redskins**. Just two years ago, such gestures were rare.

"With respect to the LGBT community and where society is today, it totally makes sense that teams are being more proactive and reaching out," says Jessica Berman, vice president for special projects and corporate social responsibility at the NHL. At least half of all NHL teams will host LGBT nights as part of a diversity week in late February. The league partnered in 2013 with the group You Can Play, which promotes LGBT sports participation, and in the 2015-16 season, Berman says, nine teams hosted pride nights.

The efforts are a positive change from the past, says former baseball outfielder Billy Bean, who retired from playing in 1995 and came out as gay in 1999. "Sometimes doing the right thing is ▶

◀ not the easy thing, but I'm still in awe of the progress we've made," he says. "If there was a pride night when I ran onto a big league field, if I had seen that, it might have changed my whole life."

MLB hired Bean in July 2014 to serve as its first ambassador of inclusion. As part of the job, he travels across the country educating teams about the LGBT community and attends pride events at ballparks. In 2016 he visited the **Tampa Bay Rays**' Tropicana Field shortly after the Orlando shooting, as well as Wrigley Field, home of the **Chicago Cubs**, and the **Toronto Blue Jays**' Rogers Centre, among others.

LGBT fans have almost $1 trillion in purchasing power, according to an annual survey by Witeck Communications, a consulting firm that focuses on the gay-and-lesbian market. "Sports teams depend on fan lifeblood, and a growing share of LGBT total spending means more money to fill seats, buy swag, and cheer themselves hoarse," says founder Bob Witeck. Sports marketers can't ignore this option, he says.

Ticket sales at a pride night hosted by the WNBA's **New York Liberty** in June were about 7 percent above the team's average, says Kristin Bernert, senior vice president for business and basketball operations for the team, which held its first such event in 2012. "A lot of our fans are from the LGBT community, so we're recognizing and celebrating that," she says. Each of the dozen WNBA teams hosted pride nights during the 2016 season.

The leagues' outreach has met with some predictable hostility. The comments posted to videos produced for pride events are filled with homophobic slurs and insults. Similar messages are shared on social media. "Out on the Fields," a survey of 2,064 lesbian, gay, bisexual, and straight Americans conducted on behalf of an international coalition of LGBT sporting groups in partnership with Australia's government, found that homophobia is more prevalent in sports than in society at large. The problem prompted former NFL player Wade Davis, together with a researcher at the University of Alberta's Institute for Sexual Minority Studies and Services, to create the website NoHomophobes.com to track homophobic slurs on Twitter in real time. Davis, who came out in 2012, years after he retired from the NFL, says the site's data show an increase of homophobic posts during sporting events.

"We're trying to get it to the point where every team does an LGBT event either at a game or elsewhere," says Davis, who's also executive director of You Can Play. The NFL has granted Davis's group funds to stage four to five LGBT events this season.

To keep the pressure on sporting arenas, Athlete Ally, an advocacy group whose mission is to end homophobia in sports, is developing tolerance ratings for 127 venues based on several factors, including whether the stadium has held a pride night and if it makes accommodations for transgender people. "The reality is that fans travel for their team and they will want to know if a venue is welcoming to them," says founder Hudson Taylor.

Despite the efforts, pro sports still aren't seen as inclusive, he says. The number of stadiums and fields that haven't yet hosted a pride night outnumber those that have. "Pride nights are amazing and important and powerful, but they are only one game out of a season," Taylor says. His group encourages venues to institute fan codes of conduct that prohibit homophobic slurs and ensure the facilities also are welcoming to transgender visitors.

JoAnn Neale, Major League Soccer's chief administrative officer, says her league's goal is to create what she calls a "safe place" for everyone, fans and athletes alike, by not tolerating any discrimination at the stadium. MLS rules prohibit homophobic slurs. D.C. United fan York believes LGBT viewers will respond positively to the leagues' efforts. Almost 900 gay fans and their supporters, waving rainbow-colored scarves made for the D.C. United pride event, cheered the team on at RFK Stadium. The Gay Men's Chorus of Washington DC sang the national anthem. Says York: "It was a great night for sports and for visibility for LGBT sports fans." —*Jeff Green*

The bottom line Pro sports leagues are hosting pride nights to welcome LGBT fans and tap into their purchasing power.

Fans keep track of strikeouts at a San Francisco Giants' LGBT night last year

Retailing

This Deflation Has Grocers Fed Up

▶ **Competition creates a bargain bonanza in the food aisles**

▶ **"It starts to border on irrational pricing"**

Call it the Great Grocery Store Giveaway of 2016. In Austin, **Randalls** supermarkets slashed prices for boneless beef ribs by 40 percent, to $3.99 a pound. Not to be outdone, rival **H-E-B** charged $1-a-pound less. During grilling season, **Albertsons** advertised buy-one-get-one-free specials on USDA choice petite sirloin steak—a deal you don't normally see on finer cuts of meat.

Still, such bargains pale compared with what a dollar and change can buy at grocery stores these days. In North Bergen, N.J., you can pick up a dozen

FROM LEFT: GETTY IMAGES; ILLUSTRATIONS BY 731 eggs at **Walmart** for $1.14. A mile away at **Aldi**, the Germany-based discounter, shoppers can actually break the buck: 12 eggs for 99¢. A year ago, they'd have paid three times as much, on average.

In a development almost unheard of outside a recession, food prices have been below year-earlier levels for nine straight months in the U.S. through August. It's the longest streak of declines since 1960, with the exception of a period following the Great Recession. Analysts credit low oil and grain prices, as well as cutthroat competition between supermarkets and discounters.

"The severity of what we're seeing is completely unprecedented," says Scott Mushkin, an analyst at Wolfe Research who's studied grocery prices for more than a decade. "We've never seen deflation this sharp."

At first, falling prices helped grocers. Slumps in global commodities markets pushed down the cost for many meats and packaged foods, initially boosting grocers' profits. But deflation has since turned ugly for the industry, with some retailers pushing steep discounts to lure more customers into their aisles. The price war, led by Walmart, the nation's largest seller of groceries, has resulted in bargains for shoppers while squeezing stores' profits.

"It starts to border on irrational pricing," says Jennifer Bartashus, an analyst at Bloomberg Intelligence. "People are lowering prices just to draw traffic, without thinking about their margins."

Supermarkets are facing competition not just from Walmart and Aldi but also dollar stores and online retailer **Amazon.com**. It could get worse. **Lidl**, one of Aldi's rival food discounters in Germany, is building three distribution centers on the East Coast and plans to open U.S. stores by 2018. Even **Whole Foods Market**, dogged by a reputation for being expensive, has been trying to compete more on price through digital coupons and promotions on items such as beer and produce.

Mushkin of Wolfe Research recently found that prices of a typical basket of grocery items in Houston had fallen almost 5 percent in the past year. He credits in part the discerning behavior of shoppers such as Manny Sinclair for the declines. On a weekday lunch break, the 43-year-old contractor stopped by a Walmart supercenter in Secaucus, N.J., to pick up turtle food and paper towels.

Sinclair typically buys groceries at his local **ShopRite** supermarket but has recently noticed the steals available at discounters. He glanced at the meat case, where a 12-pack of angus-steak burgers fetched $15.82 and grass-fed ground beef could be had for $4.96 a pound. Sinclair was intrigued, but with the classic logic of a shopper in an age of deflation, he figured he might find even lower prices elsewhere. Along with two Walmarts, a Target, and an Aldi, the area has a **Family Dollar** store that features a small refrigerated food section. Says Sinclair: "Wherever I find the good deals—that's where I'm at."

In recent years, **Kroger**, the largest grocery chain in the U.S. with almost 2,800 stores, cut prices to compete with Walmart and managed to increase its market share and sales. But deflation has been hard on the company. Its stock has lost more than a quarter of its value this year as sales growth has slowed because of price cuts. Chief Executive Officer Rodney McMullen has expressed frustration that many customers don't even notice the falling prices.

"The other thing that's always hard is getting your message out, because it's fascinating—in our research, most people are saying their basket of goods costs more money," McMullen said on a call with analysts in September. A possible reason for his lament: Food on average makes up only about 15 percent of a consumer's budget. Except for gas and other energy-related items, prices for most other goods are going up, if only modestly.

At the same time, restaurant food isn't getting cheaper. That can make for some strange contrasts: In Chicago a pound of Dunkin' Donuts coffee sells for $4.99 at a **Jewel-Osco** store, less than the cost of a venti pumpkin spice frappuccino at Starbucks. Albertsons owns Jewel-Osco, as well as Randalls, home of the cheap Texas ribs. Fast-food chains also have recently blamed cheaper groceries for stealing customers.

Still, some consumers aren't biting. Elena Rosa, a 63-year-old retired health aide, was blasé when she steered her shopping cart past the refrigerator case at Aldi in North Bergen. She paused, noting the dozen eggs for less than $1—"That's a good price," she said—before moving on without buying.
—*Craig Giammona, with Lauren Etter*

The bottom line Food prices in the U.S. have been below year-earlier levels for nine straight months. The price cuts have been bad for retailers' profits.

Groceries Get Cheaper

Year-over-year change in prices of food at home

Price change, from August 2015 to August 2016

Eggs	-37.9%
Beef and veal	-7%
Milk	-4.9%
Coffee	-3.8%
Apples	+10.3%

DATA: BUREAU OF LABOR STATISTICS

Product Liability

Plaintiffs' Lawyers ♥ St. Louis

▶ **The city's circuit court is known for fast trials and big awards**

▶ **"Litigation tourists ... think the court will treat them favorably"**

Deborah Giannecchini began using **Johnson & Johnson**'s baby powder for feminine hygiene as a teenager in California in 1967 and continued for 45 years until she was diagnosed with ovarian cancer. Giannecchini, who lives in Modesto, Calif., used the product only in that state. When her lawyers filed a lawsuit against J&J, a New Jersey-based company, they ▶

◀ did so in a state court in St. Louis.

Hundreds of plaintiffs with product liability claims against J&J, **Bayer**, **Pfizer**, **General Motors**, and other big companies have been flocking to downtown St. Louis to a venue that over the past three years has developed a reputation for fast trials, favorable rulings, and big awards. Traditionally, Giannecchini's claim would have been sent to federal court or filed in a local court in a jurisdiction where she or the defendant lives. Giannecchini and other plaintiffs are taking advantage of a quirk in Missouri law that allows out-of-state plaintiffs to combine their claims with those of local residents. As long as one plaintiff in the suit resides in St. Louis and another in the home state of the defendant, dozens of cases with similar claims can be combined before one Missouri judge.

$174
million

Combined value of three of the top six U.S. product defect verdicts this year from cases heard in St. Louis's circuit court

Metropolitan St. Louis has two circuit courts. One is in the city; the other, in Clayton, Mo., handles countywide cases. The city court, with 18 general trial judges and 13 courtrooms, handles more than 300 jury trials annually. So far this year, three of the top six product defect verdicts in the U.S., totaling $173.5 million, have come out of the St. Louis court. Two of those were against J&J over an alleged link between talc and ovarian cancer. (It's appealed the decisions.) The third was against **Monsanto** over allegations it dumped polychlorinated biphenyls (PCBs) into waterways that got into food supplies.

One suit against Pfizer, scheduled to go to trial next April, claims the company's Lipitor medication caused a woman to develop diabetes. GM, named in thousands of claims nationwide and hundreds in St. Louis related to its faulty ignition switches, will face three trials in the city court next year.

The cases are heard more quickly and more fairly in the St. Louis court, plaintiffs' lawyers say, giving their clients a better chance of winning. "The city has more judges, it's a bigger venue, and you go to trial quicker," says Steve Kherkher, a plaintiffs' attorney who brought the case against Monsanto alleging a link between PCBs and non-Hodgkin lymphoma. In May a jury awarded the plaintiffs in the suit $46.5 million. Cases in Missouri are more likely than those in many other jurisdictions to avoid pretrial dismissals, and the state's appellate courts tend to uphold verdicts, says Houston plaintiffs' lawyer Tommy Fibich.

The jury pool in the city is also a draw, says Merrie Jo Pitera, chief executive officer of Litigation Insights, a jury consulting firm in Overland Park, Kan., that works with big defendants. Liberal jurors are more sympathetic to plaintiffs, and, she says, "citizens of the city are more likely to be liberal."

Winning a trial in state court in Missouri requires the support of 9 of 12 jurors; in federal court, the verdict has to be unanimous. The rules for submitting evidence are looser, too, with judges allowing expert testimony that wouldn't be accepted in federal courts, says attorney Victor Schwartz, general counsel of the American Tort Reform Association. "These plaintiffs are litigation tourists," says Schwartz, who isn't involved in any cases in St. Louis. "They have no connection with the city but think the court will treat them favorably."

Plaintiffs face some restrictions. The cases can't include more than 99 claims. Those with more must go to federal court. Yet the number of filings and trials will continue to rise as news of favorable verdicts spreads, Pitera says. "There have always been litigation hot spots," she says. "If there's a good verdict, people start flocking there."

Other plaintiff havens have included Southern Illinois and certain counties in Texas. Carl Tobias, a law professor at the University of Richmond, says venues that acquire a reputation for being plaintiff-friendly are often reined in by state legislatures. He predicts lobbyists will try to get laws passed in Missouri limiting the ability of out-of-state plaintiffs to join a case. Business groups, including the U.S. Chamber of Commerce, recently spurred passage of a bill in the state to alter rules on expert evidence. Missouri's governor vetoed the bill, but a renewed push is planned. The efforts may eventually succeed but will just shift the cases to another jurisdiction, Tobias says: "It will get tightened up, and plaintiffs' lawyers will move on." —*Margaret Cronin Fisk, with Tim Bross*

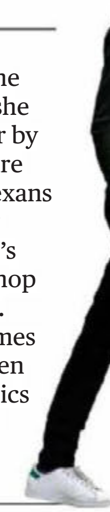
The bottom line A circuit court in St. Louis has drawn hundreds of out-of-state plaintiffs with product liability claims against big companies.

Apparel

How Adidas Got Back In the Game

▶ **Younger players, music producers, and fast fashion are paying off**

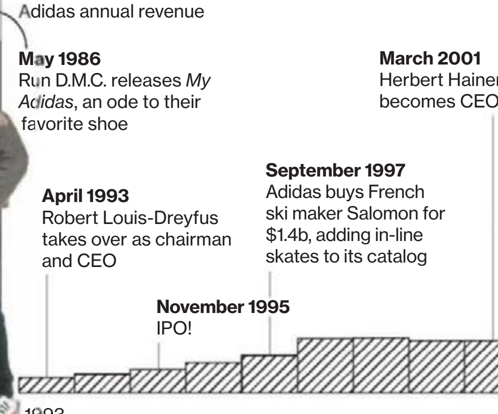
▶ **"It's really millennials fueling this resurgence"**



When Angelique Kerber won the U.S. Open in September to bring the women's tennis title to Germany, she was decked out head-to-toe in gear by **Adidas**. NFL wide receiver DeAndre Hopkins kicked off the Houston Texans season wearing cleats designed by rapper Kanye West, part of Adidas's strategy of mixing sports and hip-hop culture that's resonating with kids. Even celebrities such as Katie Holmes and Kristen Stewart lately have been seen sporting Adidas's back-to-basics Stan Smith tennis sneakers, which some fashionistas have taken to mixing with couture wear.

Walk This Way

Adidas annual revenue

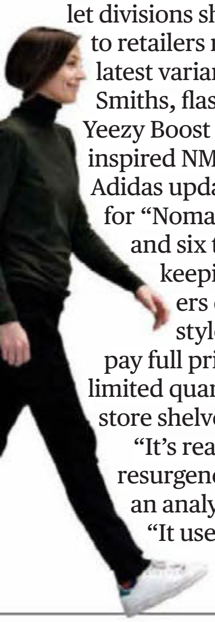


GETTY IMAGES (4)

"If a giant hurricane comes tomorrow and wipes out Herzo, the one thing people are going to miss most are our products," says Eric Liedtke, Adidas's executive board member responsible for global brands, using company shorthand for Herzogenaurach, the Bavarian enclave where the company is based.

That's quite a turnabout for a company whose stock was Germany's worst-performing in 2014, after it abandoned its sales forecast and scrapped long-standing profit goals. Yet today, thanks to a recent embrace of e-commerce, strong demand for celebrity-themed gear, and a revival of interest in retro-style shoes, Adidas is red hot: Its stock has more than doubled in the past 12 months, and it's gaining ground on **Nike** and **Under Armour** in the crucial U.S. market.

A management reorganization has let divisions ship new styles and colors to retailers more often, bringing the latest variants of the classic Stan Smiths, flashier Kanye-designed Yeezy Boost shoes, and running shoe-inspired NMDs to market much faster. Adidas updated the NMD (it stands for "Nomad") three times in August and six times in September, keeping young customers clamoring for the latest styles—and they're willing to pay full price to snag them before limited quantities disappear from store shelves.



Céline's Phoebe Philo wearing Stan Smiths, which helped spark an interest in the shoe in runway fashion

"It's really millennials fueling this resurgence," says Neil Schwartz, an analyst at SportsOneSource. "It used to be Adidas came out with a shoe and they had only a few styles. Now it's 31 flavors at Baskin-Robbins."

Adidas leapfrogged Under Armour to become the second-best-selling sports footwear maker in the U.S. this year through September, Schwartz says, though its share is still about a ninth of leader Nike's. Adidas says it sold 8 million pairs of Stan Smiths globally last year—out of 50 million over the past four decades. It also sold 15 million pairs of Superstars, the white low-rise basketball shoes immortalized by Kareem Abdul-Jabbar in the 1970s and transformed into hip-hop essentials by rappers Run D.M.C. in the '80s. "They are gaining market share at the expense of Nike," says Cédric Rossi, an analyst at investment bank Bryan, Garnier, who notes Adidas's currency-adjusted sales grew at double Nike's pace in the spring quarter.

Chief Executive Officer Herbert Hainer, who retires on Sept. 30, has over the past few years decentralized the company's marketing, advertising, and research and development. In soccer, a flagship sport associated with Adidas since the 1950s, general manager Markus Baumann says he now has more control over sales, design, and sponsorship budgets and doesn't need to tap headquarters staffers to get things done.

Hainer is funneling marketing spending into six trend-setting cities: New York, Los Angeles, London, Paris, Tokyo, and Shanghai. He's also constraining supply of hot shoes such as the NMD to build buzz and amp up demand. In the coming weeks, for example, new versions of Stan Smiths and Superstars will add Adidas's bouncy Boost running sole—usually found on its most serious athletic shoes—to help keep interest high in the retro-inspired models.

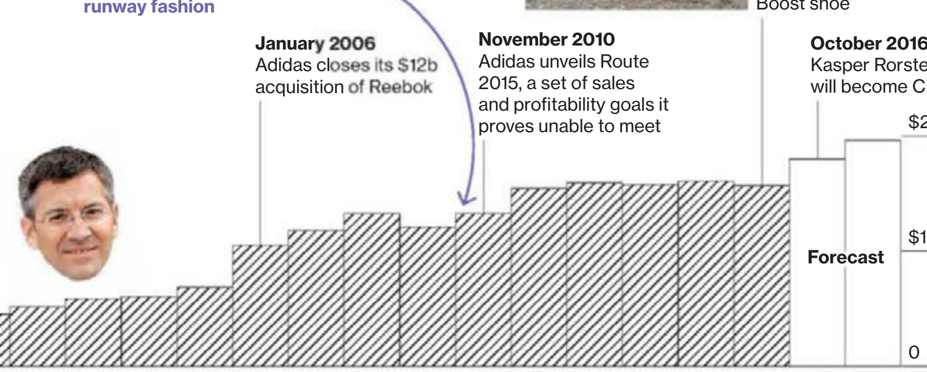
February 2015
Kanye West releases the first Yeezy Boost shoe

Adidas has also rethought its sponsorship policy, downplaying broad leaguewide tie-ins, such as the 11-year NBA sponsorship deal that it ended in 2015. "In the past we couldn't own the runner, the basketball player, the soccer player," Liedtke says. Nowadays, Adidas backs individual players such as NBA star James Harden and European soccer's Paul Pogba, who are more likely to connect with kids. "It's the player behind the club who's influencing the younger generation," says John Guy, an analyst at brokerage MainFirst.

As part of its push to react faster, Adidas in September introduced a white woven running shoe called Futurecraft, knitted by robots in a new factory in Germany. (Most sneakers are made in Asia and then transported by sea, a lengthy process.) A second so-called SpeedFactory will open in Atlanta next year. Both facilities will allow limited-run shoes to be produced more quickly and closer to key markets. Adidas also plans to test in-store robots that can assemble shirts to customers' exact fit.

The durability of Adidas's fashion-driven comeback is still unclear. Two-thirds of Adidas's growth is coming from its casual Originals and Neo brands, rather than hard-core athletic shoes, according to Citigroup. And fashion can be fickle.

Moreover, North America accounted for only 2.4 percent of 2015 operating profit, well below its 16 percent portion of company sales, according to Bloomberg Industries. And Adidas lags far behind rival Nike in profitability. Says Ingo Speich, portfolio manager at Frankfurt's Union Investment: "Nike's margin is nearly twice as much. That's not yet solved." Adidas officials hope that getting new styles to market while they're hot and high-priced can help narrow that gap. —*Aaron Ricadela*



The bottom line Adidas has aggressively added celebrity and fashion-oriented styles. That's led to a 100 percent rise in its share price in 12 months.

Edited by James E. Ellis and Dimitra Kessenides
Bloomberg.com

Politics/ Policy

October 3 — October 9, 2016

Chillary Clinton

AP PHOTO (3); BLOOMBERG (1); GETTY IMAGES (3); NEW YORK TIMES/REDUX (2); REUTERS (3)

▶ The Democratic nominee faces an enthusiasm gap with millennials

▶ "Are we where we want to be? Not precisely"

When Hillary Clinton decided to run for president, she faced a critical strategic choice. Should she tailor her message to the predominantly white working-class Americans who twice helped elect her husband—and supported her in the 2008 Democratic primaries over Barack Obama? Or should she try to piggyback on Obama's coalition of minorities, single women, and millennials?

Clinton chose the latter track. It's worked, up to a point: Polls have consistently shown she's crushing Donald Trump among black voters, Latinos, and suburban women. But she hasn't managed to attract the overwhelming support among young people that powered Obama's victories in 2008 and 2012. It's not that they won't vote, because they turned out in large numbers for Clinton's Democratic primary challenger Bernie Sanders. It's that, with less than six weeks to go until Election Day, they haven't gotten excited about Clinton.

In Ohio, Clinton leads comfortably among likely voters under 35 who are asked to pick between her and Trump, according to a Bloomberg Politics poll released on Sept. 26, before the first presidential debate. When third-party candidates are included, however, Clinton's support among millennials tumbles 13 percentage points, while Trump's drops only 3 points. About 22 percent of voters under 35 say they'll choose Libertarian Gary Johnson.

70
million

Number of U.S. voters under 35, the same share of the electorate as baby boomers

The survey found a similar dynamic repeated nationally, with Trump narrowly leading among millennials and Clinton losing 20 percent of her support when Johnson and Green Party nominee Jill Stein are included. The trouble for Clinton, says Democratic pollster Andrew Baumann, is that her campaign hasn't given young people enough reason to vote for her rather than any of the other non-Trump candidates: "She needs to be making the case of why she's good."

From the start, Clinton has made efforts to attract millennials, who match baby boomers as a share of the electorate, with just under 70 million in each group, according to the Pew Research Center. She put her headquarters in Brooklyn, invited *Girls* creator Lena Dunham and singer Katy Perry to be surrogates, and printed up ironic T-shirts—including a bright-yellow one that read "Yaaas, Hillary!" over a black-and-white yearbook headshot. Clinton has also invited supporters to complain about their college debt on Twitter using emojis and has appeared with Zach Galifianakis on the Funny or Die web show *Between Two Ferns*. Yet all this synthetic hipness has failed to produce the real thing. "Are we where we want to be? Not precisely," says campaign strategist Joel Benenson. "But we're confident we'll get there."

Most of the voters Clinton is trying to reach are too young to remember when she and Bill Clinton were the insurgents who took over the Democratic Party in 1992 with their mix of centrism and Fleetwood Mac. Their expectations for politicians have been shaped under Obama. "Barack Obama is probably the coolest president we're going to have, maybe in my lifetime," says Steve Schale, who managed Obama's 2008 campaign in Florida. "It's impossible to replicate that moment."

Polls suggest the main reason young voters are so hesitant about Clinton is that they don't trust her. Of likely voters age 18-34, 77 percent don't think Clinton is honest, the highest of any age group, according to a Sept. 14 Quinnipiac University poll. Her approval rating among voters under 30 is 33 percent, according to a Sept. 11 Gallup poll.

In response, Clinton dispensed with the tweets and memes and went to Temple University in Philadelphia to talk to millennials directly. Her Sept. 19 speech covered college costs, climate change, LGBT equality, and racial justice. It also included a rare acknowledgment of weakness: "I also know that even if you're totally opposed to Donald Trump you may still have some questions about me. I get that. And I want to do my best to answer those questions."

The campaign is sending organizers to college campuses to register voters and try to get them excited about Clinton. It's specifically targeting people who supported Sanders in the primary, says Christopher Huntley, Clinton's director of millennial media.

Sanders has also hit the campaign trail for Clinton, appearing with her at a rally in Durham, N.H., on Sept. 28. "I am asking you here today not only to vote for Secretary Clinton but to work hard to get your uncles and your aunts, to get your friends, to vote," he said. "This election is enormously important for the future of our country. It is imperative that we elect Hillary Clinton as our next president."

The close national polls may help Sanders and other surrogates impress on young people that their vote could influence the outcome of the race, says former Sanders strategist Tad Devine, who worked on Al Gore's 2000 campaign. That year, Devine says, younger voters told pollsters they were planning to support Ralph Nader, who was running on the Green Party line. "Many of them, particularly in places we went out and made an aggressive case not to do that, left Nader," says Devine.

Nader's support dropped significantly in the last few days before the vote, Devine says. He wound up winning 2.7 percent of the popular vote nationally. Nader's presence on the ballot in Florida, where he took just 1.6 percent of the vote, nevertheless cost Gore the presidency. Says Devine: "That'll weigh very heavily on them." —*Sahil Kapur, with Joshua Green and Ben Brody*

The bottom line With only weeks to Election Day, Clinton is trying to lure millennials away from third-party candidates.

Voting Rights

A Texas Election Official Talks Like a Sheriff

▶ **Civil rights groups fear threats of charges will scare voters away**

▶ **"We have every reason to be very, very concerned"**

Texas officials have spent years in court fighting to keep their state's controversial 2011 voter-ID law alive. The law, one of the toughest in the U.S., requires Texans to show some form of government-issued identification at their polling place. Under a court-approved August compromise with the Department of Justice, Texas must allow voters who show up without

PHOTO ILLUSTRATION BY BRAULIO AMADO; CHESNOT/GETTY IMAGES

a driver's license or other photo ID to sign a sworn affidavit stating that they'd encountered an impediment to obtaining the required documents before Election Day.

On Sept. 20, the federal district judge who oversaw the August agreement denied a plea from the NAACP, the League of United Latin American Citizens, and Dallas and Hidalgo counties claiming Harris County clerk Stan Stanart and Texas Attorney General Ken Paxton were effectively intimidating voters by publicly suggesting that people who filed affidavits could be criminally prosecuted if it turned out they'd been issued driver's licenses or other IDs in the past. "If you sign that affidavit and you lie about not being able to get a photo ID, you can be prosecuted for perjury," Paxton told Fox News on Aug. 18.

The judge's ruling was a victory for Stanart, an active member of the state Republican Party whose campaign website touts him as "the proven conservative leader." Harris County, which covers Houston, is the biggest in Texas and third-largest in the U.S., with a population the size of Kentucky. Early voting in Texas starts on Oct. 24.

Stanart says he's already compared lists of registered voters against state driver's license records so that his staff will be prepared to spot any affidavits filed by people who should have had appropriate ID. "If we suspect that they're doing it intentionally and doing it for fraudulent purposes, I'm going to be inclined to turn them over to the DA," says Stanart, who worked in the county tax office before he was elected county clerk in 2010. "We will have chaos if we don't have people that are willing to follow the law."

Texas isn't the only state dealing with last-minute changes in how voter-ID laws can be implemented. Over the summer, federal judges overturned North Carolina's ID requirement and decreed that Wisconsin accept expired student IDs, as well as expedite IDs for voters who've had difficulty acquiring them.

Civil rights advocates say the threat of fraud is overblown. A 2014 analysis by Justin Levitt, a professor at Loyola Law School who's now a deputy assistant attorney general in the DOJ's civil rights division, found 31 instances of possible voter impersonation out of 1 billion ballots cast over 14 years. "One is more likely to see the tooth fairy standing next to Santa Claus at the voting booth," says national NAACP president Cornell William Brooks.

The real danger, Brooks argues, is that Texas voters who don't have ID and are nervous about making a mistake by signing an affidavit—including people whose driver's licenses have been lost or stolen—may stay home. "You have elected officials on the eve of this election openly expressing a commitment to suppress the vote. You can't regard it as anything else," Brooks says. "We have every reason to be very, very concerned."

The NAACP and other plaintiffs prevailed on a different aspect of implementing the voter-ID law: the language Texas uses in its court-ordered $2.5 million public-education campaign. The state had released materials saying people could still vote if they "cannot obtain" and "have not obtained" IDs, rather than using the more permissive phrase "cannot reasonably obtain" included in the August settlement. So the judge, Nelva Gonzales Ramos, ordered Texas to change the language on its elections website, posters, and press releases with the updated phrasing. The state attorney general's office has filed an appeal to the U.S. Supreme Court asking for a new review after the Nov. 8 presidential election.

In August, the DOJ sued Harris County on allegations that polling places used in a May special election violated the Americans With Disabilities Act because they lacked accessible facilities. The county has filed for dismissal. "We don't think that there's any voters that cannot get into our polling places," says Stanart.

He brushes off the legal tussles as routine election-year noise. "There's always somebody out there complaining about something," he says. With regard to the voter ID law, he adds: "If someone is lying purposefully, don't you think that we have laws and we should uphold them?" —*Josh Eidelson*

The bottom line Houston's top election clerk threatens to go after voters who falsely claim they don't have ID when they show up to polling places.

Mass Transit

Connecticut Tells Amtrak to Slow Down

▶ **Plans for an Acela bypass north of Stamford run into opposition**

▶ **"It's already had a negative effect on house sales"**

Stamford, Conn., has become a hub for hedge funds in part because of Amtrak's Acela Express, which delivers riders south to Manhattan in about 45 minutes. But a move to speed up service north to Boston is meeting fierce opposition in southeastern ▶

Quoted

"He told me that…it's the present that really belongs to the young."

A statement by **President Obama** mourning the Sept. 28 death of former Israeli President Shimon Peres, at 93

◀ Connecticut, where the Federal Railroad Administration wants to reroute the express trains through historic towns such as Old Lyme and New London, potentially endangering their quaint downtowns. At a hearing on Aug. 31, Democratic Senator Richard Blumenthal threatened to tie himself to the tracks to block construction. "Nobody's against bigger, faster, more efficient rail," says Carl Fortuna Jr., the first selectman of Old Saybrook, where the bypass would begin. "We're happy to help support your goal here. But not the way you're drafting it."

High-speed rail has lagged in the U.S., where the fastest train is the Acela. It runs at a maximum of 150 mph, but only in some areas along its 457-mile route between Washington and Boston. Magnetic-levitation trains in Shanghai rocket along at 270 mph, and a next-generation system tested in Japan last year reached a world-record 375 mph.

California's plan to build a 220-mph bullet train between Los Angeles and San Francisco is running years behind schedule, and total estimated construction costs have doubled from the original $33 billion. Texas Central Railway, which would use Japanese technology to run trains at 200 mph between Dallas and Houston, has yet to raise the $12 billion in private investment needed to cover estimated construction costs. In Florida, where Republican Governor Rick Scott refused $2.5 billion in federal rail money in 2011, a would-be private operator has struggled to sell bonds for Orlando-to-Miami service.

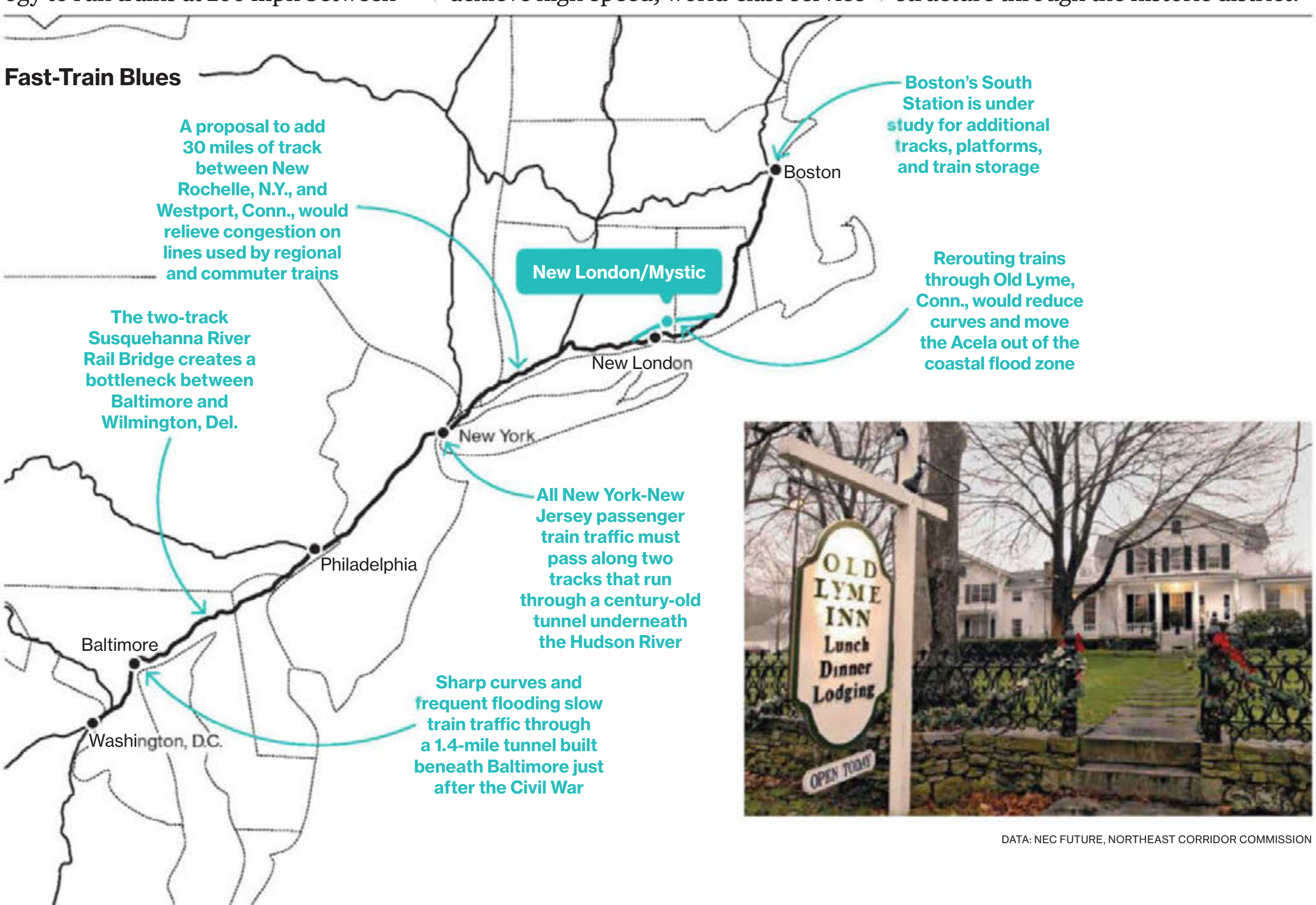
Amtrak announced on Aug. 26 that it's taking out a $2.5 billion federal loan, the largest in the history of the U.S. Department of Transportation, to pay for 28 trains designed to go as fast as 186 mph. "Amtrak is taking the necessary actions to keep our customers, the Northeast region, and the American economy moving forward," Joe Boardman, the then-Amtrak chief, told reporters in Wilmington, Del., when he and Vice President Joe Biden announced the deal.

The first of those trains is expected to go into service by 2021, but it will need more straightaways and a clear right of way to sustain top speeds along the Northeast Corridor, which runs through some of the nation's densest population centers. Even current Acela trains could go faster if new tracks like the one proposed in Connecticut are built. "There's no way you could ever achieve high-speed, world-class service with the right of way we have today," says Jim Cameron, founder of the Commuter Action Group, which represents rail riders in the New York City suburbs. "This train is like a Ferrari driving on a dirt path."

In Stamford, whose railroad station draws Amtrak riders from Greenwich, New Canaan, Westport, and other wealthy enclaves, the population has grown 8 percent, to 129,000, in the past five years, according to Thomas Madden, the city's director of economic development. Commercial space and 8,000 apartments are under construction at a cost of $6 billion. "It really does help the Fortune 500 companies, and the other companies, to serve the businesses on the Northeast Corridor," Madden says.

In Old Lyme, about 1 in 4 residents signed a petition objecting to an early design for the bypass that included elevated tracks through the downtown, which served as a backdrop for the 19th century American impressionist movement. That design has been scrapped, says Matthew Lehner, a railroad administration spokesman: "If the final blueprint includes the bypass in that area, it would not be an aerial structure through the historic district."

Fast-Train Blues



DATA: NEC FUTURE, NORTHEAST CORRIDOR COMMISSION

FROM LEFT: PETER HVIZDAK/THE IMAGE WORKS; MARK BUGNASKI/KALAMAZOO GAZETTE/AP PHOTO

Lehner says federal officials will make their recommendations later this year.

Designers are considering a tunnel instead, according to Bonnie Reemsnyder, Old Lyme's first selectwoman. "Even with a tunnel, you have venting, and that has to come out somewhere. And you have vibrations," she says. "It's already had a negative effect on house sales. A line on the map already has done this community damage." —*Elise Young*

The bottom line Residents along the Washington-Boston Acela line object to rail construction that would speed up service to 186 mph by 2021.

Public Finance

Another Way to Tap the 1 Percent

▶ **Instead of tax hikes, Kalamazoo is asking the rich for donations**

▶ **"Anything any city could have done to lower its costs, we did"**

Earlier this year, staring ahead at years of deficits, the city of Kalamazoo, Mich., formed a committee to conjure up solutions. The resulting recommendations were standard fare: Make further cuts to city services, impose an income tax, or do a bit of both. Then Mayor Bobby Hopewell, on a lark, introduced a third option—ask the city's wealthiest residents for a bailout.

Hopewell approached his friend, banker William Johnston, husband of billionaire Ronda Stryker, whose grandfather founded the Stryker medical-device company in Kalamazoo after World War II. Johnston and another local philanthropist, Upjohn pharmaceutical heir William Parfet, responded with an even grander idea. Rather than give the city a one-time donation, they proposed creating a $500 million endowment that would generate enough income to keep the city afloat indefinitely. To get it started, Parfet and Johnston will put up an immediate $70.3 million to cover the city's budget gaps for the next three years and pay for poverty-reduction and business-development programs.

The first donation is to be accompanied by a 38 percent reduction in property taxes effective in 2017. The city commission is expected to approve the tax cut in October. Hopewell says he's hoping the endowment setup will enable the city to keep cutting taxes while improving services, which would attract residents and investments, further bolstering municipal finances. "To me, this is another pot of revenue," says Hopewell, a Democrat in his fifth two-year term. "We have more strings attached to the dollars we receive from the state and federal government than this will ever have." Parfet and Johnston didn't respond to requests for comment.

"We have more strings attached to the dollars we receive from the state and federal government than this will ever have."
—*Kalamazoo Mayor Bobby Hopewell*

Kalamazoo's budget woes are, in fact, the creation of the state. In recent decades, Michigan has kept an increased share of the revenue it receives from municipal taxes while prohibiting cities from raising property-tax assessments faster than the rate of inflation, according to Richard Murphy, a program coordinator with the Michigan Municipal League, a nonprofit advocacy group. Property assessments fell drastically after the financial crisis in 2008 and have yet to recover, which is one reason so many cities in the state have been taken over by governor-appointed emergency managers.

Public-private partnerships devoted to specific causes, such as maintaining historic landmarks, are common throughout the U.S. But it's unusual for philanthropists to hand over large sums to keep basic municipal functions running. "Trying to put up 1,700 local philanthropic budget fixes one by one just doesn't scale very well," Murphy says.

Kalamazoo has experience with unconventional philanthropy. It's the home of the Kalamazoo Promise, an 11-year-old program through which anonymous donors pay college tuition for all students who graduate from the public high schools. The Promise has led to a population boomlet that's attracted aspirational, education-minded parents from every U.S. state.

Yet since 2009, Kalamazoo has cut about $12 million from its budget, which had an operating revenue of almost $53 million for fiscal 2016, city documents show. That's resulted in the elimination of about 120 city jobs over the past five years. Revenue has continued to decline even though the unemployment rate has fallen below 5 percent and home prices are rising more than 5 percent per year.

Without the cash transfusion, the city would face a projected annual $5 million gap starting in 2017. "Anything any city could have done to lower its costs, we did," says Hannah Apps, a former mayor who teaches economics at Kalamazoo College. "We gutted our economic-development programs. We gutted rental inspections. And it was beginning to show."

The concern, Apps says, is that the foundation's benefactors may have different priorities than many city residents. "If it's a question between a policy to rebuild a street on the poor side of town, which might take $7 million, and spending that $7 million on a bike lane through downtown so medical students can get places, I think the bike lane will win," says Apps. "If the bike lane wins too many times, that's tricky. But without the donation, we'd be able to do neither."

Hopewell thinks that stark reality is the best reason to embrace the endowment model. "Everyone's saying what if, and I get that," he says. "But to me this is a prime example about how philanthropy in this community is willing to go where no one has gone before." —*Steve Friess, with Amanda Albright*

The bottom line Wealthy Kalamazoo residents have committed to build a $500 million endowment to help the city cut taxes and generate growth.

Edited by Allison Hoffman
Bloomberg.com

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Where Buying Data Is as Easy as Buying Cabbage

▶ **On China's wild web, strict hardware and software controls make it harder to fend off cyber attacks**

▶ **"It certainly doesn't benefit the Chinese customer"**

The typical image of Chinese hackers is of operatives working for or with the tacit approval of the government, targeting valuable or sensitive data at foreign companies or government agencies. While there are plenty of those, many in China—like hackers elsewhere—also target the laptop of their ex-boss or the smartphone of the guy in front of them at the coffee shop.

China's criminal hacking community numbers at least 400,000 and sucks 100 billion yuan ($15 billion) out of the country's economy each year, according to Zheng Bu, an angel investor and former executive at cybersecurity company FireEye. "There is a large criminal ecosystem in China," says Bryce Boland, FireEye's chief technology officer for the Asia-Pacific region. And with government restrictions on security technology tightening, individuals and businesses can have a tough time combating the crooks.

Respondents to a 2016 PwC survey of 330 chief executive officers and IT directors of foreign and domestic companies operating inside China and Hong Kong reported a 417 percent year-over-year increase in "detected security incidents," which can include malware, ransomware, stolen data, and other network breaches.

PwC says these hacks most often target customer databases and proprietary records and typically cost each company in Greater China about $2.6 million annually. Of 496 executives and IT professionals surveyed earlier this year by the American Chamber of Commerce in China, most said data-security threats were more significant in China than in other regions where their businesses operate.

Part of what makes China a lucrative target for hackers is the population's rapid embrace of mobile payment technology—WeChat Wallet, Alipay, and other transaction software linked to popular social media services. More than half of Chinese consumers expect their phones to become their primary way to pay for things, PwC says. And automatic connections to Wi-Fi are common in China. "Most people don't check who is the real administrator of a public Wi-Fi connection," says Mangesh Fasale, a malware analyst at security firm F-Secure. "Hackers in China often make decoy Wi-Fi access points, and if you connect to them, they can access whatever is on your phone."

Fully 50 percent of detected institutional hacks in China and Hong Kong were inside jobs, involving former or current employees, according to PwC. In May a Chinese hacker with the Twitter handle @Shenfenzheng, which means "personal identity," ▶

◀ tweeted stolen personal information—including scans of official ID cards and home addresses—apparently belonging to dozens of top Communist Party officials and prominent businesspeople, including Wanda Group CEO Wang Jianlin and his son. "It's easy to figure out anybody's information, whether you're a government official or a celebrity," the hacker tweeted. "Getting the common people's data is like buying cabbage."

That leak was likely an inside job, too. A police officer confirmed that at least some of the ID cards seem genuine and had come from the Ministry of Public Security's database, which most police stations across China can access. "Usernames, ID card information, credit card details—it's very common for all this data to be stolen," says Kenneth Wong, PwC's cybersecurity head for China and Hong Kong. "There have been many incidents where people have gone to websites or trade shows and registered their personal information, and soon after, they will find all their ID information has been leaked online," he says, often for a price.

> "China's standards are unchecked by outside parties." —*Jake Parker, vice president, U.S.-China Business Council*

China's hackers have two main goals, says Lester Ross, a partner in the Beijing office of law firm WilmerHale. "First, to extort, to force a company or individual to pay money in order to resolve a problem. And second, to extract proprietary information to benefit somebody else, possibly another company or the government."

The government's efforts to control the internet make domestic users more vulnerable, says FireEye's Boland. Beijing recently stepped up enforcement of a prohibition on the sale or import of hardware and mobile devices containing Trusted Platform Module microchips, used for encrypting passwords and biometric data. "It's the international standard, but it's banned in China," says Jake Parker, vice president for the U.S.-China Business Council. "As a consequence, companies must use old or untrusted technology systems to secure data. Excluding foreign IT hardware absolutely undermines security goals."

The government has designated its own standards, but "there's significant uncertainty over whether local encryption standards match international standards," he says. "China's standards are unchecked by outside parties."

A draft of China's pending cybersecurity law, which has been reviewed twice by the legislature and could be enacted by the end of the year, would expand the scope of hardware, network equipment, and services that must be accredited by local authorities before being used or sold in the country. The bill would also require more corporate data to be housed exclusively on servers located within China, including sensitive user information.

"China is trying to have more control over cybersecurity technology, which is not something that's ever done to increase the quality of cybersecurity," says John Pescatore, a director at IT training company SANS Security. "It's always done so that a government can maintain its access through the technology."

If the final legislation includes more stringent directives that companies operating in China use domestic cybersecurity technology, it'll become even more difficult for companies to protect themselves, says Ross, the WilmerHale partner. "It certainly doesn't benefit the Chinese customer, either," he says. —*Christina Larson, with Bloomberg News*

The bottom line With thin encryption resources available, some 400,000 domestic hackers cost China's economy $15 billion a year, by one estimate.

E-Commerce

EBay Tries to Push Past Its Tag-Sale Roots

▶ **Taking on Amazon hasn't worked. Can analytics and VR?**

▶ **"The world doesn't have to choose between Amazon or EBay"**

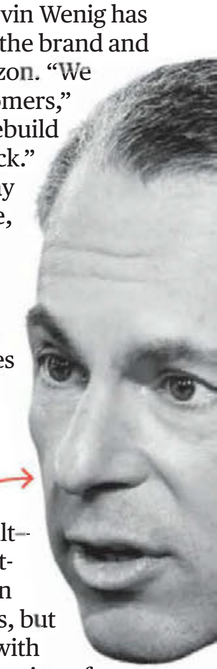
When activist investor Carl Icahn pushed for **EBay** to spin off its fast-growing PayPal business two years ago, he saw little promise in the slow-growing parent. The online marketplace was grappling with the aftermath of a security breach and changes to Google's

Growth Potential

EBay stock price

search engine that pushed EBay results further down the page. With every EBay stumble, rival **Amazon.com** gained more customers, web visits, and market share. Separating the two would increase PayPal's value, Icahn argued. Otherwise, the payment platform risked losing out to Amazon Payments, Apple Pay, and startups developing similar systems. The company ultimately agreed with the strategy.

In the 14 months since the spinoff, EBay's shares are up 12 percent as the company has added customers and increased its 2016 revenue forecast. PayPal's shares haven't moved. EBay Chief Executive Officer Devin Wenig has unveiled a plan to refresh the brand and better compete with Amazon. "We still have 164 million customers," he says. "We're going to rebuild this company brick by brick."



Many may still view EBay as an online rummage sale, where buyers can snag a baseball card collection or video game console by bidding in an auction. But auction and rummage sales are a small part of EBay's business today. New merchandise—what the site calls "big savings on top brands" such as Apple, Under Armour, and DeWalt—increasingly fill the marketplace. The shift has been in the works for several years, but it hasn't resonated much with shoppers. The dated perception of EBay as exclusively an auction site is one of the "hard truths" confronting the company, Wenig says.

A bigger challenge remains distinguishing EBay from Amazon. "The world doesn't have to choose between

Amazon or EBay," he says. EBay won't try to beat Amazon at its own game—selling virtually everything to anyone. Just as **Walmart** and **Target** provide different shopping experiences, EBay and Amazon can coexist, he says.

Wenig wants shoppers to come to EBay when they need supplies for a camping trip, for example, to refresh a wardrobe, or to splurge on a tech gadget. He hopes to wow consumers with a sense of discovery as they navigate an online bazaar that makes shopping fun and encourages impulse sales. Product searches will highlight all related inventory at various prices, not just the most popular result. Deals on new items will be prominently displayed.

For EBay to succeed, customers must easily find what they want. A search engine revamp is in the works, and the site is pushing sellers to enter more precise keywords and product descriptions. Search results will also link the products to images and consumer reviews.

According to research firm EMarketer, worldwide e-commerce sales will increase to $4.1 trillion in 2020, or 14.6 percent of all retail sales, up from 8.7 percent of all sales this year.

In July, EBay acquired SalesPredict, an Israeli company that forecasts customer buying behavior and can help EBay better match its inventory to demand. The company also bought Expertmaker, a data analysis firm. The acquisition will help EBay organize its inventory by translating product description codes used by manufacturers into commonly used search terms.

Wenig says he's in the market for a company that makes algorithms to correct spelling, because misspelled words are a leading cause of failed searches.

There's even a virtual-reality component to Wenig's strategy. Ticket buyers who use EBay's StubHub division get a virtual view of their seats, a feature that's proving popular with shoppers. With upscale Australian department-store chain **Myer**, EBay created a Virtual Reality Department Store that displays merchandise on a custom app—computer graphics are combined with images of the merchandise.

Says Gil Luria, an analyst at Wedbush Securities: "What they are doing is working." Some longtime merchants agree. Eloise Holbrook, an abstract painter in Ocala, Fla., started selling her work on EBay 12 years ago. When sales stalled a few years back, she posted some works on **Etsy** and Amazon. In the past year, her EBay sales have increased 15 percent from the previous year. "The EBay ship is steadying," she says. "I can find my buyers, and they can find me." —*Spencer Soper*

The bottom line EBay is doing better than expected since the PayPal split, but many shoppers still think of the 20th century version.

Biotech

The Flu Shot's Chicken-And-Egg Problem

▶ **Drugmakers experiment with different vaccine culture sources**

▶ **"That's critical in case of a pandemic, which spreads rapidly"**

For decades, drug companies have grown vaccines using chicken eggs. That's why an outbreak of hen-killing avian flu would be such a nightmare scenario: "The whole world would consume all the chicken eggs within a couple of months," says Guan Yi, director of the Center of Influenza Research at the University of Hong Kong. "We need to have another option."

The answer may lie in the Raleigh suburb of Holly Springs, N.C., where **CSL**, an Australian company, is experimenting with growing vaccines in kidney cells taken from dogs. (No harm comes to the dogs; the cell line has been available since 1958, when researchers took tissue from a female cocker spaniel.) While egg-based vaccines have a limited shelf life, CSL—which makes more flu vaccines than anyone besides **Sanofi**—says it can keep the dog cells on ice in perpetuity, to respond easily to an outbreak. "That's critical in case of a pandemic, which spreads rapidly," says Gordon Naylor, president of the company's vaccine subsidiary, Seqirus.

There's an opening in the $5 billion market for seasonal flu vaccines, of which the U.S. consumes a third. **Novartis** sold its money-losing vaccine division to CSL for $275 million in 2014. Sanofi and **Merck** dissolved their flu vaccine joint venture in March. In June the Centers for Disease Control and Prevention said **AstraZeneca**'s FluMist hadn't been a strong preventive measure for three years. (AstraZeneca has said it's working with the CDC to resolve the matter.)

CSL is one of a few companies betting new technology can help meet the challenge of producing tens of millions of doses in the few months between the World Health Organization's recommended vaccine targets and the start of flu season. They're also betting they can make the market more profitable. Using mammalian cells instead of chicken embryos can help create a vaccine faster and more efficiently, says Russell Basser, senior vice president for research and development at Seqirus. The Holly Springs factory can produce as many as 200 million doses of vaccine in six months, according to the U.S. Department of Health and Human Services, which contributed $700 million to its construction.

Dog cells are also cheaper, as little as half the $3.50 cost to make a dose of flu vaccine via egg, estimates UBS analyst Andrew Goodsall. That would make flu shots affordable enough for such countries as Mexico and Brazil, he says.

CSL's dog cells aren't the only egg alternative. **Protein Sciences** uses cells from caterpillars at its plant in Rockland County, N.Y. Chief Executive Officer Manon Cox says Protein's process is faster than egg-based vaccine production, but costs are 5 to 10 times higher. While Protein could make 5 million doses of vaccine this year, Cox says, it expects to sell only 900,000. "The uptake is not there yet," she says.

Another alternative to eggs is *Nicotiana benthamiana*, an Australian weed that's a close relative of the tobacco plant. Cigarette maker **Reynolds American** in 2014 acquired Kentucky BioProcessing, a decade-old company that uses tobacco plants to produce pharmaceutical proteins. **Medicago**, backed by **Philip Morris** ▶

GETTY IMAGES (3)

◀ and Japanese drugmaker **Mitsubishi Tanabe Pharma**, says it can produce 30 million doses of tobacco-based flu vaccine a year at its plant in North Carolina but is awaiting approval from the U.S. Food and Drug Administration.

Guan, the flu research director, isn't confident these new technologies will be able to fill the gap if a global pandemic jeopardizes the egg supply. Absent an avian flu-style scenario, egg-based flu vaccine production should readily meet seasonal demand, he says, so investments in alternatives have been a relatively tough sell.

For now, CSL can afford to keep trying, while also continuing egg-based operations. Most of the $1.2 billion profit in its most recent fiscal year came from sales of blood plasma products; the vaccine subsidiary accounted for 10 percent of its $6.1 billion in revenue. In May, CSL won FDA approval for a dog cell-based vaccine targeting four strains of seasonal flu, and the company projects it will turn a profit from the division in 2018. "The egg-based platform has been around for a long time," Naylor says. "I don't expect there will be an overnight transition." —*Bruce Einhorn*

The bottom line Upstarts and established drugmakers are testing alternatives to egg-based vaccines in the $5 billion seasonal flu market.

Data

A Different Kind of Apple a Day

▶ **Cupertino is working on a one-stop data source for doctors**

▶ **"Health is a huge issue ... and we think it's ripe for simplicity"**

Apple's HealthKit is mostly a fitness app, counting steps and the like. Now the company is working on ways to interpret that information for use by doctors and others, say three people familiar with its plans.

Scores of health-care experts Apple has hired in recent years are building new apps, improving electronic health records, and teaming up with research institutions to better analyze patient data, the people say. The ultimate goal is to make HealthKit the software of choice among physicians, improving diagnoses by making it easy to sift something salient quickly from the mountains of raw information strewn across various old-school databases that aren't typically compatible. Storing more health records in the software could also make it a lot tougher for users to trade iOS for Android and its equivalent health app, Google Fit.

"Health is a huge issue around the world, and we think it's ripe for simplicity and a new view," Chief Executive Officer Tim Cook said at a May conference in Amsterdam. An Apple spokeswoman declined to comment.

Apple's bench is getting pretty deep. It includes Stephen Friend, a Merck veteran who co-founded health-data nonprofit Sage Bionetworks; Evan Doll, co-founder of social networking hub Flipboard, now a director of health-software engineering; and Yoky Matsuoka, formerly technology chief at Google's Nest Labs unit. Earlier this year, Apple bought Gliimpse, a startup that built software to unify electronic health records from different databases.

"I will be working on building a platform, a set of application program interfaces, and a simple product that will bring what we believe will be a disruptive consumer health-care application to the U.S. for the first time," Apple senior engineer (and former Gliimpse employee) Mohan Randhava says in his LinkedIn profile. He declined to comment for this story.

Apple is also aggressively pitching HealthKit's sister software, ResearchKit, to drugmakers and research institutions as a simpler way to conduct clinical trials. Some hint at possible uses for HealthKit: Scientists at Duke University have built a ResearchKit app that uses the iPhone's front-facing camera to scan a subject's face to try to screen for autism. Johns Hopkins University is using the Apple Watch's accelerometer and heart rate sensor to analyze and try to predict the

FROM LEFT: COURTESY APPLE (2); COURTESY ENOMAD (2); ILLUSTRATIONS BY 731 seizure patterns of epilepsy sufferers. GlaxoSmithKline began its first clinical study using ResearchKit this summer.

"Apple is working hard with many of these large institutions to generate tools that are medically correct," says Scott Jenkins, CEO of data management company Certainty Health. "They want to be the repository."

The second Apple Watch has a faster processor and a built-in GPS tracker and is water-resistant so people can run, swim, and do other exercises with the device. The updated watch software, dubbed WatchOS 3, places health-tracking information more prominently in the user interface and adds a breathing exercise app as well as swim tracking. Apps under development, the people familiar with Apple's plans say, include a program to track sleep patterns and another to analyze fitness levels based on changes in heart rate.

Apple is unlikely to add more specific hardware to the watch, like a blood-pressure sensor or glucometer, says one of the people with knowledge of its plans. Adding medical sensors would likely require approval from the U.S. Food and Drug Administration, a much higher bar than the watch's current designation as a fitness tracker. "It would need to have enough battery life to last a day," says Yuri Teshler, a health-care consultant at Moor Insights & Strategy, adding that the watch would also need its own LTE chip and other hardware to make it less dependent on a user's phone.

It's unclear how soon improvements to HealthKit may arrive. For now, the greatest hurdle is proving to medical professionals that data delivered through the app (and ResearchKit) is reliable, says Brennan Spiegel, a gastroenterologist at Cedars-Sinai Hospital in Los Angeles. "It's wonderful to have advanced methods of aggregating and presenting data, but there's a risk of it becoming a garbage-in, garbage-out project," he says. "What matters is whether the data going into that solution are generating clinically valuable, actionable results." —*Alex Webb*

The bottom line Apple is refining its fitness-tracking software in an effort to strengthen iOS's ties to valuable medical data.

Edited by Jeff Muskus and Dimitra Kessenides
Bloomberg.com

Innovation

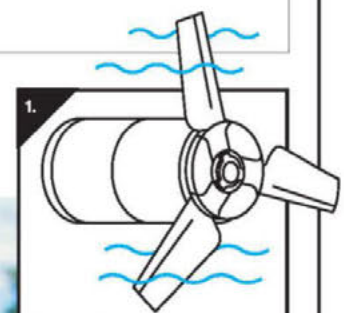
Portable Hydropower

Form and function
Estream is a generator the size of a water bottle that lets campers, kayakers, or people in isolated villages collect energy from moving water.

Innovator Hyerin Park

Age 30

Chief executive officer of five-employee startup Enomad in Los Angeles



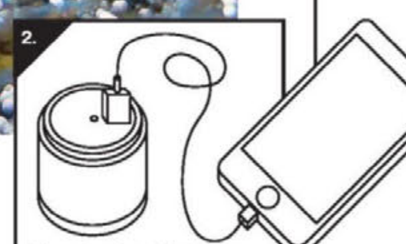
Power Placed in moving water, the blades of Estream's 8.3-inch-diameter turbine spin to charge its lithium ion battery in about four and a half hours.

Origin Park began working on personal generators a decade ago, after a backpacking trip to India. She also helped develop a tidal power plant for the South Korean government.

Funding Enomad has raised about $450,000 from angel investors and crowdfunding and is seeking an additional $1 million to fund mass production.

Cost About 600 Kickstarter backers paid $180 for an Estream.

Add-ons Enomad is developing attachments to turn Estream into a Wi-Fi router, a speaker, and even a wind-powered generator.

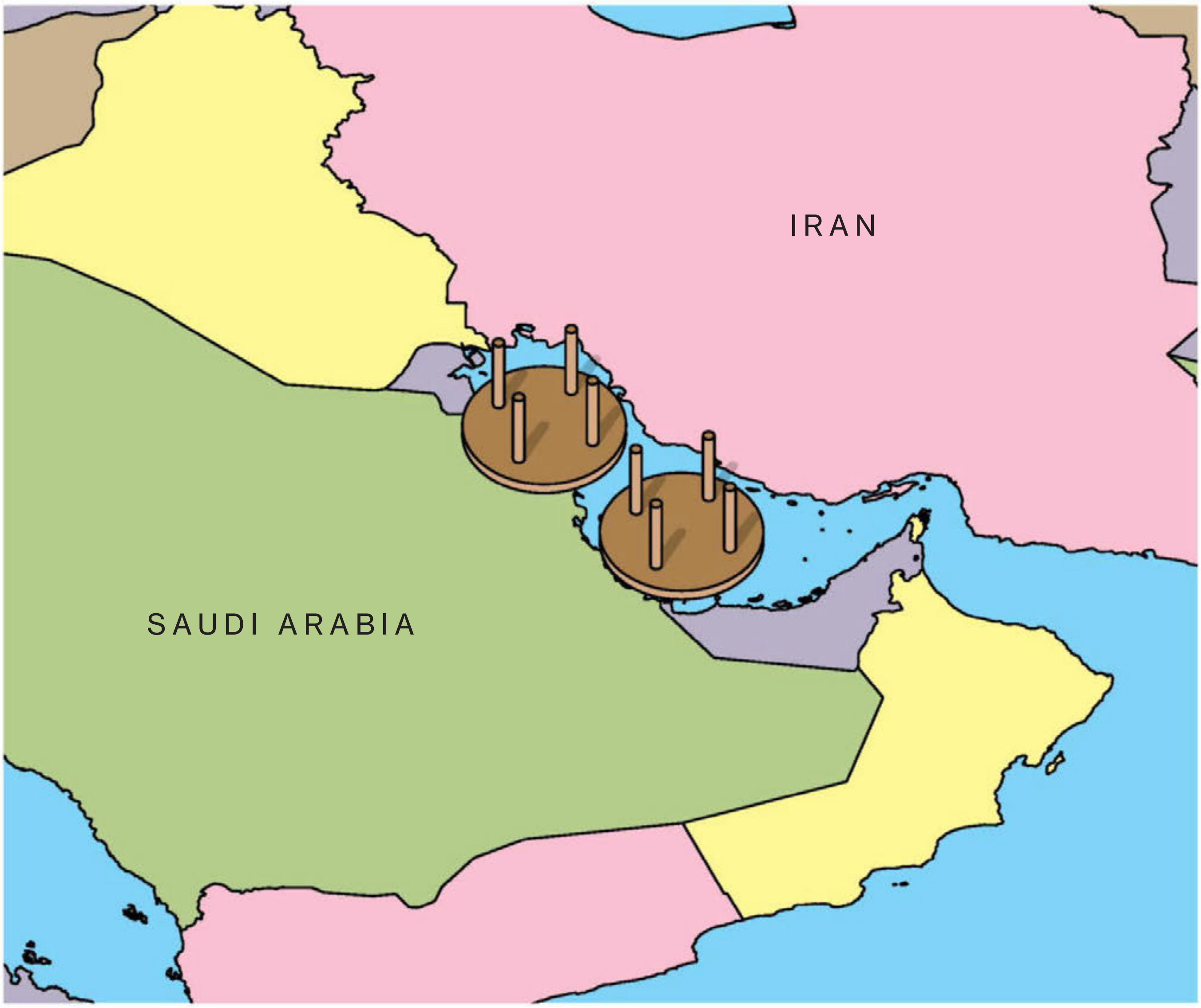


Charging On a full charge, Estream can juice three smartphones, tablets, or GoPros twice as fast as a regular outlet, Park says.

Next Steps
"It looks like a really sharp design," says Ron Pernick, managing director for market researcher Clean Edge, adding that Enomad will have to provide a strong warranty and prove its device will last. Park says she's in talks with retailers in the U.S., Canada, Europe, and Australia, and hopes to announce retail deals by the end of the year. Kickstarter backers will get their Estreams in March. —*Olga Kharif*

Markets/Finance

October 3 — October 9, 2016



The Tables Have Turned

▶ **Why Saudi Arabia found itself begging for a deal to end the oil glut, while Iran dragged its feet**

▶ **"Iran is the OPEC country that had to do fewer budget sacrifices due to cheap oil"**

At a meeting in Algiers on Sept. 28, after two days of round-the-clock talks, the Organization of the Petroleum Exporting Countries agreed to the outlines of its first oil production cut in eight years. Ministers said that the group, which supplies about 40 percent of the world's oil, will drop production to between 32.5 million and 33 million barrels a day. Most details, however, have yet to be agreed upon.

Saudi Arabia had wanted the cut badly—a reversal of its previous role in OPEC dealmaking. In 2014 the government in Riyadh was fine with cheap oil. It led the push to defend the cartel's market share against U.S. shale oil producers and other rivals. OPEC let its oil flow freely, and prices dropped sharply: On Sept. 28, even after a rally on news of the deal, crude traded at about $47 a barrel, compared with more than $90 in mid-2014.

When the Saudis called for new ▶

ILLUSTRATION BY 731

◀ limits on production, Iran pushed back hard. According to the preliminary deal, it won't have to cut its own production. "Both countries are coming from different positions," said Jason Tuvey, Middle East economist at Capital Economics, before the deal was announced. They have different thresholds for economic suffering.

Iran, never as dependent on oil revenue as its neighbor, was under international sanctions over its nuclear program until earlier this year, "so it's getting an economic boost as investment returns and oil output rises," said Tuvey. Although President Hassan Rouhani faces elections next May, he has already adjusted the economy to lower prices. "Iran has already been through so much pain, incrementally they aren't really worse off," says Amrita Sen, chief oil analyst at consultant Energy Aspects.

In Saudi Arabia, the world's largest oil exporter, two years of weak prices have caused financial havoc, despite tentative moves to diversify the economy. The country is burning through its foreign exchange reserves, using up $52 billion in 2016 through July. Government contractors have gone unpaid, and civil servants will get no bonus this year. Subsidies for gasoline and utilities are being cut—long a political taboo. A value-added tax has been proposed by the government for 2018 and is likely if oil prices stay low.

Saudi Arabia will suffer a fiscal deficit equal to 13.5 percent of gross domestic product this year, compared with

> **"Iran has already been through so much pain, incrementally they aren't really worse off."**
> —*Amrita Sen, oil analyst*

less than 2.5 percent of GDP for Iran, the International Monetary Fund estimates. It calculates that the Saudis need oil close to $67 a barrel to square the books. For Iran, it's $61.50.

When it comes to economic growth, Saudi Arabia is slowing sharply, to 1 percent, while Iran is accelerating toward 4 percent. But there have been other factors in the tactical disagreement. The two countries are on opposite sides of the Syrian and Yemeni civil wars. Then there's national pride: Iran came into the meeting looking to increase its production from 3.6 million barrels a day to 4 million barrels—its output before sanctions halved exports.

OPEC's move to protect market share was always a gamble on outlasting low prices. A month after the 2014 policy shift, Ali Al-Naimi, then Saudi oil minister, told the trade journal *Middle East Economic Survey* that "sooner or later" rivals would run into financial difficulties. The kingdom had "the ability to hold out" for a long time, he said.

Now, under a different oil minister, Saudi Arabia is less interested in waiting for the demise of the next Texas shale producer. But it's unclear whether the latest agreement will deliver the prices the Saudis want. "I cannot see a good reason for a major increase in the price of oil," since the market remains "way oversupplied," said Ian Taylor, head of **Vitol Group**, the world's largest oil-trading house, at a Bloomberg conference in London.

As for Iran, "Tehran would love to have higher oil prices, but Iran is the OPEC country that had to do fewer budget sacrifices due to cheap oil," says Olivier Jakob, an analyst at Petromatrix. That gave them a strong hand.
—*Javier Blas, with Nayla Razzouk, Grant Smith, and Angelina Rascouet*

The bottom line Saudi Arabia is feeling the pain of cheap oil and pushed for OPEC to cut production. Iran simply wants to keep selling.

The Saudis Need Higher Prices; Iran Just Wants to Sell More

Fiscal surplus/deficit as percentage of GDP

Daily crude production in barrels, compared with August 2006

Saudi Arabia

+1,370k

Iran

–400k

DATA: IMF, BLOOMBERG

Precious Metals

The Loophole Under The Mountain

▶ **Gold stored in old Swiss bunkers is safe—and out of sight**

▶ **"There has been a real interest in alternatives to bank deposits"**

Deep in the Swiss Alps, next to an old airstrip suitable for landing Gulfstream and Falcon jets, is a vast bunker that holds what may be one of the world's largest stashes of gold. The entrance, protected by a guard in a bulletproof vest, is a small metal door set into a granite mountain face at the end of a narrow country lane. Behind two farther doors sits a 3.5-ton metal portal that opens only after a code is entered and an iris scan and a facial-recognition screen are performed. A maze of tunnels once used by Swiss armed forces lies within.

The owner of this gold vault wants to remain anonymous for fear of compromising security, and he worries that even disclosing the name of his company might lead thieves his way. He's quick to dismiss questions about how carefully he vets clients but says many who come to him looking for a safe haven for their assets don't pass his sniff test. "For every client we take, we turn one or two away," he says. "We don't want problems."

Demand for gold storage has risen since the 2008 financial crisis. Many of the wealthy see owning gold as a hedge against the insecurity of banks and a reasonable investment at a time when markets are volatile and bank accounts and low-risk bonds pay almost no yield. It may also be a way to avoid the increasing scrutiny of tax authorities. In high-profile cases, U.S., French, and German prosecutors have gone after citizens of those countries with undeclared Swiss bank accounts.

Swiss storage operations such as these don't have the same obligation that Swiss banks do to report suspicious transactions to federal regulators. Americans aren't required under the U.S. Foreign Account Tax Compliance Act to declare gold stored outside financial institutions.

Of the roughly 1,000 former military bunkers still in existence across Switzerland, a few hundred have been sold in recent years, and about 10 are now storage sites holding gold as well as computer data, according to the Swiss defense department.

Few match the opulence of the airstrip setup, whose owner claims to run the largest store of gold for private clients—and the seventh-largest gold vault in the world. Near the runway sits the VIP lounge and a pair of luxurious apartments for clients. The walls of the apartments are lined with aged wood from Polish barns. South African quartzite was chosen for the floors to match the faded gray timber, and the amenities—bathroom mirror, TV screens—can retract into the ceiling, counter, or wall. The owner offers a place for clients to sleep and eat, because "many do not want to leave a paper trail of credit card receipts and passports" at hotels and restaurants.

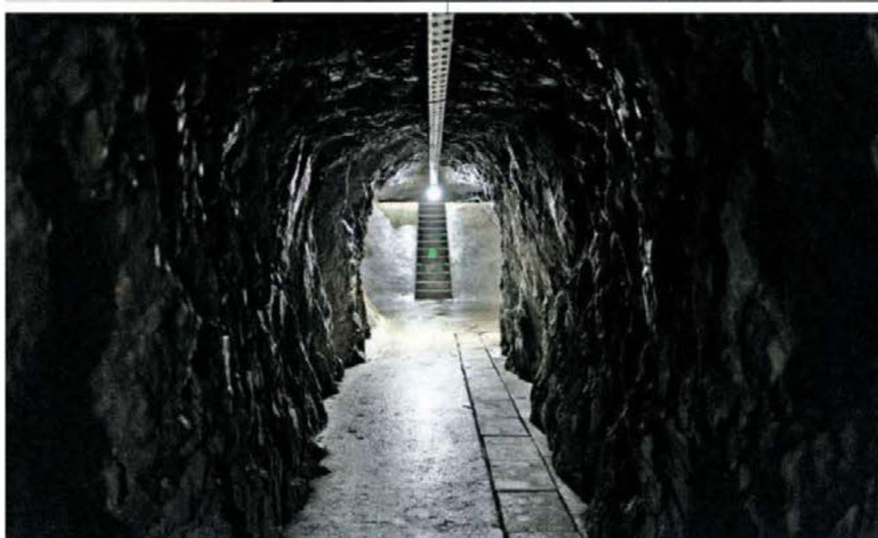
Some miles away, Dolf Wipfli, the founder and chief executive officer of a different company, **Swiss Data Safe**, is one of the few operators willing to be interviewed about his business. The gold Swiss Data Safe stores for clients is kept in a mountainside bunker outside the hamlet of Amsteg. On a recent tour, Wipfli wouldn't disclose the gold's exact location, choosing instead to take visitors into a room containing computer servers for the other half of his business, providing data backup storage. Wipfli declines to say how much he charges to store gold. The company's website has versions in Chinese and Russian.

"There is growth in gold," Wipfli says. "Since 2008 there has been a real interest in alternatives to bank deposits." The company explicitly taps into that demand. Swiss Data Safe "is independent from the banking system and any other organization or interest group," according to a PowerPoint presentation Wipfli shows clients. The company and its anonymous rival aren't regulated by the Swiss financial-services regulator Finma.

Nor do such companies have to report suspicious activity to Switzerland's Money Laundering Reporting Office. In the past, submissions to the agency have led the Swiss attorney general to open investigations into corruption at FIFA, the global soccer body, and banking ties to Brazil's Petrobras bribery scandal.

"The gold trade is a huge part of the Swiss economy," says John Cassara, a former U.S. Treasury special agent and the author of books on money laundering. "I'm not surprised that there are not more effective efforts in Switzerland to better monitor its misuse. The powers that be don't want to crack down." In the first half of this year, 1,357 metric tons of gold—worth about $40 billion—were imported into Switzerland, according to the Swiss customs office, putting ▶

Swiss Data Safe's secure storage facility outside Amsteg, Switzerland



MICHELE LIMINA/BLOOMBERG

◀ the year on course to be the biggest since a record in 2013.

The Swiss secretary of state for international finance issued a report in December on safe deposit boxes and the risk that they are abused for money laundering and terrorism. The former army bunkers weren't mentioned in the report. "We don't see any tangible evidence of criminality of a systemic nature, but this could be a topic for the future," says a spokesman when asked about the bunkers.

Of course, there are plenty of legitimate reasons for investing in gold. The metal's price has risen 25 percent since the end of 2015. The tonnage of gold assets in exchange-traded funds has climbed 39 percent this year, data compiled by Bloomberg show.

Even so, the Financial Action Task Force, an intergovernmental body that sets anti-money-laundering standards, warned in a 2015 report of the risks of gold being used by criminals for financing terrorism or for laundering money. Cassara, the former Treasury agent, says, "Perhaps gold should be subject to currency cross-border reporting."

Wipfli says Swiss Data Safe, too, scrutinizes prospective clients and will reject those "for whom it doesn't have a good feeling." The company accepts corporate clients but insists on knowing who the owner of the company is, he says, a condition that goes beyond the more relaxed federal customs rules that govern Switzerland's controversial free ports, where art and other valuables are stored.

Wipfli's company also insists on inspecting goods that come into its bunkers. That, he says, distinguishes it from the no-questions-asked policy of safe-deposit-box companies that have been flourishing in the canton of Ticino, 100 miles south. "We don't do black-box storage," he says. —*Hugo Miller and Stephanie Baker*

The bottom line Swiss bank accounts aren't so secret anymore, but gold storage remains under the radar.

Fintech

Digital Banks Take On The High Street Giants

▶ **Starting a new lender has gotten easier in the U.K.**

▶ **"Britain's pitch ... is to have an avant-garde regulator"**

Will Stanley and Jonathan Lind are bonding over pizza, beer, and a mutual affection for their coral-colored debit cards. "It's the Lamborghini of card colors—it's vulgar, it's shouting," Lind says. "You know, if you stick it under UV light, it's fluorescent," Stanley adds.

Stanley, 29, and Lind, 31, have never met before. Along with about 100 other people, they've come to a party in London hosted by **Monzo**, the issuer of those eye-catching cards. "We've all come here for drinks with our bank, which is utterly crazy," Lind says.

Monzo is one of four financial technology companies—neobanks, as they're known in Britain—that have won licenses in the past year from U.K. regulators to offer branchless, mobile-phone-based banking. These fledgling brands join earlier challengers, including billionaire Richard Branson's **Virgin Money**, all aiming to shake up British retail banking, which has long been dominated by four big lenders.

The new banks plan to set themselves apart by offering mobile budgeting and investment tools, instant notifications on spending habits, and smarter antifraud features. Some envision becoming marketplaces for services offered by other companies.

So far, Monzo has distributed 35,000 prepaid debit cards, on which it says £31.7 million ($41.3 million) has been deposited. Another of the newly licensed banks, **Atom Bank**, has about 1,800 customers and £16 million in deposits. These are tiny numbers in a country with 70 million checking accounts, and some in the industry worry the field is already crowded. "I'm a little bit afraid," says Matthias Kröner, chief executive officer of **Fidor Bank**, a German mobile-based lender that started doing business in the U.K. a year ago. "If you suddenly have this many new players on the market, this is increasing competition for the death of the new challengers."

Virgin Money began offering this Sex Pistols credit card last year

The boom in mobile-banking companies is one legacy of the 2008 financial crisis. After the near-collapse of two of the country's biggest banks, **Royal Bank of Scotland Group** and **Lloyds Banking Group**, lawmakers leaned on regulators to encourage more competition. It's now easier and faster to get a banking license: Fifteen have been granted since 2013, and 20 additional companies are in talks to apply, according to people with knowledge of the matter.

"Britain's pitch when it comes to fintech is to have an avant-garde regulator," says John Egan of venture capital firm Anthemis Group, which invests in Atom and Fidor. Many financial technology startups use the U.K. as a base for operating across Europe. That status may be upended, however, by Britain's vote to leave the European Union.

The startups face other challenges. Few British consumers switch

COURTESY OF VIRGIN BANKING

Digits

Brevan Howard will still collect a 20 percent cut of profits

0%

The firm's main fund lost

2.5%

this year through August

Annual fee **Brevan Howard Asset Management** will charge existing customers on new investments in two hedge funds. —*Saijel Kishan*

Its previous management fee was as high as 2 percent banks. The four largest lenders—RBS, Lloyds, **Barclays**, and **HSBC Holdings**—have lost only 5 percent of their market share since 2005. Lloyds, which had 7.3 million active mobile users at the end of June, has allocated £1 billion a year for technology. "The big banks will end up copying them or absorbing them into what they're doing," Gary Greenwood, an analyst at Shore Capital Group, says of the upstarts.

The digital bankers say they have the technological edge. The big banks "can create a wonderful new app, but they still have to plug them into a pig of an old back-office system," says Anthony Thomson, chairman of Atom, which built its mobile app on the game-design platform used to create *Pokémon Go*.

Internecine feuds among the neobanks are common. The London party that enticed Lind and Stanley out on a Thursday night was thrown to announce Monzo's new name. It had previously been called Mondo, but the bank decided to change it because of trademark issues. **Starling Bank**, another of the startups, got wind of the renaming; it registered the web address getmonzo.co.uk and had its own advertisement on the now-dormant site when Monzo unveiled the new name in August. *—Richard Partington and Jeremy Kahn*

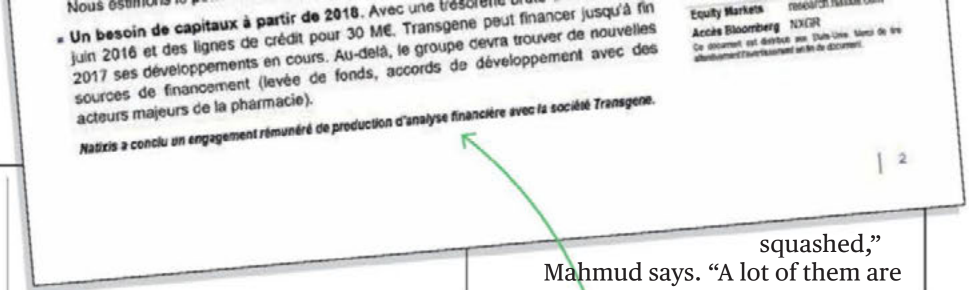
The bottom line Startup banks are challenging the U.K.'s big four—which have lost only 5 percent of their market share since 2005.

Stock Research

One Very Important Footnote

▶ **Natixis says Transgene paid for its report ... on Transgene**

▶ **"It would potentially taint the brokerage's product"**


Un besoin de capitaux à partir de 2018. Avec une trésorerie brute ... Transgene peut financer jusqu'à fin juin 2016 et des lignes de crédit pour 30 M€. Transgene peut financer jusqu'à fin 2017 ses développements en cours. Au-delà, le groupe devra trouver de nouvelles sources de financement (levée de fonds, accords de développement avec des acteurs majeurs de la pharmacie).

Natixis a conclu un engagement rémunéré de production d'analyse financière avec la société Transgene.

Equity Markets

Accès Bloomberg NXGR

| 2

The bullish stock recommendation came with a warning: The company paid us to write this report.

Stock research by brokerages has long been subsidized by other parts of their businesses, such as trading. Customers who pay a lot in commissions often get it as a perk. But that model is breaking down because of new regulations and changes in the banking business. Now France's **Natixis**, an investment bank and brokerage, is trying the novel approach of charging companies for coverage. It's similar to what's been done for years in the bond-rating business—a system that's fraught with conflicts.

In September analysts Jean-Jacques le Fur and Philippe Lanone at Natixis published their first piece on **Transgene**, a French biotechnology company with a market value of $125 million. The two-page note recommended that investors buy the shares. At the bottom of the first page, in bold italics, was a disclaimer that translates to "Natixis has been paid by Transgene to produce financial analysis." On the day of publication, the stock rose 7.8 percent and hit its highest trading volume since January.

"I find the whole concept a little odd," says Ian Gordon, head of bank research at investment bank Investec in London. "It would potentially taint the brokerage's product. My perception is that investors only value truly independent research." A spokeswoman for Natixis declined to comment on the agreement with Transgene. External representatives for Transgene did not return calls and e-mails seeking comment.

While providing paid analysis may undermine credibility and raise concerns about potential conflicts of interest, there aren't too many alternatives, especially for a midsize European research shop such as Natixis. Using trading fees to pay for research will be banned under European Union rules in 2018, and banks are looking for new ways to fund the service.

"We're likely to see banks moving to a more a la carte pricing structure for their research ahead of the new rules," says Sarah Jane Mahmud, a Bloomberg Intelligence analyst. For example, a bank might charge a flat annual fee for access to its research. But customers might be willing to pay for only the biggest, brand-name research shops. "It's precisely the medium-size players who are squashed," Mahmud says. "A lot of them are even exiting the business."

A contract to pay for analysis is perfectly legal as long as it's disclosed loud and clear, according to French market regulator AMF. For a small company that may suffer from a lack of analyst coverage, commissioning research is a way to get on the radar of investors. Only a handful of analysts provide investment research on Transgene, compared with more than 30 for Total, France's biggest listed company.

"Of course, such contracts create concerns in terms of conflicts of interest," Christèle Fradin, communications director for AMF, said in an e-mail. "Market-abuse regulation requires a clear disclosure of such agreements in the research documents."

Beyond Europe, even the biggest global banks are trying to squeeze more money from research as they struggle to boost profitability. **Bank of America**, **Morgan Stanley**, and **Citigroup** have put more limits on access and made it more difficult to share files with people who aren't paying clients.

Natixis' move is comparable to the way companies like Moody's Investors Service and S&P Global Ratings produce analyses of the creditworthiness of fixed-income investments, but it's far less common in the equities market, according to Michael Woischneck, a money manager at Lampe Asset Management in Düsseldorf, Germany. Credit-rating firms were widely blamed for lowering standards to win business during the lead-up to the financial crisis.

As a manager of a European small-cap stock fund, Woischneck says he's read commissioned research reports from small brokerages, but never from a bank the size of Natixis. "A paid note can't be completely neutral," he says. "It might be a good way to find out about the company and to get a first impression, but it's marketing." *—Sofia Horta e Costa*

The bottom line It's becoming more difficult for banks to fund stock research. One way is to charge companies for coverage. *Caveat lector.*

Edited by Pat Regnier
Bloomberg.com

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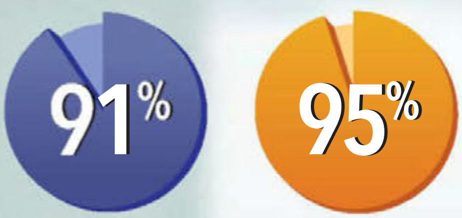

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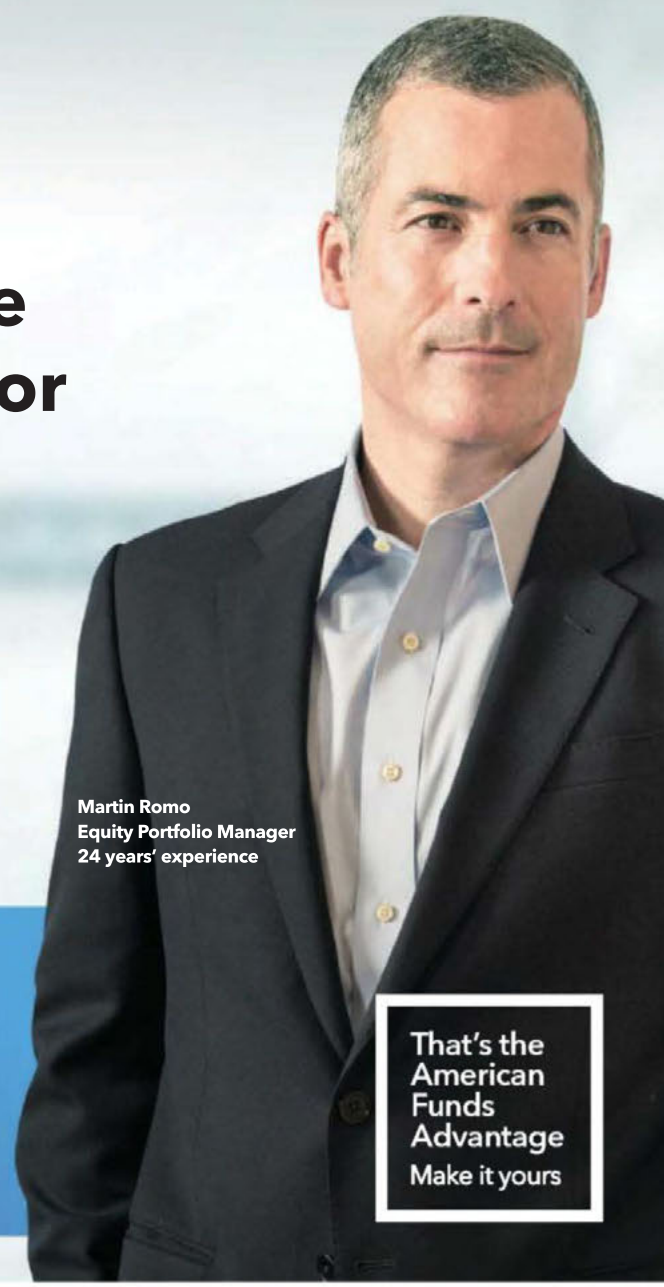

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*Based on Class A share results for rolling periods through December 31, 2015. Periods covered are the shorter of the fund's lifetime or since the comparable Lipper index inception date (except Capital Income Builder and SMALLCAP World Fund, for which the Lipper average was used). Our fixed-income funds have beaten their indexes 58% for 10-year periods and 58% for 20-year periods.

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IT'S NOT JUST BRANGELINA

▶ Americans 50 and older are divorcing in greater numbers, jeopardizing their retirement

▶ "Savings you've accumulated must be divided, leaving each spouse with less"

Barbara Ballinger panicked when her husband of 29 years told her he wanted a divorce. At 51, she hadn't seen the end of her marriage coming and wasn't prepared to cover half the expenses for their five-bedroom home in a St. Louis suburb, their two daughters' college tuitions, car and home insurance, and other necessities. She'd always worked, as a writer, but "he earned as a corporate attorney more than five times what I did," says Ballinger, who is now 67.

She began clipping grocery coupons, eliminated Starbucks lattes and meals out, put off home repairs, and made fewer visits to the hair salon, while taking on as many freelance assignments as she could land. Still, during a trip to visit her daughters at college, a car rental company turned her away because she didn't have a credit card in good standing. "My living standard changed dramatically," she recalls.

Americans 50 and older are getting divorced at a higher rate than younger people—and much more frequently than in prior decades. As life spans lengthen, couples who've celebrated their silver and even golden anniversaries—who in earlier generations likely would have stayed together until death despite their differences—are going their separate ways. Many decide they don't want to spend their senior years unhappily wed, especially since they're likely to live healthily into their 70s and 80s. People 50 and older comprised 25 percent of all Americans who got divorced in 2014, up from about 8 percent in 1990. Divorce among this older group doubled during that period, while plateauing or declining for younger couples, according to the National Center for Family and Marriage Research at Bowling Green State University in Ohio.

Those who quit their marriage late in life sacrifice retirement security. "The vast majority of older couples who divorce, even if they've both worked or are still employed, see their standard of living decline substantially," says Joslin Davis, an attorney and president of the American Academy of Matrimonial Lawyers. "It's a lot more expensive to live in separate households than in one home, and the retirement savings you've accumulated must be divided, leaving each spouse with less."

Many are forced to put off retirement until they regain their financial footing or because they have alimony obligations. Divorce attorney Davis says she often grapples with "how to create an alimony stream of income for a dependent spouse, at least for a period of time, while also making sure the providing spouse gets to stop working and retire at some point."

Women initiate 60 percent of divorces after age 40, according ▶

to the AARP, even though they usually suffer more financially, because they earn less than their husbands and are much more likely to have taken time off from paid employment to care for children and elderly parents. "Women have long been less tolerant of a mediocre relationship," says Stephanie Coontz, director of research at the Council on Contemporary Families at the University of Texas at Austin. "And today they don't feel finished at 50. They believe they can reinvent themselves, so they'll take the financial hit."

Custody battles are not usually a feature of gray divorce, but there's plenty of other things to quarrel over. About 62 percent of divorcing couples among those 50 or older fight about retirement savings in the process of reaching a settlement, according to a recent survey of members of the Academy of Matrimonial Lawyers. Eighty-three percent fight over alimony, and 60 percent spar about business interests, the survey found.

It doesn't help that many people are completely in the dark about their spouse's personal finances. Twenty-one percent of more than 1,800 couples who were either married or living together didn't know the value of their partner's retirement account, according to a recent Harris Poll survey for website NerdWallet. A 65-year-old woman from Rye, N.Y., who's a manager at a nonprofit, didn't realize her husband of 27 years had squirreled away several hundred thousand dollars in an investment account until she discovered a statement in his desk during their divorce last year. Still, because she'd invested her retirement savings more aggressively, she had to give her ex $50,000. The woman, who didn't want work colleagues to know her situation, asked not to be identified.

Some seniors choose to avoid acrimony and legal fees even if that means walking away with less than they're legally entitled to. A 68-year-old furniture maker and restorer in Old Saybrook, Conn., had a much smaller income and less retirement savings than his wife, a corporate caterer. But he didn't ask for alimony or a portion of her 401(k) when they divorced two years ago; he didn't want his two adult children to accuse him of hurting their mother financially. He asked not to be identified because he didn't want to discuss his divorce publicly.

"Today they don't feel finished at 50. They believe they can reinvent themselves, so they'll take the financial hit."
—Stephanie Coontz, Council on Contemporary Families

It took Ballinger about four years to reach a settlement with her ex. She says she was both "pleased and disappointed" with the terms, which she didn't want to disclose, but mostly relieved to know where she stood financially. She's living much more frugally now than she did when married. She's still working and has no plans to retire.

The co-author with Margaret Crane of *Suddenly Single After 50*, Ballinger advises older women going through divorces to mediate settlements if possible, to consider freezing both shared and separate 401(k) and IRA accounts until an agreement is reached, and to purchase insurance to protect alimony payments in case of an ex-husband's death. "I still worry about my financial future, but my happiness is no longer linked to the lost dollars we worked so hard to save," she says. "I have income coming in and, most important, my health, daughters, a grandson, and many friends." —*Carol Hymowitz*

The bottom line People 50 and older were twice as likely to go through divorce in 2014 than in 1990, while rates for younger Americans have dipped.

Health Care

Bearing the Financial Burden of Alzheimer's

- **Families should enlist an elder-care lawyer to map out a strategy**
- **"I kept wondering, Are we going to end up on the streets?"**

When Tom Allen's wife received a diagnosis of early-onset Alzheimer's disease in 2010, the Minneapolis resident had to make some tough decisions. He quit his $60,000-a-year position running a nonprofit that served the homeless to take a $12-an-hour job as a janitor in the building they lived in, so he could keep an eye on his wife during the day. "I was concerned about her safety being alone," he says. But Allen had bigger worries than whether Julie had poured gravel down the garbage disposal again or left the iron on: "I was bleeding money out of my retirement account," he says. "I kept wondering, Are we going to end up on the streets?"

One in nine Americans age 65 or older has Alzheimer's—a total of 5.2 million people—and that number is expected to triple by 2050. Patients typically live 8 to 10 years after diagnosis, and families can quickly exhaust their savings caring for them. The cost of an assisted living facility averages $43,200 a year, while a semiprivate room at a nursing home runs $80,300, according to the Alzheimer's Association.

5.2
million

Americans age 65 and older who are living with Alzheimer's disease

Medicare doesn't cover that expense. Medicaid does—if you're poor enough. A single person must have no more than $2,000 of assets to qualify, says Todd Lutsky, an elder-care attorney at Cushing & Dolan. "If you're married, the healthy spouse gets to keep $119,220 and the home."

Lutsky advises clients in their 60s with a net worth of more than $1 million to set up an irrevocable income-only trust to protect their assets from future nursing home costs. You can put pretty much any asset in one of these trusts, and it won't affect your Medicaid eligibility so long as it's in there for at least five years prior to applying for assistance—what Medicaid calls its look-back period. Income from investments in the trust can be paid to the healthy spouse or other beneficiaries without affecting eligibility. Upon a person's death, the assets in the trust pass on to the beneficiaries.

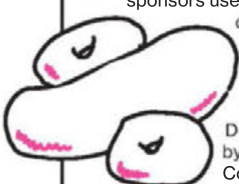
For someone like Allen, whose assets at 64 total $170,000—close to the median American's net worth for someone his age, according to the U.S. Census—locking up his nest egg in a trust would be both impractical and costly. Lutsky typically charges about $5,000 to set one up.

Instead, with the help of an elder-care lawyer, Tom enrolled Julie into a state program called Community Access for Disability Inclusion Waiver. It now pays for most of her care at the assisted living facility in St. Paul

Litigation Class Actions

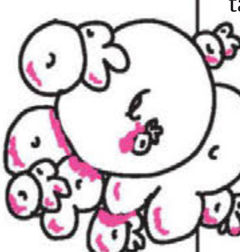
Providers of 401(k)s, the 403(b)s used by nonprofits, and other tax-deferred savings plans face a growing number of lawsuits over excessive fees and poor plan design. Here's a guide to some of the main allegations—claims likely to feature in cases to come. —*Suzanne Woolley*

❶ Excessive fees



Many of the recent suits allege that plan sponsors used higher-priced funds designed for individual investors when less expensive institutional versions of the same funds were available. During the period targeted by a lawsuit against Cornell University's 403(b) plan, some of the funds charged annual fees of 0.44 percent, while institutional versions of the same funds were available for 0.19 percent, according to the complaint. Cornell is fighting the suit.

❷ Too many options



Suits filed in August against Cornell, Northwestern, the University of Southern California, and other schools cite investment lineups that ranged from 120 options (Columbia) to more than 440 (Johns Hopkins). The complaint? Having too many choices discourages people from participating. A January paper by Dan Pawlisch, who leads Aon Hewitt's 403(b) client practice, noted that investors tend to freeze up when confronted with an overwhelming number of options. While the universities have said the allegations are unfounded, almost all have pared back their plans to 30 to 40 offerings.

❸ Company self-dealing

Some complaints, focusing on the 401(k) plans of financial-services companies, allege that defendants engaged in self-dealing by including their own sometimes expensive or underperforming mutual funds in employee plans when cheaper options were available elsewhere. Morgan Stanley and the brokerage Edward Jones are among the companies that have been targeted; both have said the suits are without merit.

◀ where she's been since May 2015. To qualify, Julie had to be eligible for Social Security Disability Insurance and younger than 65. (She's 63.) SSDI doesn't have the same means testing as Medicaid, though applicants must prove they were employed for a period prior to their disability. Tom says the process of getting his wife approved took six months.

When Julie turns 65, she'll have to switch to Medicaid and the normal asset test will apply to Tom. In place of an irrevocable trust, another asset-protection option he could try is an immediate annuity, a type of insurance contract that provides a fixed monthly income. By spending about $50,000 to purchase an annuity, he would reduce his assets below the Medicaid cap, and get an income of about $250 a month. Twenty-four states, including Florida and New Jersey, have a Medicaid income cap of $2,199 a month for the sick spouse in a couple; no state has an income cap for the healthy spouse.

Faced with the complexity of both state and federal laws, Tom says he's glad he hired an elder-care attorney with Alzheimer's-related experience. The Alzheimer's Association maintains a directory of such attorneys on its website. One of the first things the Allens' lawyer did was set up a health-care directive and a power of attorney designating Tom as the decision-maker for Julie's medical and financial issues. "At some point I had to cancel Julie's credit cards because she was using them for goofy purchases," he says. "The only way I could do that is if I had power of attorney."

Long-term-care insurance is another option for some people. (Julie Allen would not be a candidate, because insurers won't issue a policy to someone already diagnosed with Alzheimer's disease.) When the policies first became popular in the 1990s and early 2000s, insurers underpriced them. To recoup their losses, they've been hiking premiums on old policies, scaling back benefits on new ones, and in some cases getting out of the business entirely.

Some insurance experts say long-term-care insurance remains a viable option now that changes have been made in state insurance regulations to protect consumers. "Insurers are now required to price into their policies a cushion designed to prevent rate increases even if their claims are higher than they project," says Scott Olson, an insurance agent and co-founder of LTCShop.com.

Even so, for people of modest means, long-term care is probably too expensive an option. "Half the people who are retired today have household incomes of $40,000 per year or less and not much assets," Olson says. "Those people should not be considering long-term-care insurance. It's not going to be very hard for them to get Medicaid." —*Lewis Braham*

The bottom line Trusts and annuities can help ease the financial hit from Alzheimer's, though they may be too costly for many families.

Financial Planning

Living on 4 Percent—Or Less

▶ Early retirees share their secrets to make the money last

▶ "I definitely don't want to go back to working in a corporation"

The "4 percent rule" is a bedrock of retirement planning. But does it apply to those who quit working before 65? The rule of thumb holds that retirees who spend only 4 percent of their investment portfolio annually, adjusted for inflation, will be able to stretch out their savings for the rest of their life. For example, a $1 million brokerage account gets you $40,000 a year to spend.

Lately, the 4 percent rule has been under assault, with experts warning that the future could bring weaker market returns, an increased life span, or both. "If you retire at 40 with a couple million dollars, you're going to worry—about financial emergencies, taxes, inflation, market crashes, and the chance you'll live a lot longer than you'd planned for," says Robert Karn, an adviser with Karn Couzens & Associates in Farmington, Conn.

Evan Inglis, an actuary at Nuveen Asset Management, offers an alternative rule: Divide your age by 20—couples should use the younger partner's age—to get the percentage that you can ▶

◀ safely spend. For a 40-year-old, that's 2 percent, or $20,000 a year on $1 million in savings.

How do these concepts play out in the real world? We asked three people who retired in their 30s and 40s to explain how they've made it pay off.

The Stay-at-Home Dad

Joe Udo retired in 2012, at 38, after spending 16 years as a computer hardware engineer at Intel and saving aggressively. He and his wife, a human resources professional, performed a two-year test run in which they supported themselves on her salary alone while meticulously tracking their spending.

Financial planners typically recommend that you save enough to replace 80 percent of your preretirement income, but Udo says his family lives comfortably on less. They spend about $50,000 a year—from his wife's earnings, dividends from stocks, rental income, and what Udo makes from a blog where he chronicles his retirement experience. "Right now we have plenty of padding in our lifestyle," he says. "Our income is more than our expenses." They have about $1.4 million in a brokerage account and rental properties worth $600,000.

Udo's wife plans to retire by 2020, if not sooner. In the meantime, the couple continue to sock away money, including $400 a month in a 529 college savings plan for their son. Udo's plan is to keep a tight lid on spending until he reaches 55. His son will have graduated from high school by then, which will free the couple to travel more. Still, Udo says they'll be careful not to let their annual spending rise to more than 4 percent of their portfolio. Then, at 65, Udo will start collecting Social Security, which should ease the pressure on their nest egg.

"It's not really stressful at this point, because everything is going really well," Udo says, alluding to the buoyant stock market. He's "hoarding cash" on the chance he can buy stocks when prices dip, as he expects they will: "It seems like the stock market valuation is pretty high right now."

Early retirement isn't for everyone, Udo says. "But if you really put your mind to it, I think it's in reach for a lot of people." He says most people lack the discipline, though. Udo figures he and his wife can adjust, including working part time, if some unexpected expense crops up. Whatever happens, he adds, "I definitely don't want to go back to working in a corporation."

The Accountant

Before Sydney Lagier retired in 2008, at 44, she set up an elaborate spreadsheet to take her and her husband to age 100. Every quarter since, the couple, both certified public accountants, review their spending and investments. Eight years later, everything's on track, despite the global financial crisis. "I figure if I kept my cool during the worst recession of my lifetime, I can probably weather any storm now," says Lagier, who lives in Redwood City, Calif. She and her husband, who's also retired, spend just under 3 percent of their portfolio each year. At that pace, she says, their money will carry them through age 102. Lagier declined to give further details on her finances.

Lagier has several safety nets in place, in case some event throws off her planning: The couple try to keep two or three years of cash on hand, enough to be able to ride out a 2008-style meltdown without selling stocks. The equity in their home—worth about 21 times their annual expenses—provides peace of mind. And if all else fails, about 40 percent of their budget is made up of entertainment, clothing, vacations, and eating out, all of which they could cut.

Lagier tried working part time for a while but didn't enjoy it: "There was so much I wanted to be doing that I wasn't getting time for." Now she keeps busy taking piano lessons, exercising, and writing a book about retirement. Her husband is learning the acoustic guitar, and the pair regularly head into San Francisco to listen to live jazz.

The Road Tripper

Justin McCurry is a 36-year-old transportation engineer who hasn't worked full time in three years. He didn't want to have a job for 20 more years, he says. "What if I keel over at my desk at 56?" He and his wife, who quit her back-office job at Credit Suisse in February, spend about 3 percent of their $1.5 million portfolio a year.

Their lifestyle in Raleigh, N.C., is comfortable but not cushy. They eat out once a month and get takeout at other times. They've paid off their modest home, in a "convenient but lower-middle- to middle-class area in the city." Their cars "were usually the oldest cars in the parking lot at work." They don't clip coupons but do look for sales. "I guess you could say we have inexpensive tastes and desires," McCurry says. "But we're not minimalist by any means."

He has a smartphone, two high-definition TVs, and a PlayStation system. His three kids each have a tablet. "Any kind of electronics we need, we have," he says, even if some are secondhand.

McCurry does some consulting—"work seems to chase me down," he says—and makes $1,000 to $2,000 a month blogging about financial independence. The rest of his income comes from a portfolio that's almost 100 percent stocks. Equities historically provide higher returns than a mix of stocks and bonds, but they're also more volatile: The value of McCurry's portfolio shrank $70,000 in one day in June, after Brexit led the markets to swoon. "You do have to be comfortable with, and understand, the potential for huge losses in the stock market," he says.

McCurry, his wife, and their children recently took their annual summer road trip to Canada in the family minivan. It's a monthlong adventure they could never indulge in if they were employed full time.

He advises flexibility, even while being disciplined about spending. "It seems like very few people follow the 4 percent rule strictly," McCurry says. "People tend to spend more when times are good and spend less when times are bad." —*Ben Steverman*

The bottom line Three couples have made early retirement work by spending less than 4 percent of their investment portfolios each year.

Edited by Cristina Lindblad
Bloomberg.com

AccuVote-TSX machines at the San Diego Registrar of Voters

In Crappy, Buggy, Obsolete Voting Technology We Trust

Remember when everyone hated hanging chads and wanted computerized voting? Seemed like a good idea at the time

By Michael Riley, Jordan Robertson, and David Kocieniewski
Photographs by Julian Berman

Six days after Memphis voters went to the polls last October to elect a mayor and other city officials, a local computer programmer named Bennie Smith sat on his couch after work to catch up on e-mail.

The vote had gone off about as well as elections usually do in Memphis, which means not well at all. The proceedings were full of the technical mishaps that have plagued Shelby County, where Memphis is the seat, since officials switched to electronic voting machines in 2006. Servers froze, and the results were hours late. But experts at the county election commission assured both candidates and voters that the problems were minor and the final tabulation wasn't affected.

That story might have held up if Smith, a financial software developer and church organist, hadn't been conducting an election night experiment. In his free time, Smith crunches voter-turnout data with programs he's written to help local politicians target their direct-mail campaigns. Like Smith, most of his clients are black, and he had bet a friend 10 candy bars that the polling place at Unity Christian Church, a black congregation a mile from Graceland, would have a big turnout. The precinct, No. 77-01, is a Democratic stronghold and has one of the largest concentrations of African American voters in a city known for racially fractured politics. Smith's guess: 600 votes.

When the polls closed at 7 p.m., he was at Unity Christian and snapped some photos with his BlackBerry of the precinct's poll tape—literally a tally of the votes printed on white paper tape and posted on a church window. Since the printouts come directly from the voting machines at each location, election officials consider it the most trustworthy count. According to the tape, Smith's guess was close: 546 people had cast ballots.

When he got an e-mail a week later with Shelby County's first breakdown of each precinct's voting, he ran down the list to the one precinct where he knew the tally for sure. The count for Unity Christian showed only 330 votes. Forty percent of the votes had disappeared.

If you're an election official, losing votes is a very big deal, but it presents a special problem in Tennessee. Most counties in the state don't keep paper records of ballots, so there are no physical votes locked in a room somewhere, ready to be recounted.

When underperforming voting equipment in Florida nearly created a constitutional crisis in the 2000 presidential race, officials at least knew what went wrong. The aging Votomatic machines were supposed to be cleaned regularly, which election officials in several counties failed to do. So when voters choosing between Al Gore and George W. Bush inserted their readable punch-card ballots into the devices, they often created a half-punched piece of chaff rather than a clean cut, and entered the term "hanging chad" into the American political lexicon.

Shelby County uses a GEMS tabulator—for Global Election Management System—which is a personal computer installed with Diebold software that sits in a windowless room in the county's election headquarters. The tabulator is the brains of the system. It monitors the voting machines, sorts out which machines have delivered data and which haven't, and tallies the results. As voting machines check in and their votes are included in the official count, each machine's status turns green on the GEMS master panel. A red light means the upload has failed.

At the end of Memphis's election night in October 2015, there was no indication from the technician running Shelby County's GEMS tabulator that any voting machine hadn't checked in or that any votes had gone missing, according to election commission e-mails obtained by *Bloomberg Businessweek*. Yet as county technicians followed up on the evidence from Smith's poll-tape photo, they discovered more votes that never made it into the election night count, all from precincts with large concentrations of black voters.

For the members of Congress, who in 2002 provided almost $4 billion to modernize voting technology through the Help America Vote Act, or HAVA–Congress's response to *Bush v. Gore*–this probably wasn't the result they had in mind. But voting by computer has been a technological answer in search of a problem. Those World War II-era pull-lever voting machines may not have been the most elegant of contraptions, but they were easy to use and didn't crash. Georgia, which in 2002 set out to be an early national model for the transition to computerized voting, shows the unintended consequences. It spent $54 million in HAVA funding to buy 20,000 touchscreen voting machines from Diebold, standardizing its technology across the state. Today, the machines are past their expected life span of 10 years. (With no federal funding in sight, Georgia doesn't expect to be able to replace those machines until 2020.) The vote tabulators are certified to run only on Windows 2000, which Microsoft stopped supporting six years ago. To support the older operating system, the state had to hire a contractor to custom-build 100 servers–which, of course, are more vulnerable to hacking because they can no longer get current security updates.

After California declared almost all of the electronic voting machines in the state unfit for use in 2007 for failing basic security tests, San Diego County put its decertified machines in storage. It has been paying the bill to warehouse them ever since: No one wants to buy them, and county rules prohibit throwing millions of dollars' worth of machines in the trash bin.

This muddle is about to collide head-on with one of the most incendiary presidential campaigns in modern U.S. history, one in which the candidates have already questioned whether votes will be counted properly. Donald Trump warned supporters in Columbus, Ohio, on Aug. 1 that "we'd better be careful, because that election is going to be rigged." Hillary Clinton and top Democrats have accused Russia of trying to manipulate the election by hacking. FBI Director James Comey, testifying before Congress on Sept. 28, said that states should be vigilant against online intrusions "because there's no doubt that some bad actors have been poking around."

The real threat isn't a thrown election. Nationwide electoral fraud would be extremely difficult to pull off, mostly because votes in the U.S. are tallied by more than 7,000 counties and townships. Hacking enough of them to tip the balance would be a monumental undertaking–and one certain to be detected. (Tabulators are designed not to be connected to the internet at all.) Rather, the risk is a violation of trust: that Election Day mishaps borne of outdated, poorly engineered technology will confirm and amplify the fear pervading this campaign. In Shelby County, multiple lawsuits over the past 10 years have alleged that voting machines and computerized tabulators have been used to steal or suppress votes–deepening the distrust of a system some locals see as stacked against them.

Smith was never one of those. His energies went into building data analytics that candidates would need if they wanted to stop complaining and get elected. But after the votes disappeared from Unity Christian last October, something changed. "I kind of knew this would be a place where this could happen, but this morbid feeling came over me–are you serious?" he remembers thinking. "Is this how politics is supposed to work? Is anybody's vote safe?"

The voting technology business, after a frenetic decade of mergers, acquisitions, and renamings, is dominated by just a few companies: Election Systems & Software, or ES&S, and Dominion Voting Systems are the largest. Neither has much in common with the giants of computing. Apple, Dell, IBM, and HP have all steered clear of the sector, which generates, according to an analysis by Harvard professor Stephen Ansolabehere, about $300 million in annual revenue. For context, Apple generates about $300 million in revenue every 12 hours.

During the dramatic Florida recount, Mark Earley was an election official in Leon County, which is mostly made up of the city of Tallahassee, the state capital. That put Earley at the center of a global spectacle, in charge of counting the 103,000 votes in the county, which were cast on optically scanned ballots, a novelty then. State troopers armed with machine guns stood outside the courthouse, protecting the proceedings from crowds of screaming protesters and international TV crews.

Earley knew the controversy would create a big opportunity for voting tech companies, and they began hiring local officials like him. Sandra Mortham, a former Florida secretary of state, was hired by ES&S, based in Omaha. (Mortham also represented the Florida Association of Counties, and before long ES&S was the only voting system endorsed by the association.) Earley took a job at Global Election Systems, a smaller Canadian company that he thought had better products.

Global Election Systems, with U.S. offices in McKinney, Texas, was sold to Diebold in 2002, as companies merged to chase the HAVA billions. Earley went to Diebold as well, where he liked the travel and the chance to share what he'd learned with officials in other states. But this was no Silicon Valley, with its stock options and office juice bars. Managers at Diebold's election division in McKinney went to CiCis Pizza for the all-you-can-eat buffet. "You had to try and go when it was busy—that way they had to keep replacing the food," Earley says. "Otherwise it got cold and stiff."

By 2006 every state but New York had dumped their pull-lever and punch-card machines in favor of computerized voting. The voting tech vendors rushed systems to market, often without adequate testing, to meet procurement deadlines set by hundreds of counties and states. According to Earley, the systems often had software flaws or too little memory, problems the company's executives figured could be fixed later.

Before Global was sold, Earley says, its executives were frantically trying to solve the problem of recurring revenue. Consumers were willing to replace mobile phones or computers every two or three years to get the latest features, creating big profits and fast innovation cycles. County buyers wanted electronic voting machines to last a decade or more. Earley believes Global ran into trouble because its products were too reliable, so there were too few returning customers.

He says the competition solved the revenue problem by focusing less on making equipment and more on long-term contracts. It was an enhancement of the old razors-and-blades strategy: Sell the razors cheap and make money on the blades, and make even more money by making the razors so hard to use that customers pay you to give them a shave. When Allen County, Ohio, replaced its old voting machines in 2005 with equipment from ES&S, officials didn't realize they'd also be stuck with a service fee of $40,000 per year to help run an election system that handled about 70,000 votes. "When we found out the cost, our jaws just about hit the floor," says Ken Terry, who was election director there until this year.

To top it off, Terry discovered that the county was paying top dollar for antiquated technology. It wasn't until the machines were purchased, and in place, that county officials realized their new system ran on software written in 1996. After counting paper ballots with an optical scanner, the data had to be transferred to a server using Zip drives—a storage format developed when pagers and AOL dial-up were still in vogue. When Allen County tried to replace the disks in 2012, they were so hard to find that officials had to ask ES&S for a set. "They were in this shrink-wrapped package," Terry says, "and when we opened it, there was a coupon that expired in 1999."

ES&S declined to be interviewed for this story but provided written answers to questions. Kathy Rogers, senior vice president for government relations, wrote that many local election officials are satisfied customers who see digital voting as a big improvement over the old-fashioned kind. The company stands by the performance record of its equipment and services. "At ES&S we place as much emphasis on sustainability of currently fielded systems as we do on development and research of new systems," she wrote.

Election officials now have more ways than ever to screw up a vote. South Carolina elections are run on ES&S machines that use cartridges—like the ones for old Nintendo game consoles—to transfer votes to a tabulator. Poll workers put the cartridge in a slot in the machine at the start of voting; after polls close, all cartridges must be delivered to the tabulator room, where they're plugged in and their data downloaded. In 2010 workers at two precincts in the state capital of Columbia mixed up cartridges and lost 1,127 votes, or almost two-thirds of the precincts' total.

Ohio Secretary of State Jennifer Brunner sued Diebold following the 2008 primaries after 11 counties using the company's AccuVote-TSX voting machines and GEMS tabulator dropped votes. The company claimed the problem was the result of the antivirus program the counties were using. After a 10-month fight, Diebold conceded the lost votes were the result of a software bug. The bug was fixed in later versions, and more than half of Ohio counties received free or discounted voting machines and software as part of the settlement.

"This is the strangest niche of IT that I've ever come across," says Merle King, executive director for the Center for Election Systems at Georgia's Kennesaw State University, which runs the state's vote machine testing program. "Whatever you think you know about IT, you have to check it at the door. It's legacy stuff, but it's legacy in weird ways. This is legacy stuff that as you start to tease it apart goes back decades."

With little chance of another infusion of federal funds from a constipated Congress, the industry consolidated some more. Diebold rebranded its elections division as Premier Elections Solutions in 2007, then sold the business two years later to ES&S. Antitrust action by the U.S. Department of Justice forced ES&S to sell some of those assets to Toronto-based Dominion.

What the industry hasn't done is invest much in updating the hardware on which millions of Americans will cast their votes in November. In conversations with officials at statehouses and county offices, the device makers often point fingers at the same federal law that greatly expanded the market for digital voting in the first place. HAVA created the U.S. Election Assistance Commission, which sets federal standards for computerized voting equipment that most states use as a benchmark. Those standards haven't changed much since 2005.

Whoever is to blame, the result is that many of the old systems were simply repackaged as they passed from one company to the next. Even a cosmetic upgrade was too much in some cases. On its website, ES&S displays a picture of its AccuVote-TSX touchscreen voting machine. Emblazoned on the front of the machine is the name Diebold, a company that stopped making voting equipment seven years ago. (ES&S's Rogers says its agreement with the Justice Department allows the company to sell AccuVote only to customers who already use them.)

In 2014 a presidential commission that assessed the state of voting technology, interviewing hundreds of local election officials over two years, issued a devastating judgment in its final report: "Jurisdictions do not have the money to purchase new machines, and legal and market constraints prevent the development of machines they would want even if they had funds."

The AccuVote-TSX touchscreen voting machines used in Shelby County are essentially folding easels with a computer screen. They stand about 5 feet tall, weigh about as much as a hibachi grill, and record votes on a removable data card about the size of a credit card. When the polls close, the votes from the five or six machines at a typical polling place are totaled and printed on a tally tape, which is posted somewhere visible. The cards are then sealed in a clear security bag and driven to one of six

upload centers, where they're individually inserted into a transmitter and the data sent to GEMS over a closed network.

At 7 p.m. on Oct. 8, 2015, the polls for Memphis's municipal elections closed, and tallies began rolling in to Shelby County's election operations center, a wide building on the eastern outskirts of the city, across from a county penal farm ringed with concertina wire. The problems began almost immediately.

About 15 minutes into counting, votes stopped coming into the GEMS tabulator from the precincts. Shelby County was using two GEMS databases that night instead of one, a troublesome configuration because each memory card can upload only to the database it was programmed on for security reasons. Problems merging the two sets of data created at least a two-hour reporting delay that night, according to a postelection analysis by ES&S. But by 8:45 p.m. the system was up and running again.

The county also happened to be using new software to post results to the web, which is a different program than the one that calculates the official tally. A worker copying the wrong file in the race for city clerk of court published the wrong vote count, which stood uncorrected until around 9 p.m.

Watching from Fitzgerald's Cigar Lounge, Wanda Halbert, a two-term city councilwoman, was munching on a deviled egg when officials corrected the numbers. Halbert had left her City Council seat to run for clerk, a job that oversees the collection of some $5 million in traffic fines handed out annually—real power in Memphis. She and her supporters were stunned as the top three candidates' vote totals suddenly changed, dropping her into second place.

Climbing into a friend's car, Halbert sped to the county election commission's offices, where she cursed out officials and demanded answers. The profane exchange was caught by a local TV news crew before Halbert calmed down. She stayed until the final results were tallied around 2 a.m. Halbert, who is black, lost to the top vote-getter, who is white, by a slim margin, 1,367 votes.

Herman Morris, then the Memphis city attorney, sent out an e-mail the following day congratulating election officials on quickly resolving the night's various crises and noting that, "notwithstanding the intense media scrutiny, harassment, bias and spin, you all performed magnificently."

That was before Smith's smartphone image of the Unity Christian vote count surfaced. Smith grew up poor in the city's College Park neighborhood, a high-crime stretch of single-family homes in north Memphis. As a kid, he managed to stay out of the violence that engulfed his family and friends, reading Malcolm X and tinkering with toy trains and other electronics. Smith eventually moved into a gated community, raising three girls, but he never lost the habit of questioning authority and "this knack for the rub—figuring out why things didn't line up."

He decided to show the poll tape to Norma Lester, a friend on the election commission. The photo, which Smith gave Lester on Oct. 17, the week before commissioners were scheduled to certify the election, was smoking-gun proof that the votes had disappeared somewhere between Unity Christian's voting machines and the GEMS tabulator that spat out the official election night tally.

What the county's election administrators did with that information isn't entirely clear, mostly because the county has decided not to clarify it. Shortly after the election results were certified, Halbert filed a lawsuit over irregularities in the tally, and an attorney representing the election commission cited the legal action in explaining that officials wouldn't comment about anything that happened that night.

Internal e-mails and other documents related to the Oct. 8 election were given to *Bloomberg Businessweek* by Carol Chumney, a local attorney, who got them through a series of open records requests. They show that Joe Young, Shelby County's deputy administrator of elections, went hunting for answers shortly after Lester got Smith's poll-tape photo. He looked at server logs and other data that gave a picture of how GEMS operated on election night, and he found the problem was much worse. At first it looked like votes were missing from not just one precinct but 20. After more investigation, he appeared to narrow that number to four. Not all of the precincts are named in the e-mail, but a master record for the voting machines shows missing uploads at four polling places on election night, all in areas with large concentrations of black voters. Three are located at black churches: Mt. Zion Missionary Baptist, Mississippi Boulevard Christian, and Unity Christian; the fourth is at Gaston Park, a community center in a mostly black neighborhood south of downtown. The weird thing is, the GEMS system recognized at least some of the missing votes—stored on the memory cards of seven voting machines—as already counted when officials tried to reload them on Oct. 19, according to an e-mail exchange between Young and operations manager Darral Brown. But it was clear from Smith's poll tape and other data dug up by Young that they hadn't been. In all, 1,001 votes had been dropped from the election night count, according to the master record, including almost 400 from an early voting center at Mt. Zion, the most from any single polling place.

Young wasn't rewarded for his effort. In fact, on Oct. 19 he got a sharp rebuke from his boss, Shelby County Administrator of Elections Richard Holden, who had asked Young to investigate a separate issue. Holden refused repeated interview requests by phone, e-mail, and in person.

Discussion of the missing votes stops in the e-mails after that. There's no indication the county looked further into how the votes got lost or why the GEMS system failed. One other thing Holden and Young didn't do: They didn't explain how

widespread the problem was to the five county election commissioners, according to Commissioner Anthony Tate, one of two Democrats on the panel. As far as the five commissioners knew, the only precinct with missing votes was Unity Christian; not three other precincts, too. If they had been informed of the full scale of the fiasco, Tate says, he wouldn't have voted to certify the election along with the other commissioners on Oct. 23.

Given that this is Memphis, where the political history is fraught with a legacy of election tampering and cronyism that favored wealthy, white elites, it would be easy to conclude that something nefarious was going on. That's what Halbert's lawsuit is seeking to prove. King, the Kennesaw professor and an expert in GEMS software, says the answer is probably much simpler: It's what happens when hard-to-use technology is deployed sloppily.

Shelby election officials added the votes after the fact, using the data on the memory cards located the day of Young's search. Around 300 votes were added on Oct. 19 and an additional 700 or so over the next two weeks, according to a master tabulation report which was also obtained by Chumney. In the court clerk's race, the missing votes were divided among four African American candidates, including Halbert, who gained 225 votes on the winner, not enough to change the result.

It may never be possible to say exactly what went wrong on election night last October, since officials in Shelby County didn't conduct a public investigation, but one possibility stands out. Among the documents released to Chumney is a user's manual for the county's version of GEMS. It shows they're using a version of the software that contains the bug known to drop votes, the subject of that 10-month investigation in Ohio in 2008. The software flaw creates exactly the situation described in the e-mails by Young and other officials, one that has been well-known for eight years. Diebold didn't replace the flawed versions outside Ohio, and for counties to do so on their own was expensive. Some counties in Virginia and Georgia still use the problem software, as well. But they employ special protocols to make sure that votes aren't dropped, officials in both states say. In Georgia, that includes comparing tabulated precinct results with each physical poll tape—essentially replicating Smith's experiment, but for every precinct in every county.

Tennessee law requires counties there to do it as well, but Shelby County stopped the practice several years ago to save money, according to a deposition in an earlier election lawsuit. The process was replaced with an audit of 10 percent of polling places, which failed to catch any problem with the October vote. The county's election commissioners were also not told that Shelby uses a version of GEMS known to lose votes, Tate says. "I'm shocked and baffled as to why that information was not disclosed to us," he says.

For Smith, who prides himself on being sober and analytical, it's tough to know what to think. It's certainly odd that the missing votes were all in areas with high concentrations of black voters. What is clear, he says, is that local officials didn't try to get to the bottom of the problem, or figure out whether it's also occurred in past elections, or determine what elections over the past several years might also be compromised. If these problems were affecting white votes, Smith says, "there'd be some smoke in the city."

Following every major election since introducing computerized voting six years ago, Shelby County has been sued, often with the defendants alleging some version of election fraud through hacking or data manipulation. So far, none of the defendants has been successful.

Before running for city clerk, Halbert spent 25 years as an administrative assistant at FedEx and eight years on the City Council. She's now cleaning houses, trying to earn enough on top of her savings to fund her lawsuit, which alleges that problems with Shelby County's election systems "date back at least a decade and are pervasive, severe, chronic, and persistent." The only attorney she could afford is a personal injury lawyer; Shelby County is represented by John Ryder, a local attorney who's also general counsel for the Republican National Committee and one of the most high-powered election lawyers in the country.

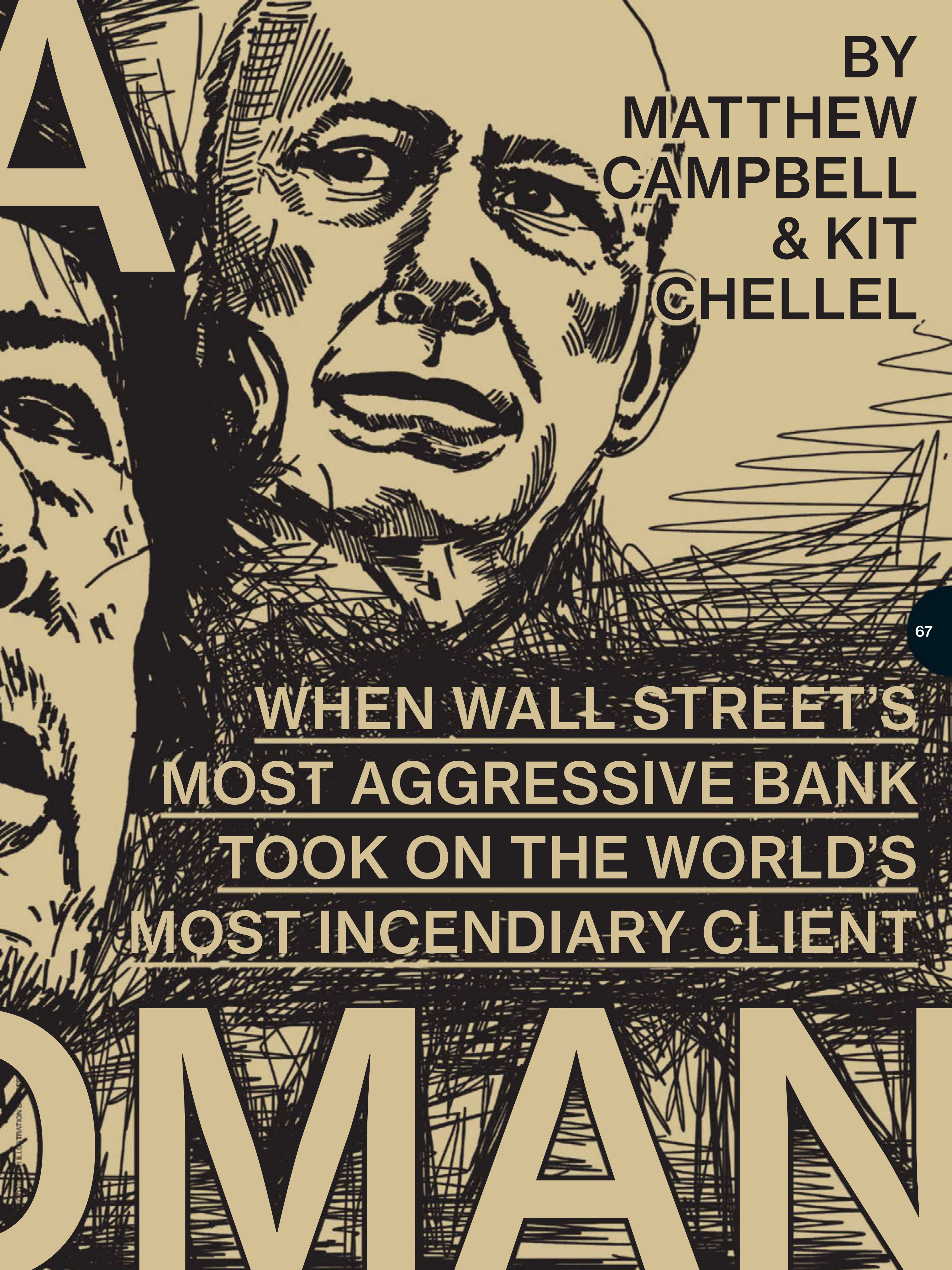
"We just have to stop this happening in Shelby County," says Halbert. "If I did lose, I want it to be fair and square. We really don't know who the hell won" the election.

The case was going Halbert's way, at first. In early filings, the county conceded some of the software it uses is so old or obscure it doesn't even know who makes it. The suit stalled in May, when District Court Judge Jim Kyle abruptly recused himself, citing that his wife is running for office in November. A new judge was appointed in July, but Halbert says she's running low on money.

Shelby County officials say they're exploring whether to buy new voting machines, but replacing all of them would cost about $20 million. Linda Phillips, the county's new administrator of elections (Holden, who oversaw the October election, retired at the end of last year), said in a local TV interview that the current system needs only small changes, mostly voter education about confusing ballots. "The basics are there," Phillips said.

Reverend Eric Lowell Winston, pastor at Mt. Zion, the polling place where the most votes were lost in October, says election officials have already lost the trust of many black voters in Memphis. Not having a clear answer for what happened, or pretending the problem doesn't exist, only feeds suspicion. "I think it insults the intelligence of our community," he says. "As if we don't see or understand. But we do understand, we understand perfectly well what's going on." Ⓑ


LIBYA
VS
GOLD



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MAN

BY MATTHEW CAMPBELL & KIT CHELLEL

WHEN WALL STREET'S MOST AGGRESSIVE BANK TOOK ON THE WORLD'S MOST INCENDIARY CLIENT

MOAMMAR QADDAFI'S LIBYA WAS A MISERABLE PLACE FOR A BUSINESS TRIP.

In 2008, a few years after renouncing its nuclear and chemical weapons program, the desert nation remained a menacing and ugly place, with cratered highways, awful restaurants with no booze, and Qaddafi's leathery visage everywhere, staring balefully down from billboards. The dreary capital, Tripoli, sat at the edge of the Sahara, in the least barren sliver of a country defined in the West by dictatorship, terrorism, and billions of dollars' worth of oil.

Goldman Sachs's Youssef Kabbaj was one of the few that enjoyed the commute. A securities salesman based out of the bank's London headquarters, Kabbaj found that Libya reminded him of his native Morocco, and he considered the ruins in Tripoli's old quarter enchanting. The city had a single decent hotel, the Corinthia, a crescent hulk the color of sand, and that year Kabbaj was such a frequent guest that he stored a rack of pressed suits there at all times. With slick black hair, round cheeks, and a mischievous smile, he was fluent in English, French, Arabic, and the language of international finance.

Qaddafi's peaceful turn had reopened Libya to Western banking for the first time in two decades. Its $60 billion in oil wealth, no longer dammed up by international sanctions, was ready to flood into the market, as directed by the Libyan Investment Authority, Qaddafi's brand-new sovereign wealth fund. With his North African pedigree, Kabbaj had been one of the first at Goldman to spot the opportunity. The LIA had become his biggest client, transforming him in a year from rookie salesman into possibly the No. 1 rainmaker at the world's most profitable investment bank. He was 31 years old.

On July 23, 2008, Kabbaj was in his room at the Corinthia, waiting anxiously for his mobile phone to ring. It finally did around 9 a.m., and he grabbed a pen and paper to take notes. On the line was Michael Daffey, a senior Goldman executive in London. Daffey praised Kabbaj's work in Libya and said that after some negotiation, the bank was willing to guarantee him $9 million in pay. It was an astonishing sum, even at Goldman.

Kabbaj immediately asked for more. He knew he'd been instrumental in extracting an unusual amount of money from a highly unusual client. Who else on the planet could sell a billion dollars of derivatives to a regime whose theatrical despot slept in a tent under an all-female warrior guard?

By now Kabbaj was running late, and Nick Pentreath, a South African colleague on one of his first trips to Libya, was knocking on his hotel room door to hurry him up. They'd been summoned to a late-morning meeting by the LIA's deputy chief executive, Mustafa Zarti, a Qaddafi family friend. Zarti kept a ceremonial sword mounted above his desk—and was rumored to wave it around before visitors who displeased him. The markets were scary enough that summer. Bear Stearns, an American investment bank, had collapsed in March, and there were rumors that Lehman Brothers could be next. Zarti wanted Kabbaj to give him an update on Libya's portfolio at Goldman.

Pentreath and Kabbaj took a short taxi ride to the Al-Fateh Tower, a two-pronged structure of stupendous ugliness that loomed over Tripoli in a style that might be called totalitarian postmodern. The LIA's offices were on the 22nd floor. Usually, Kabbaj was shown right in, but this time he and Pentreath were kept waiting for what felt like hours, watched over by an oversize portrait of Qaddafi in military garb. Something wasn't quite right. Finally, as Kabbaj was called into a boardroom next to Zarti's office, he recognized three bankers from the French bank Société Générale—Goldman's main rival for the LIA's cash. He saw with alarm that they were holding term sheets for Goldman deals and grinning at him as he walked past.

Kabbaj steeled himself and began to address Zarti. The LIA's day-to-day chief was 38, with plump features, thinning black hair, and a Marlboro Red forever at his lips. He glowered as Kabbaj said that Goldman had some great new trading ideas. Zarti cut him off, saying he wanted to talk about deals that had already been done. Kabbaj started drawing on a whiteboard, running through basic concepts like how options could be "in the money" or "out of the money," and Pentreath began a technical explanation of the derivatives.

Zarti again interrupted. "Youssef," he said, "I'm asking you." Before Kabbaj could say much more, Zarti exploded. Screaming in a mix of English and Arabic, he accused Kabbaj of deceiving the LIA into deals it didn't understand. He called Goldman "a bank of Mafiosi" and said that he could behave like a Mafioso, too. He stormed out of the room, leaving Kabbaj, Pentreath, and a clutch of LIA staffers in a Marlboro haze.

Shaken, Kabbaj asked Zarti's aides what had just happened. None had an answer. After a few minutes, Zarti burst back in, angrier than ever. Catherine McDougall, an Australian lawyer who was in the office that day, later recalled Zarti's words as along the lines of "F--- your mother, f--- you, and get out of my country." Kabbaj and Pentreath packed up their things.

Zarti followed them into the corridor. If Kabbaj didn't make amends, he shouted, "we will go after your own family in Morocco!" The Al-Fateh Tower elevators were agonizingly slow to arrive. "What are you still doing here? Get out of my building!" Zarti screamed. He told Pentreath that if he didn't get in the lift soon, he'd throw him out the window.

Kabbaj was white with shock. Zarti had saved his most chilling remark for him. "You are only a Moroccan here in Libya," he said. "I can make you disappear, and nobody will ever hear back from you."

The story of Goldman's seduction of Libya—based on court evidence, testimony from witnesses, and interviews with people who were involved in the transactions—is as brief as it was costly. Barely 12 months elapsed between Zarti's first tour of the bank and his threat to murder its brightest young star, and Libya wound up losing $1.2 billion. Goldman enjoyed its payday, the exact size of which it has never disclosed. But whatever the level,

GOLDMAN SACHS

the matter is now before a London judge, and the Libyans have a chance to extract an even more damaging toll.

For 65 million years, a mile beneath what's now the Libyan Desert, the supercompressed remains of billions of dinosaurs, plants, and other Cretaceous organisms have been gently cooking into crude. Human ancestors were using tools in the region 200,000 years ago, and early civilizations came to be conquered in turn by the Phoenicians, the Greeks, the Romans, and others in a chain of foreign rule that reached the modern era. Italy relinquished Libya after World War II, and the nation declared independence in 1951. Eight years later, Western drillers struck what remain the largest oil reserves in all of Africa.

In 1969, while Libya's U.S.-allied king was out of the country, a strikingly handsome young military officer pulled off an ambitious coup. Initially, Moammar Qaddafi ruled as a garden-variety Arab nationalist, like those who'd recently taken over Egypt, Iraq, and Syria. He gradually became more erratic, writing checks to the Black Panthers and Red Brigades and declaring himself supreme leader of the Great Socialist People's Libyan Arab Jamahiriya. By the 1980s, Qaddafi seemed to relish his image as a villain out of a Chuck Norris movie, blamed for a Berlin nightclub bombing, targeting U.S. servicemen in the region, and downing a Pan Am jet over Scotland, killing 270 people. Ronald Reagan called him the "mad dog of the Middle East," an image that stuck even as Qaddafi extended his canny rule into the 21st century.

U.S.-led sanctions steadily crippled the Libyan economy. Then, in 2003, Qaddafi watched American troops invade Iraq and drag a filthy Saddam Hussein out of a spider hole. A few days later, Qaddafi offered to give up Libya's WMD programs. Eager to reward good behavior, the U.S. eased sanctions, restoring full relations in 2006. Qaddafi might have been a brutal tyrant who forced citizens to study his *Green Book*, but he was abruptly a man the West could do business with. So complete was the reversal in his fortunes that on one visit to New York he struck a deal to pitch his Bedouin tent on the Westchester County lawn of Donald Trump.

The reemergence of Libya, and its vast oil wealth, coincided with an era of nearly unbridled avarice on Wall Street—and nowhere more so than at Goldman Sachs. The same year that Qaddafi established the LIA, Goldman posted the largest profit in Wall Street history. The bank paid employees an average of $622,000, with many times that amount available for bankers who nailed down the biggest deals. A stupendously wealthy petro state desperate to buy into a bull market was a dream client—the kind of "elephant," in Goldman argot, that could make careers.

Kabbaj joined Goldman's London office in 2006. Born to a wealthy Rabat family, he'd attended the elite Lycée Louis-le-Grand in Paris, going on to a degree in engineering at MIT. Goldman hired him after a stint at a Moroccan bank,

PREVIOUS SPREAD: ILLUSTRATIONS BY 731; BASED ON PHOTOS: MAX ROSSI/REUTERS (QADDAFI); ERIC PIERMONT/AFP/GETTY IMAGES (BLANKFEIN)

initially offering Kabbaj a job as one of its "quants"–the math whizzes who devise algorithmic trading strategies behind closed doors. He insisted on a role in sales, convinced he could climb the ladder faster by being close to clients. The only available post was on a team covering Africa–at the time, a backwater within the firm that generated next to no revenue.

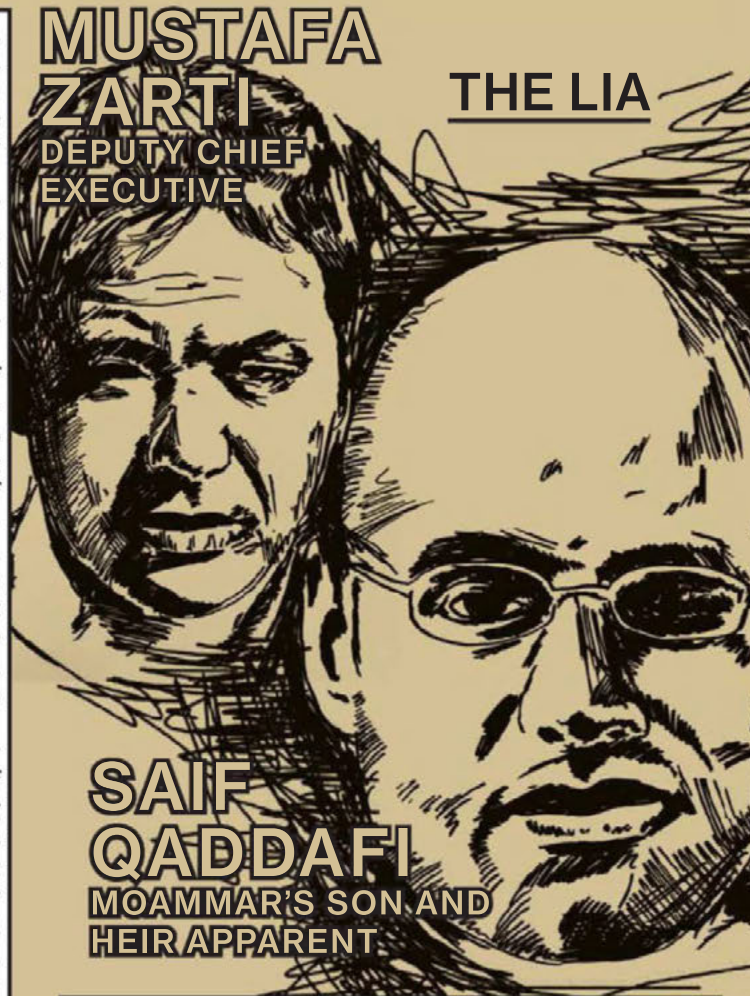
Kabbaj was one of the first to realize that to make big money in Africa, Goldman would have to tap Libya, telling a colleague in February 2007 that its wealth fund was "one of our key prospects." He cold-called the LIA and was told that Zarti was due in London soon and would listen to what Kabbaj and his colleagues had to say.

Zarti's background underscored the essential weirdness of doing business in Libya, where there were few private companies and credit cards didn't exist until 2005. Before coming to the LIA, he'd worked at a fund run by OPEC and led a modest tuna-fishing concern. He also happened to be a close friend of Saif Qaddafi, Moammar's son, which in Libya was the best possible qualification for a government job. Zarti favored Italian suits in loud colors, paired with chunky watches from Audemars Piguet, and he was often accompanied at meetings by his elegant assistant Sofia Wellesley, the aristocratic granddaughter of the Duke of Wellington, who would make introductions and smooth out Zarti's rough manners. (Zarti declined interview requests sent through a spokesman.)

Zarti and Wellesley were given the VIP treatment when they arrived at Goldman's Fleet Street offices on the afternoon of July 6, 2007, waved past security and escorted onto the trading floor by Kabbaj. The Libyan seemed awed by the cavernous space, clanging with the noise of late-day trading. Zarti kept asking if he could smoke and kept getting told he couldn't. After the tour, he was led into a glass-walled office to meet Goldman partner Driss Ben-Brahim. Tall and charismatic, with dual Austrian and Moroccan citizenship, Ben-Brahim was well-known in the Arab world thanks to reports that he'd been paid a £30 million ($54 million) bonus in 2004. (Goldman denied the story at the time.) Ben-Brahim gave Zarti a sense of Goldman's scale: It had 26,000 employees, $69 billion in revenue, and $9.5 billion in profit. Zarti said, "So if you had a flag, you'd be a country." Pleased, he invited Goldman to come to Libya to talk about whether the LIA should make some small "appetizer" investments–something in the region of $100 million to $200 million.

Soon after, a group of Goldman bankers converged on Tripoli, including Ben-Brahim; Kabbaj and another salesman, Laurent Lalou; and Edward Eisler, a senior trader. On the ground, Libyan officials confiscated a bottle of wine intended as a gift. Alcohol was banned in Qaddafi's Libya, and speed limits didn't really exist, as the bankers learned on a white-knuckle ride into town, their local drivers tearing down the decrepit roads at more than 90 miles an hour. The Goldman delegation stayed at the Corinthia, which, because of its monopoly on business travel, charged upwards of $500 for a basic room. Ben-Brahim said, half-seriously, that Goldman should buy it.

First impressions of the LIA were unpromising. The Al-Fateh Tower seemed like it couldn't possibly be the headquarters of a multibillion-dollar investment fund. The 25-story structure had been built without enough elevators, which meant long waits in a dingy lobby full of cell phone shops. A ring-shaped roof deck was supposed to rotate but didn't. The LIA's floor was a raw construction site with almost no furniture. But such concerns receded when LIA's chief executive officer, Mohammed Layas, an experienced banker, explained the fund's ambitions.



Qaddafi himself, who communicated with the LIA through missives transcribed by a man known as "Qaddafi's quill," wanted large, quick returns to support state spending.

"Investment opportunities with this account is [sic] one of the largest I've ever seen," Goldman partner Yusuf Aliredha wrote afterward. "We are all over them." Goldman wanted to strike quickly, as other firms began to notice the giant pot of money in Libya. The day Goldman arrived, Wellesley noted in an e-mail that "there are private jets blocking Tripoli International."

Ben-Brahim was on vacation in the south of France later in July when Zarti got in touch, asking him to meet on a yacht that had just pulled into Cannes from Saint-Tropez. As Ben-Brahim climbed aboard the vessel, he realized that it belonged to Saif Qaddafi, the colonel's heir apparent, who had an international reputation as Libya's reformer-in-chief. After the three men spoke, Ben-Brahim thought there could be even more money in Libya than Goldman realized. The country expected "gigantic" new oil and gas finds, he wrote in a debrief to colleagues, who began to gossip about the bank's exotic new client–including tales, never confirmed, that the yacht meeting featured a cameo by one of Saif's pet white tigers.

Ben-Brahim instructed Kabbaj to "stay a lot in Tripoli. It's important you stay super close to the client on a daily basis. Teach them, train them, dine them." Aliredha agreed. "You need to own this client," he wrote. "This is a once in a career opportunity." Kabbaj traveled to Tripoli four more times before the end of September, becoming such a fixture at the Al-Fateh Tower that he eventually got his own desk. He spent part of his

time taking the LIA's junior people "through Finance 1.00," as he put it, using MIT's term for an introductory course. The fund's young staff had been recruited from the Libyan diaspora with help from Monitor, the Massachusetts-based consulting firm, and knew little about complex securities deals. Kabbaj helped stock an in-house library. In addition to dry tomes on asset allocation and pop-economics hits such as *The Black Swan*, he bought the Libyans a few copies of *Liar's Poker*, Michael Lewis's seminal tale of bond salesmen screwing over clients. (Amazon.com didn't deliver to Libya, so Kabbaj ordered the books to London and had a colleague lug them to Tripoli.)

Kabbaj also entertained the Libyans when they came to London, expensing a $757 sushi dinner at Nobu and taking them to the *Lord of the Rings* musical. Lalou took a junior LIA employee to Paris to watch England's rugby team play South Africa. (Goldman says the hospitality was in line with what other banks also provided the fund.) Nothing was too much trouble. One banker, Jaber Jabbour, declared to an LIA employee by e-mail, "You are brothers and friends before clients."

By late September 2007, the LIA was ready to proceed with its first substantial investment with Goldman: $350 million into two funds called Petershill and Mezzanine. Libya had signed a document describing itself as a "market counterparty"–large and sophisticated enough not to need special regulatory protection. Ben-Brahim and Aliredha flew again to Tripoli early in October, chartering a jet from Qaddafi's favorite vendor to give their arrival the necessary gravitas.

It was Ramadan, and the Goldman team joined LIA executives for a traditional breaking-the-fast dinner at the Corinthia. Layas, the LIA chief executive, was at the head of the table. The LIA had previously indicated that it was planning to split its business equally among as many as 20 banks, but as they ate, Goldman's executives suggested a more exclusive relationship. They proposed a dedicated team of partners, access to research and training, and the opportunity to join in Goldman's own proprietary investments–a "strategic partnership." Both sides could make money, Ben-Brahim told the group, citing Goldman's long-standing informal motto of being "long-term greedy." The Libyans were receptive. Ben-Brahim and Aliredha flew straight back to London after the meal, leaving Jabbour and Kabbaj behind to discuss Goldman's proposals. They were bleary-eyed, having just pulled an all-nighter preparing a presentation. A suggested first step: "Buy strategic stakes in key undervalued companies."

By January 2008, the Libyans had some companies in mind. The talk at the LIA, Kabbaj learned, was that Qaddafi wanted to emulate the leaders of Qatar, who'd invested in the shares of troubled banks. One target was Citigroup, which Abu Dhabi's sovereign wealth fund had put $7.5 billion into less than two months before. On Jan. 15, Kabbaj texted the head of the LIA's equities team to note that Citi shares were down, creating a buying opportunity: "It is time to do the trade!!!"

The Libyans made two trades later that month, totaling $200 million. But this wasn't a simple purchase of shares–it was a complex derivatives deal, or as Goldman Sachs described it later, "a cash-settled forward purchase agreement for Citigroup shares with downside protection in the form of a put option at the same price as the forward." More simply, if Citi shares rose, as the LIA was betting, the fund stood to gain many times its initial investment. If the shares fell by a certain amount, the fund could lose everything. The structure was potentially more lucrative than a conventional purchase of equity and also significantly riskier–while resulting in far higher profits for Goldman.

Whether the LIA understood it wasn't actually investing in Citi is disputed. Whatever the case, the fund proceeded a few weeks later with another large deal, a similar wager on the French utility EDF Group that cost it almost €120 million (then $175 million) in premiums.

Word was getting around the financial sphere that Goldman had landed an African elephant. Kabbaj discovered that Société Générale was also pursuing megadeals with the LIA. "People are spreading that we made a lot of money with LIA and we screwed them," Kabbaj texted a colleague from Tripoli. "Even though this is of course uncorrect [sic], Pnls [profit and loss figures] have to become super secret."

Kabbaj began spending more time with the Libyans and bought some of them iPods. A few came to London in February for training at Goldman, with the firm covering their hotels and dinners. There, Kabbaj could entertain the Libyans in a capital with incomparably greater diversions than Tripoli. At Zuma, a bankers-and-Bentleys Japanese restaurant in Knightsbridge, he expensed a $1,009 dinner; at The Playroom lounge, he put $1,573 on his corporate

ILLUSTRATIONS BY 731; BASED ON PHOTOS: RENE VAN BAKAL (ZARTI); JASON FLORIO/CORBIS/GETTY IMAGES (QADDAFI); LIA (BREISH); BANK ABC (LAYAS)

card. They went to see *Chicago* and, records indicate, the *Lord of the Rings* musical again.

To help plan the training sessions, one of Kabbaj's colleagues e-mailed to ask about the level of the Libyans' knowledge of derivatives. He responded: "Baaaaaaaasic." In another exchange, Kabbaj's manager, Lalou, told a colleague he'd "just delivered a pitch on structured leveraged loans to someone who lives in the middle of the desert with his camels."

Zarti had goals beyond the greater glory of Libya. He also wanted to help his younger brother, Haitem, learn the banking trade, preferably through an internship at Goldman. Kabbaj wouldn't disappoint his best client.

Kabbaj found it easy to connect with Haitem, who was 25, shy, and soft-spoken–nothing like his intense sibling. Both he and Kabbaj were single and from important North African families. They spent the weekend together in Morocco in late February and then flew business class to Dubai, where Kabbaj had offered to take Haitem to a Goldman conference, checking into the five-star Ritz-Carlton, all at the firm's expense.

Just after arriving, Kabbaj used his company BlackBerry to get in touch with a prostitute who went by the name Michella. "Hi darling, do you remember me? Youssef from London," he texted. "Just arrived in dubai. Available tonight, with a friend?" They haggled over price before Kabbaj agreed to pay $300, with one condition: "Your friend has to be as good looking as you." There is no record of what happened next, but the following day, Kabbaj texted Haitem to say he needed a rest: "Going to the hotel. I am dead." A couple of nights later, Kabbaj wrote that he'd stay in, "Getting back to god's way incha allah."

Immediately after returning from Dubai, Haitem sent Kabbaj his résumé, which didn't fit the bank's typical hiring profile. Haitem listed an MBA from the Vienna campus of Webster University, an institution based in St. Louis with branches mostly near U.S. military bases, and his most recent work experience was at a "Video Club" in 2003, where he was "in charge of customer and reservation services."

Ben-Brahim, discussing the possibility of an internship by e-mail with two other partners, said he was "not sure what the best course of action is. We are running the risk of 'upsetting' [Mustafa] Zarti." Yet by April, Goldman was prepared to offer a 6- to 12-week gig to Haitem. The next day, Kabbaj told colleagues he'd spoken with Mustafa about further deals, and that the elder Zarti wanted "to give us something. If we can have him focus, we should be in a good position."

The same month, Kabbaj again spent a weekend with Haitem in Marrakech and flew him to Dubai a second time. Haitem dawdled in committing to the internship. Kabbaj messaged him a few days later, on April 23: "Can you start May 1? June 1? Mustafa wants you to start asap." Haitem indicated June. "OK. How long? Mustafa is killing us," Kabbaj replied. The same day, the elder Zarti gave the go-ahead for Goldman to execute several trades of astonishing size, totaling more than €2.4 billion in notional value. Like the Citi and EDF deals, they were "synthetic"–the LIA wasn't actually buying shares in the companies concerned, in this case Banco Santander, Allianz, Eni, and UniCredit. Kabbaj later called it "one of the biggest orders that GS has ever been given on single names." (Goldman says Haitem's internship had no impact on the trades. Haitem couldn't be reached for comment.)

The scale of Goldman's business with Libya was now being noticed at the highest levels. When Chief Executive Officer Lloyd Blankfein "found out how big the p&l [was] on the recent trade he started asking" questions about it, one executive said in an April e-mail. Another internal note later described Kabbaj as perhaps Goldman's top salesman globally. In a text to Kabbaj, Ben-Brahim's verdict was simple: "Bravo Youssef. Well done. You are a hero."

Goldman's downfall in Libya began with the arrival of Catherine McDougall. A cheerful Australian lawyer at London firm Allen & Overy, she was just 26 when she arrived in Tripoli on July 1, 2008, to begin an assignment with the LIA, which was seen as a major potential client. Although McDougall had traveled widely in the Middle East, Libya was a new experience. It seemed frozen in the 1970s: There were no cinemas and barely any shops. Foreigners lived in gated compounds under the watchful eyes of Qaddafi's secret police, who LIA employees warned her had moles at the office. In London she'd bought a copy of *In the Country of Men*, a novel depicting the fearful atmosphere of 1970s Tripoli. When her Libyan counterparts saw it on her desk, they told her to put it away. Qaddafi had banned the book.

McDougall was astonished by how little the LIA's junior employees seemed to know. The legal department's level of competence in dealing with complex legal documentation was "zero," she wrote later in a witness statement. The problem was compounded by rudimentary English and basic paperwork that was missing. She described the setup as like "an advertising company having no TVs."

One of McDougall's tasks was to work with LIA staff on some paperwork for the Goldman derivatives trades. She was struck by their affection for Kabbaj, whom they considered a friend. One LIA staff member showed McDougall Facebook photos of Kabbaj hanging out with the equity team. They told her stories of expensive nights out in London and Morocco, covered by his Goldman credit card. As she learned more, McDougall began to suspect the LIA team didn't realize they hadn't purchased actual shares. No one understood, she wrote, that if the underlying stocks went the wrong way, "they could lose all their money." She asked to see the due diligence the LIA had performed before committing to the deals. They responded, she wrote, "Due what?"

Citigroup's share price, meanwhile, had dropped about 40 percent since the start of the year, and analysts were warning of a worldwide credit crisis. McDougall relayed her concerns to Zarti, who also asked her opinion on a currency trade the fund had recently carried out with Goldman. She told him the $50 million the LIA had committed to the deal stood a better chance if she took it to a Monaco casino. Zarti asked Kabbaj to return to Tripoli. Soon, on July 23, 2008, Goldman's phenom was sitting on the 22nd floor of

McDOUGALL ASKED TO SEE DU
THE LIA RESPONDED, "DUE WH

the Al-Fateh Tower, thinking about his $9 million paycheck and wondering why Zarti was keeping him waiting so long.

After Zarti offered to defenestrate Pentreath and disappear Kabbaj, the two bankers hustled into a cab back to the Corinthia. They understood that in Libya, threats that came from a close friend of the Qaddafis weren't to be taken lightly. From his hotel room, Kabbaj called Michael Sherwood, one of Goldman's top London executives, who said the bank would do whatever it took to get them out. Goldman's security team called back, telling Kabbaj it was looking at options for "extraction" and ordering him not to leave the Corinthia. The hotel housed the U.S. embassy and a complement of armed U.S. Marines, not to mention hundreds of foreign witnesses to anything unpleasant that might occur. The next morning, a Goldman partner called to say the bank's security team was increasingly concerned about their safety. They hustled to the airport and a flight to London.

Seven weeks later: the end of the world. Lehman Brothers filed for bankruptcy in September, and stocks crashed. The full force of the global financial crisis left Libya's derivative bets virtually worthless; when they expired three years later, the LIA had lost $1.2 billion—a total wipeout. Goldman hasn't revealed how much profit it made from the other side of the trades, saying only that the figure was appropriate given the size and risk of the deals. The LIA has said it was more than $200 million.

Kabbaj never got his $9 million. After the confrontation in Tripoli, he was told he'd be fired if he tried to contact the LIA. Sidelined to minor accounts, he took to joking that he'd been put in charge of "Oman and North Korea." When Kabbaj complained, Andrea Vella—a Goldman partner who took charge of the Libya relationship—got so angry he took off his shoe and used it to pound the table, according to Kabbaj's lawyers. (Vella says he doesn't recall the incident.) In November 2008, Kabbaj threatened to sue Goldman for the pay he'd been promised, claiming to fear for his life and blaming Libya for ruining his reputation. Goldman agreed to pay Kabbaj $4.5 million, according to court filings, under two conditions: that he leave the bank and that he keep quiet about the circumstances of his exit. Incredibly, Haitem Zarti outlasted Kabbaj at Goldman. The bank extended his internship six times, to 11 months. (The LIA has said U.S. authorities are investigating the internship. Goldman declined to comment.) Now working at a small financial firm in Dubai, Kabbaj said in a June statement that neither he nor Goldman paid for improper entertainment for LIA employees. "All my expenses relating to LIA have been reimbursed and signed off by at least two Goldman Sachs partners," he said. "I am under a strong confidentiality agreement but I expect Goldman Sachs to correct the facts and protect my reputation."

Qaddafi came to a grisly end. In early 2011, when Arab Spring protests spread from neighboring Tunisia into Libya, he turned on his own people with shocking savagery. As his forces bombed and shot demonstrators, the U.S. and its allies reimposed sanctions and began military action. Assisted by Western airstrikes, rebels captured Tripoli in August, and that October, Qaddafi was dragged from a drainpipe, shot, and killed. Zarti fled to Vienna.

Libya's new leaders started asking questions about the LIA's dealings. Global Witness, an investigative organization funded by billionaire George Soros, published leaked documents in 2011 that showed the dismal performance of the LIA's investments at the end of the Qaddafi era. It had made deals with at least 70 different banks and investment firms, many of them losing money. In 2013, AbdulMagid Breish, the new LIA chairman, asked Deloitte to review the fund's losses, and a U.K. firm, Enyo Law, to look at whether they could recover anything through the courts. The LIA sued Goldman for $1.2 billion in London on Jan. 21, 2014, just before a six-year statute of limitations would have expired. (It later filed a separate suit against Société Générale, which denies wrongdoing.)

The *LIA v. Goldman Sachs* trial began in June 2016 in a bright, modern courthouse just a few hundred yards from the bank's Fleet Street offices. The chaos of post-Qaddafi Libya, which has two rival governments plus an insurgency by Islamic State militants, had its echoes in the courtroom. At the outset of the case, the LIA also had dueling executive teams—one based in Malta and one in Tripoli—and both factions hired their own legal and PR outfits. For now, a court-appointed accounting firm is managing the case on Libya's behalf.

During the trial, the LIA claimed its people never understood they weren't buying shares. They barely understood anything at all, their lawyers argued, and were the victims of Goldman's gifts, slick salesmanship, and misleading marketing materials. Several junior LIA staffers came to London to testify about the extent of their naiveté. One said he'd never heard of Goldman Sachs, or derivatives, before getting a job at the fund.

Goldman argued the LIA was exaggerating its cluelessness. Even if its staff didn't understand the deals, lawyer Robert Miles said, that's not the bank's problem; the Libyans entered commercial transactions, fair and square. The LIA "understood at all times that Mr. Kabbaj was a salesman, and that his job was to sell investments to the LIA from which [Goldman] could make money," Goldman's lawyers said in closing arguments. The bank's official statement on the lawsuit reads, in part, "We have always disputed the LIA's claim that it was financially illiterate and it is clear that they understood the disputed trades and entered into them of their own volition."

The judge in the case will rule after early October. Why is Goldman allowing such an embarrassing suit to drag on, exposing its internal talk of prostitutes and camels, instead of quietly settling? More than the bank's image is at stake. The LIA is employing a legal concept called "undue influence" that's more commonly used by wives against husbands—it's novel in financial litigation. The idea is that one party to a transaction can have so much power over another that a contract between them isn't valid. If Libya wins, investment banks everywhere will face the risk of lawsuits by clients claiming they were snowed.

Goldman may have made hundreds of millions off Libya, but it's put banking dogma at risk. A bedrock principle of the securities business is that sophisticated investors can look out for themselves and don't have recourse to the courts if they lose their shirts. If a huge sovereign wealth fund can successfully claim it was duped, there's no telling who else can. Ben-Brahim identified the perils of dealing with Libya in an April 2008 e-mail. "These guys are extreme," he wrote a colleague. "If we truly behave as steadfast friends looking after their interests, they will do anything for us. If we ever lose their trust, they are ruthless." Ⓑ

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Welcome to America!

By Susan Berfield
Photographs by
Andrew Moore

Here's How You

Foreign investors were promised green cards if they put $500,000 into Vermont's poorest region. Where did their money go?

ur Investment Is Doing

Pedro Brito, a manager at a waste-disposal business in Caracas, was riding his motorcycle home from work in November 2014 when six men on three motorbikes surrounded him. One pressed a gun to his stomach and threatened to kill him if he looked up. They wanted his motorcycle. Brito got off the bike and ran. Later, after reporting the theft to police, he received a threatening phone call. A month after that, his home was robbed. Then his 19-year-old daughter and her boyfriend were carjacked. Brito and his wife decided it was time for the family to leave Venezuela.

Some friends recommended that he consult an immigration attorney in Fort Lauderdale, who put him in touch with two men offering an intriguing opportunity for people eager to live in the U.S. and willing to pay for a legitimate chance. One was Bill Stenger, the chief executive of Jay Peak Resort, a family destination perched on a mountain in Vermont's Northeast Kingdom region. The other was Ariel Quiros, the Miami businessman who owned the property. A decade earlier, Jay Peak had consisted only of a ski area and a roach-ridden lodge. Now it had three hotels, six restaurants, some 200 cottages, an indoor water park, an ice rink, a spa, and a convention center, all tended to by 600 employees. The $280 million transformation had been made possible by a U.S. government program known as EB-5, which allows prospective immigrants to invest $500,000 in hard-up areas in exchange for temporary residency for themselves and their families. Anyone whose investment creates 10 jobs can then become a permanent resident. The only faster way to become an American is to marry one.

The EB-5 program has opened up all sorts of possibilities since it was started in 1990—mischief, abuse, and fraud among them. Initially it required investors to put in $1 million and show direct evidence that the money had led to those 10 new jobs. But after two years, Congress modified the program to encourage investment in rural and underdeveloped areas, permitting prospective immigrants to invest less money in projects and count "indirect" jobs estimated by economic models.

These projects get sponsored by federally approved regional centers, which serve as economic-development organizations drawing on EB-5 money. There are now 861 such centers, all of which—except for Vermont's—are privately run. They work with hundreds of brokers, who raise funds for projects such as wind farms and military-base redevelopments while collecting fees for themselves. These initiatives don't always create the required jobs, return investors' capital, or help distressed communities. Developers have found ways, for example, of using funding intended for rural areas to build in well-off neighborhoods.

About 10,000 EB-5 visas are available each year; in 2014, 85 percent went to immigrants from China. For many, the investments represent a fraction of their fortunes. Others must cash in most of what they own.

At the time Brito was looking to immigrate, Stenger was promoting a new initiative, a biotechnology center in Newport, a city of 4,500 people about 20 miles east of Jay Peak. The project, which involved a partnership with a South Korean company called AnC Bio, was even more ambitious than the resort expansion had been. Stenger and Quiros said it would spark a $600 million revitalization of Newport, which hadn't seen prosperity since its heyday as a logging town at the turn of the 20th century.

Brito was aware that the EB-5 program could be risky, but he believed that Stenger's project was a safe investment. How could a massive biotech complex fail to create the necessary 10 jobs? Because Vermont ran its own regional center, it was regarded as a model for the EB-5 program. Stenger was the program's best-known promoter—the Democratic governor, Peter Shumlin, had called him "the Michelangelo" of EB-5 projects. Jay Peak seemed to be a success, and more important, the state would oversee the biotech initiative. "Stenger said this was their best project ever, and the government was supporting it," Brito said.

"The governor ... the senator, everybody asked me to acquire Jay Peak. Please Quiros. ... It was every day, every day"

On the advice of his lawyer, he decided to invest. He and his wife sold their home and emptied their retirement accounts to raise the half-million dollars, plus a $50,000 administrative fee. In September 2015 they put their money into the AnC Bio project, joining about 160 investors from around the world. In Miami on tourist visas, they waited for their temporary green cards to be issued.

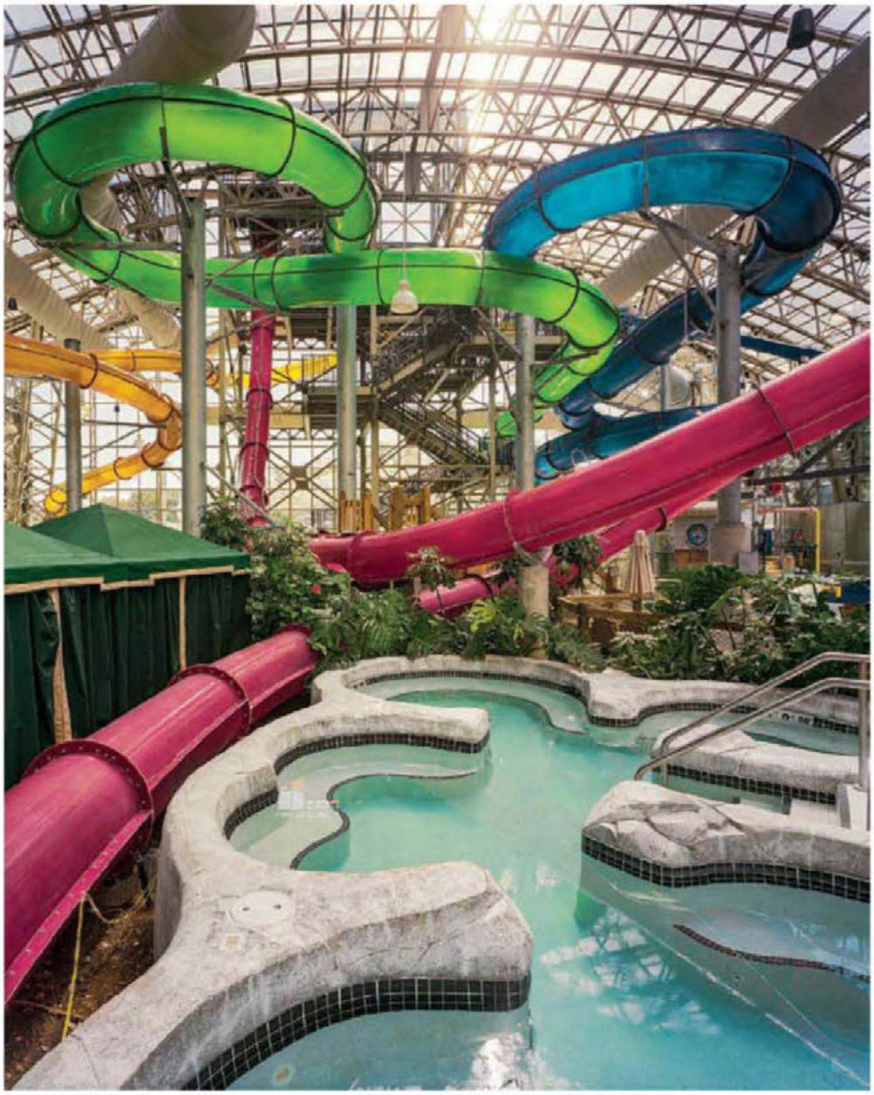
They'd invested their money without knowing that the Securities and Exchange Commission had been investigating Stenger and Quiros for almost two years, and that the state of Vermont had been doing so for nine months. In April 2016 federal government lawyers seized the resort and halted work on the biotech project, calling it "rampant with fraud." The SEC and Vermont also announced that they were opening civil court proceedings. The tangled financing they'd uncovered left more than half of the 731 foreigners who had placed their money with Stenger and Quiros vulnerable to deportation, and threw $83 million that had been invested in the biotech project into limbo. (Stenger has settled the federal case, without admitting or denying culpability, and is cooperating with the SEC. Quiros has denied the government's allegations.)

The trouble comes as Congress prepares to reauthorize the EB-5 regional center arrangement, which expires on Sept. 30. Vermont Senator Patrick Leahy, a Democrat who once championed Stenger's projects, wants the program fixed or killed. Congress will most likely extend it at least until December. The EB-5 program isn't easy to give up—demand among prospective immigrants is high and, for developers and politicians, the money is practically free. Vermont's budget for economic development is less than $7 million; Quiros and Stenger raised six times that much every year they were in business.

Jay Peak lies four miles from the Canadian border and a slow 230 from Boston. The mountain rises to 3,968 feet, and in the best winters receives 375 inches of snow, more than any other on the East Coast. Seventy-eight ski trails run down and across its 370 acres, along terrain so rugged that only 20 percent of it is suitable for novices. For decades powder chasers stayed at a hotel known mainly for its constant state of disrepair, but they were there for the mountain and at night needed only shelter and beer.

Around 2007 the property's Canadian owners started trying to sell the hotel and ski area, but they didn't get many suitable offers. Skiing seemed to be on the decline, as Baby Boomers aged out and the climate became less predictable. Stenger, who is now 66, had been general manager at Jay Peak since 1984. He had come up with a plan to "weatherproof" the resort by adding a water park and other year-round amenities using EB-5 money, which he'd just begun raising. But before he could break ground, he needed someone to buy the place.

He soon identified Quiros as a possible owner. Quiros, who is 58, had grown up in Harlem and had been visiting northern Vermont since he was a child. He'd served in the U.S. Army in South Korea and guarded Rudolf Hess, the Nazi war criminal,



The Jay Hotel water park was built with $25 million of foreign investors' money

at Berlin's Spandau Prison. Quiros and his South Korean wife had raised their two children in her country, and Quiros had started a wire and copper trading company there. By the mid-2000s he was living in Miami and owned property in Vermont. He seemed like a successful businessman.

To pitch Quiros on Jay Peak, Stenger drew on his many political connections in the state. "The governor ... the senator, everybody asked me to acquire Jay Peak," Quiros later recounted to the SEC. "Please Quiros, please Quiros, please Quiros, buy Jay Peak, buy Jay Peak, buy Jay Peak. It was every day, every day."

The Great Recession was already starting to affect Vermont, and Quiros was unsure about acquiring the resort. He expressed doubts that it could attract the EB-5 money Stenger was promising. Stenger explained that he had already raised about $20 million, most of it intended to build a 57-room boutique hotel called the Tram Haus Lodge, and was beginning to attract funds for the second phase, a $75 million project to build a new hotel, the Jay, which would have 120 rooms, a water park, and an ice rink. He told Quiros that Vermont's support for the EB-5 program gave his projects a marketing advantage over others that were competing for immigrants' dollars—it was mentioned in every brochure and at every conference, and every broker emphasized it to potential investors. Stenger also promised Quiros a 20 percent cut of each investment, more than double the typical management fee.

According to the SEC, the fraud began within hours of the $25.7 million purchase of the ski resort

Convinced, Quiros agreed to buy Jay Peak in June 2008 for $25.7 million. According to the SEC, the fraud began within hours of the deal. Instead of paying with his own money, officials allege, Quiros transferred the $20 million in seed money that Stenger had raised to Raymond James, a financial-advisory firm where Quiros's son-in-law was a manager, then had Raymond James put it toward the resort. (He later told SEC lawyers that the accusation was "hellacious false." Both he and Stenger declined to comment for this story.)

Investigators say this quickly became a pattern for the Jay Peak projects. To disguise the initial misuse of the $20 million, Quiros took money meant for the second phase of the expansion, the Jay Hotel, and used it for the first phase, Tram Haus Lodge. He and Stenger then raised $32.5 million for a third project, building penthouse suites atop the Jay Hotel, and put some of it toward the hotel itself. And so on. Quiros was operating a Ponzi scheme of sorts, the SEC alleges, which encompassed seven projects over eight years, and some 100 bank accounts.

"There has been so much co-mingling of the funds via transfers, which has been compounded by the accounting entries, that this has become quite a mess," Jay Peak's then-controller, John Carpenter, wrote in an Aug. 13, 2010, e-mail to Stenger and Douglas Hulme, the owner of an EB-5 consulting firm in Florida that was helping Stenger raise money. Carpenter soon resigned, believing, according to a deposition, that Stenger had failed to address his concerns. He was the second financial executive to leave Jay Peak in three years—an early sign of trouble. (Neither executive could be reached for comment.)

The renovations dragged on longer and cost more than Stenger had promised investors, but by the end of 2011 the water park was open and a slide called La Chute, an almost vertical 65-foot drop with a 360-degree twist, was drawing visitors. Stenger reported that Jay Peak's two new hotels had created 1,850 jobs and that all 185 investors were eligible for permanent residency. Impressed, Leahy invited him to testify in Congress about the benefits of the EB-5 program.

But in February 2012, another warning sign emerged. Hulme wrote a letter to 100 immigration attorneys across the U.S., saying that he "no longer has confidence in the accuracy of representations made by Jay Peak." James Candido, then the director of Vermont's EB-5 regional center, told a local paper that he spent a day at the resort after seeing the letter. "There was absolutely nothing that was out of the ordinary," he said.

Stenger told Vermont officials that he, Quiros, and Hulme were having a simple dispute over strategy, but later depositions revealed the argument to have been tumultuous. In them, Quiros accused Hulme of having tried to steal—or ruin—his company while Stenger stood by. "When this SEC gets over with, I'm going to go over after that man, I promise you," Quiros said of Hulme. "I will kill that man for what he did." (Hulme didn't respond to requests for comment.)


The abandoned site where Stenger and Quiros promised to create a biotech center

Despite the tensions, Quiros and Stenger pushed forward with a new, more elaborate project drawing on EB-5 money. According to government investigators, Quiros needed funds to keep his scheme going. Stenger, for his part, seemed to be sincerely interested in helping the Northeast Kingdom, which had long been Vermont's poorest region and had its highest jobless rate. In Newport, where he lived, few factories remained; a state prison was among the city's biggest employers.

In September 2012, Stenger announced a $600 million plan to create 10,000 jobs by transforming Newport into a biotechnology hub. He was going to do so, he said, by partnering with AnC Bio, a South Korean company that wanted to produce revolutionary technology in rural Vermont. He'd already raised $50 million from EB-5 investors for the project, which would be anchored by a renovated 90,000-square-foot facility just outside Newport, in the hills overlooking Lake Memphremagog. A plant there had once produced high-end skiwear, before being abandoned in 2005. Soon, Stenger said, it would manufacture artificial organs and offer stem-cell therapy, with 50 sterile rooms for research. He would build a hotel and conference center by the lake and a four-story commercial and residential complex downtown. However far-fetched the plan may have sounded, some 500 people attended the press conference, and Vermont's top elected officials stood beside Stenger as he spoke.

By 2014, the final Jay Peak expansion, a group of townhouses, was progressing slowly, and the biotech hub had fallen behind schedule. A local investigative news site, *VT Digger*, was starting to ask questions about the projects, and Michael Gibson, a prominent EB-5 investment adviser, had begun making noise in industry circles about Stenger's lack of transparency. Sometime during this period, if not earlier, the SEC quietly opened an investigation.

"We were doing the happy dance. Finally something good was happening in the Kingdom"

Then, in January, the 35 people who had invested in Tram Haus through the EB-5 program received a letter from Stenger, which said that Quiros had bought them out, and that instead of equity in the hotel they now had an unsecured IOU that Quiros pledged to repay within 10 years. Their immigration status was unaffected, but this wasn't the exit strategy they'd expected. Moreover, though Quiros had made the transaction months earlier, Stenger hadn't informed them—or Vermont regulators—at the time. He called it an oversight.

One of the investors, a British car dealer named Tony Sutton, began reading through the hundreds of financial records from Jay Peak that he'd had to file with his petition for permanent residency. He came across entries showing that investors' money had been used as collateral for loans and that the funds had been swapped among projects. To Sutton, the documents, which had been given to him by mistake, exposed a shell game Quiros had been playing. He laid out the details in a letter to the SEC and Vermont regulators. "It was so clear to us investors that there was something very wrong with the controls," he told me.

Soon the biotech hub came under suspicion, too. In May the Vermont Agency of Commerce and Community Development, which oversaw the EB-5 regional center, assigned a few Korean-speaking interns to research AnC Bio. They discovered that the company had been losing money for years and that its Seoul headquarters had been foreclosed on and auctioned off in 2013. The agency barred Stenger and Quiros from seeking new investors until they had explained the situation and updated their disclosure forms.

It was the first time that regulators had reprimanded Stenger. Partly this was because they had limited resources and no subpoena power, but more to the point, for years the agency had been responsible for both regulating and promoting EB-5 projects, a glaring conflict of interest. Now, with concerns about the program's biggest projects growing, Shumlin, the governor, turned over compliance duties to Vermont's Department of Financial Regulation.

That's when Sutton's letter arrived. The department opened an investigation into Jay Peak and the biotech center, but the state was still hoping that the projects were aboveboard, and partway into the investigation regulators granted Stenger permission to resume fundraising for the biotech center, as long as the funds were held in escrow.

It was hard not to believe in him. Thanks to Jay Peak's expansion, the Northeast Kingdom was leading Vermont in job creation for the first time. "We were doing the happy dance," Patricia Moulton, the former head of the state's commerce and community-development agency, told me. "Finally, something good was happening in the Kingdom, thanks to EB-5. Stenger was the hero."

Over the next 11 months, state investigators joined the trail the SEC was following. Regulators scrutinized 130,000 pages of financial documents and testimony, gradually uncovering the system that they later alleged Quiros had implemented down in Key Biscayne with the help of his (now former) son-in-law at Raymond James. For each $500,000 investment he received from an EB-5 source, officials said, he would convert the sum into Treasury bills, then borrow up to 90 percent of their value. He then used the borrowed money for EB-5 projects and for himself. Over the years, he'd allegedly paid off back taxes; bought two apartments in Manhattan, including a condo at Trump Place; and purchased a second Vermont ski resort, Burke Mountain, which he renamed Q Burke Mountain. He'd also taken out the 20 percent management fee he was due as soon as the money came in, rather than when he'd actually built something—which he sometimes never did. In all, investigators traced more than 100,000 transactions among Quiros's accounts from 2008 to 2015.

"It's a shell game, done purposefully to evade detection by those at Jay Peak and by those investors who were asking questions," Michael Pieciak, who led Vermont's investigation and now heads the Department of Financial Regulation, told me. Because the money was moved so frequently, he said, if the investors' immigration status were to be challenged, they could have a hard time proving that their contribution had created the necessary 10 jobs.

In his depositions, Stenger told government lawyers that he traveled often and had left the finances to Quiros. "I have great faith in him," Stenger said. Across eight years, during which he and Quiros raised some $280 million for Jay Peak, they'd never hired an independent auditor. Nor had anyone in Montpelier insisted they do so. Quiros, for his part, said there was "a beautiful story" to be told and boasted about his purchase, telling investigators, "If you think about what I did and how I did it, you guys are going to say, 'Quiros is a genius.'"

They didn't. Instead, on April 13 of this year, more than a dozen men and women showed up at Jay Peak Resort asking for Stenger. The group included attorneys, forensic accountants from the SEC, and representatives of Leisure Hotels & Resorts, which had been appointed by the government to run Jay Peak. The next day, the SEC and the state attorney general announced civil lawsuits against Quiros and Stenger, claiming they had misused $200 million of the $350 million in EB-5 money they had raised over the years from 731 investors in 74 countries. The agencies also said that Quiros had taken $50 million of that money for himself. On Vermont Public Radio, Senator Leahy said, "I feel terribly betrayed."

One Tuesday in late July, I met with Laura Dolgin, Newport's city manager. As we talked in her office, I saw that she had ripped April 13 from her calendar and pinned it to a wall. We left to take a walk through town. Just outside the municipal building, across from the Newport CiderHouse Bar & Grill and the Memphremagog Arts Collaborative, we arrived at a giant hole in the ground. In anticipation of the biotech hub, developers had demolished a row of buildings to make way for a retail and residential complex called Renaissance Block. The site had been untouched ever since; locals had taken to calling it Little Beirut.

The biotech center outside town, Dolgin said, was also desolate. "We were all wondering what's going on," she said of the period after the announcement. "Stenger said it was the flagship, and if he said it, it must be true. But what was taking so long?"

"If you think about what I did and how I did it, you guys are going to say, 'Quiros is a genius'"

She was working to find new developers for the empty block, and in the meantime had encouraged artists to decorate the fences. Colorful ribbons were woven into the chain links, fashioning a sunrise over water and a "tree of hope." The material was left over from the skiwear factory. "They made really high-quality clothes, so we know it will last a while," she said wryly. Some residents were arguing that Newport should sue Stenger and Quiros, but the city hadn't spent any taxpayer money; it had all come from the investors. "How would you even articulate what you lost?" Dolgin said she'd asked her constituents.

Stenger was still living in the city, in a lakefront home. As part of his settlement with the SEC, he has been banned for life from having anything to do with the EB-5 program. He'll likely be fined, too, with the amount contingent on his continued cooperation with the agency's investigation of Quiros. For a time, he advised Michael Goldberg, a receiver appointed by a court to oversee the fate of Jay Peak. "Our preliminary forensics don't show that Stenger lined his pockets. His house is mortgaged up to the hilt," said Goldberg. "It doesn't mean that Stenger wasn't reckless and negligent. It doesn't mean he didn't do anything criminal. But we haven't traced any money to him." Stenger remains a defendant in the state case.

Raymond James, the firm that Quiros used to move money around, reached a nearly $6 million settlement with Vermont over allegations that it had failed to comply with state securities law, without admitting or denying wrongdoing. Four and a half million dollars of that money will go toward reimbursing investors. Quiros, publicly silent and surrounded by lawyers, was allowed to mortgage one of his New York City condos in hopes of paying his legal costs with the money. His other assets have been frozen: The SEC argues that he is liable for some $200 million in "ill-gotten gains" and penalties. David Gordon, one of his lawyers, told me, "Mr. Quiros did absolutely nothing wrong, and we are very confident that at the end of the day he will be shown to have done nothing wrong."

Goldberg, who also handled the aftermath of the Bernie Madoff scandal, said he expects to sell Jay Peak by next summer—the SEC has appraised the resort at about $42 million (with $60 million in debt), though he's aiming for a higher price. Meanwhile, he's working with the government to ensure that no one from the EB-5 program loses their green card, and that the last arrivals to the failed AnC Bio project can recoup their money and invest elsewhere. "They'll be devastated otherwise," he said. He had heard from investors unable to provide for their kids, to pay their medical bills, to sleep.

By those measures, Pedro Brito has been faring well enough. He is living in the Miami area with his wife and daughter, able to remain in the country because his wife now has a student visa. When we spoke, he expressed hope that he'd reclaim his $500,000, which was supposed to be held in an escrow account. He'd had enough money left to open an ice cream shop near his house, but he was still upset that so many people had been scammed while no one was watching. "I just want the system to work," he said. B

The LUNCH Issue

Everything you need to know to navigate your midday meal

Photographs by David Brandon Geeting

Lunch. You may be eating it now, dropping crumbs on your keyboard and thinking, I have to do better tomorrow. Friend, we feel you. There are so many options—kale quinoa bowl, anyone?—it's hard not to have a bit of FOMO at lunch o'clock. That's why we've devoted this section to maximizing our midday potential. We even learned things in the process, like which condiments to stash in our drawers (page 87), where to go for a modern power lunch (page 89), and how to prep a week of meals (page 90). So put down that chicken Caesar salad wrap and dig in.

THE REAL MOST IMPORTANT MEAL OF THE DAY

Forget about breakfast and dinner—lunch is when the tastiest ideas happen. By Josh Dean

Michael Whiteman has been thinking about how people eat lunch since the mid-1970s, when the Port Authority of New York and New Jersey hired his young restaurant-consulting firm to develop the dining options for the original World Trade Center, which had recently risen on the southern tip of Manhattan. This was a part of town with little surrounding culinary infrastructure: The neighborhood had been mostly bulldozed for the towers' construction. The authority recognized that it was about to bring 50,000 office workers—plus visitors and tourists—into the complex, and they'd all need places to eat, especially at lunch.

Whiteman and his partner, Joseph Baum, commissioned researchers to organize focus groups and survey Manhattan office workers on how they actually ate—how many packed lunch, where those who went out to eat were going, how much the average person spent, and even what percentage of workers ▶ 85

My Week of ADVENTUROUS *Eating*

It's convenient but depressing to stab at a salad at your desk, so I went out

By Bret Begun, Etc. editor

My lunch usually consists of a sad $10 salad of romaine, tofu, artichoke hearts, sunflower seeds, and other toppings that make no sense together. I eat it at my desk, my right hand toggling between fork and mouse.

We decided that for this lunch issue, each member of the Etc. team would try changing our routine for a week. Investigating my options, I discovered something alarming: Are you aware that people have lunch at restaurants? I decided to try it.

The rule was that I had to sit for one hour. I ate not-sad salads, such as tuna niçoise and summer romaine with a chicken skewer. And the soup! Oh, the soup. One day, I had an heirloom gazpacho; on another, a cold pea soup. (It was better than it sounds.) There was no rule that I had to eat like a 90-year-old. I just chose to.

What a freakin' delightful way to spend an hour. I marked up drafts of stories. A hostess with hair like the *X-Men* heroine Storm called me "love." I even left my bar seat early one day—*shhh*—and bought moisturizer at Kiehl's. I was never going to have a sad salad at my desk again.

I'm writing this while eating a sad salad at my desk. Alas, too much of what I have to do during the week has to be done in the office, and let me tell you: Nothing kills an afternoon like the stress of eating plates at the Indian buffet while raw copy sits unattended. The work piled up while I was piling it on.

The bottom line Going out for lunch is great unless you have work waiting for you. On easy days I'll keep making myself leave the office. But when there are tasks to be done, my desk is my dining room.

PREVIOUS PAGE, FOOD STYLIST: ELIZABETH OSBORNE

Styling by Priscilla Jeong

WHERE SHOULD I GO?

What's right for you right now

ILLUSTRATIONS BY JACI KESSLER LUBLINER

PACK IT UP, PACK IT IN

Nine fresh alternatives to the brown bag
By Monica Khemsurov

Box Appetit by Black+Blum
With a container for salad dressing, a hybrid fork-knife (fife? knork?), a sauce-dipping dish, and a microwave-safe removable compartment, this is a lunchbox that anticipates your needs. *$25; blackblum.com*

Hammertone powder-coat lunchbox by L. May MFG
Nickel miner Leo May designed his aluminum lunchbox in 1956 to function as a seat when you flip it on its side. *$70; lunchbox.ca*

GoEat lunchbox by Joseph Joseph
Two lunchboxes in one: The top compartment is divided for sides, snacks, whatever; the bottom one fits a sandwich. The whole thing snaps together with a plastic ring for easy transport. *$12; bedbathandbeyond.com*

Stainless-steel tiffin by Onyx
Double the size (and about half the price) of the Reiss model, below, for commuters with bigger appetites. *$24; food52.com*

Stainless-steel food jar by Zojirushi
The best feature here is the wide mouth, so you won't get third-degree burns while pouring in your three-bean soup. *$35; kohls.com*

Round enamel tiffin by Reiss
Old-school Austrian enamelware that gets Gwyneth's seal of approval. *$42; goop.com*

Round nesting trio by U-Konserve
Lightweight, stainless-steel containers with clear tops that fit inside each other for easier storage. *$23; ukonserve.com*

Double bento box by Takenaka
When the Museum of Modern Art's shop sells a lunchbox, of course aesthetics are going to matter. There's a ton of functionality built in, too: two storage compartments, a plastic fork, and a band that keeps the whole thing secure. *$36; store.moma.org*

Klip-It lunch cube max to go by Sistema
There's room for a sandwich, and you can put fruit or chips (or another sandwich) in the other three chambers, one of which houses a removable pot for dips or dressings. *$10; containerstore.com*

My Week of ADVENTUROUS Eating

I escaped for lunch even though it was harder for me to track macronutrients

By Jaci Kessler Lubliner, art director

I count macros. Everyone does it differently, but because I lift weights and want to maintain my muscle mass and body fat percentage, I eat 40 percent carbs, 30 percent fat, and 30 percent protein in the course of a day. I aim for 80 percent whole, unprocessed foods; the rest is whatever I'm craving. Most days I bring my own lunch so I can track things accurately, but I decided to try buying it for a week.

On Sunday night I looked up a few spots near the office with nutrition facts listed online. The only places that had this info were chains, so I went to Bareburger (all-natural burgers), Dig Inn (farm-to-table fast food), and Lenwich. The last one, a sandwich-and-salad place, was the best: It has a ton of options and a nutrition calculator on its site. Any restaurant that lets you "build your own" meals is great for macro trackers. You can go to the same place multiple times and always eat something different.

I had to estimate twice, once when the office provided lunch and once because I was craving a tuna-and-quinoa salad from Little Collins, a local Australian cafe. The best part of the experiment—apart from sleeping an extra 15 minutes—was leaving my desk to pick up the food. Going for a 20-minute walk helps to split up a long day. The worst part: I spent $60 vs. $20 to make my own.

The bottom line I'll keep packing lunch, but I'll try to also find time to step away from my desk.

◀ ate no lunch at all. From this came a complex of restaurants that included both the famed Windows on the World and the country's first major food court, the Big Kitchen, described by Alice K. Turner of *New York* magazine as "probably the chief reason that New Yorkers have partly forgiven the World Trade Center for existing at all."

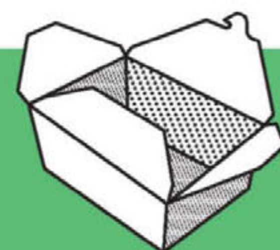
"It was a way of feeding a lot of people at modest prices in a very short space of time," Whiteman explains now. It doesn't sound like much of a revelation these days—anyone who's been to a Whole Foods around lunchtime is all too familiar with the concept—but that shows just how revolutionary the Big Kitchen was. Like many U.S. cities of the mid-20th century, New York was a town of mom-and-pop lunch counters, corporate cafeterias, and white-tablecloth service. With a raw bar, a barbecue stall, and a design by Milton Glaser, the Big Kitchen was decidedly aspirational. Since the '70s, of course, the idea of the food court has been corrupted by developers who've stuck one into every mall, airport, and stadium, but that doesn't diminish the significance of Baum and Whiteman's insight. The fact is, we're only now seeing their idea come into full flower. Almost 25 years after the Big Kitchen was destroyed in the 1993 World Trade Center bombing, the biggest idea in dining is the food hall, where a range of different vendors come together in one large, convenient space and sell simple, hearty food to a diverse range of people. Dinner may be perpetually glamorous, and breakfast might be having a fast-food moment, but if you're looking for the real driver of innovation in cuisine today, it's lunch.

Lunch itself was an innovation. Formalizing an official third meal between breakfast and dinner didn't happen until the middle of the 19th century, says Rebecca Federman, a librarian for the New York Public Library's Culinary Collections and the co-curator of Lunch Hour NYC, an exhibition the library staged in 2012. For eons, "luncheon" was a snack people took into the fields, "as much food as one's hand can hold," according to Samuel Johnson's 1755 dictionary. Lunch as we know it evolved as we migrated away from manual labor to jobs that take place in offices. You need something to break up the monotony of the workday—why not go get some food?

Childs Restaurant, opened in New York's Financial District in 1889, introduced the self-service cafeteria and became one of the first chain restaurants in America. The automat, invented in Germany, first appeared in the U.S. in 1902 in Philadelphia. Favorites there included tuna on white bread (sliced bread itself being a recent invention), beef stew, and macaroni and cheese, washed down with coffee that was brewed fresh hourly and flowed at a consistent temperature from brass spigots shaped like dolphin heads. At the automat's peak, more than 70 million cups a year were sold. For better or worse, the automat was about commodity food, favoring ease of distribution over variety, health, and taste. You can draw a straight line from the automat to America's fast-food boom that's both figurative and literal: Many of the last automat locations were converted into Burger Kings in the 1970s.

If anything has conspired to bring an end to that kind of dull, boring thinking, it's globalization. Technology, social media, and consumer education have all conspired to bring more food, at reasonable prices, to just about anyone, anywhere, at any time. "Now, whatever you want—pizza, *pho*, salad, tacos, Thai—you can have it," says Sabato Sagaria, chief restaurant officer for Union Square Hospitality Group. "I view it as never wanting to waste a meal."

Run by celebrated restaurateur Danny Meyer, USHG is as famous for its fine dining establishments Union Square Café and Gramercy Tavern as it is for Shake Shack, the "better burger" chain it started in 2004. What began as a kiosk in New York's Madison Square Park is ▶ **88**



Why the flap is this container so annoying?

If you frequent an ambitious sandwich shop or the Whole Foods salad bar, you know the one. Made of brown, post-consumer recycled paperboard that signals "good for the environment," it has an interlocking tab closure and flaps that stay stubbornly folded over your meal. Its name is as cumbersome as its design: the **Fold-Pak Bio Plus Terra**. Since the containers came to market 10 years ago, year-over-year sales of the boxes have increased by double digits. "The younger generation seems to be taking a lot more ownership of their environmental impact," says Fold-Pak Vice President Wes Gentles. Why does the design have to be so frustrating, though? "Any time you have a seam, there's an opportunity for moisture to leak," Gentles says. That rules out a fully removable lid. "It's for functionality." But how functional is it if I can't get to my food? —*Rebecca Greenfield*

We turned to an expert for help: Jessica Entzel Nolan, executive R&D chef at lunch delivery startup Sprig, who thinks about takeout lunch for her job.

The Soup to Nuts** Guide to* EATING LUNCH AT YOUR DESK

We wind up here more often than not. That doesn't have to be a sad thing.
By Nikita Richardson

** Leave the five-alarm chili at home*
*** Heirloom nut butter, that is*

THE DESK-DINING ACCEPTABILITY SCALE

In the age of the open-plan office, lunchtime etiquette has never been more important.

WORST

Anything superspicy
Your body responds to hot and spicy foods the same way it responds to actual heat–with sweat. Unless you want to be pitted out and smelly for the rest of the day, save the vindaloo for dinner.

Tuna salad
Nolan is quick to condemn this one: "It's unacceptable and gross." We don't necessarily agree, but she's a professional, so we'll let it stand.

Raw onions
That pico de gallo may look good, but the aroma will radiate well beyond your desk.

IFFY

Overcooked hard-boiled eggs
"If it's cooked right, it shouldn't smell," Nolan says. "But if it's overcooked, it's foul."

Chips, popcorn, or other crunchy foods
Food should be tasted, not heard. If you must have popcorn, go for the prepopped stuff. The buttery smell of a freshly microwaved bag is way too distracting.

TOTALLY SAFE

Blueberries
Not only are they a superfood, high in fiber and vitamin C and low in everything bad for you, they're also easy to transport and share.

ACCESSORIZE YOUR SANDWICH

These eight top toppings will turn even the blandest sandwich into a midday treat.

1. Big Spoon Roasters Mission almond butter, $14
Because you deserve a nut butter made with heirloom nuts and raw wildflower honey. It will get stale eventually if unrefrigerated–but it probably won't last long enough.

2. McEvoy Ranch extra virgin olive oil, from $27
"The flavor notes are fruity with a bit of pepper on the finish," Nolan says.

3. Bourbon Barrel Foods Bluegrass soy sauce, $7
The beauty of soy sauce is that it lasts forever. The beauty of this particular soy sauce is that it's microbrewed in bourbon barrels in the heart of Kentucky.

4. O Fig balsamic vinegar, $12
Nolan loves the addition of mission figs to this California-aged vinegar. "It's a fun twist," she says.

5. Cholula chipotle hot sauce, $3
The original version is sharp and fiery; the smooth, smoky chipotle version will help you calmly dispatch those afternoon e-mails.

6. Tracklements robust whole-grain mustard, $8
With black pepper, allspice, and chilies backing up an already tangy spread, your turkey sandwich will never know what hit it.

7. Mike's hot honey, $10
This Brooklyn brand rolled out in 2011 and quickly became a condiment-world hit. Squeeze a bit on your $1 slice to make it instantly foodie.

8. Maldon sea salt, $11
The glittering, flaky grains have a clean flavor and will make everything from avocado toast to chocolate pudding look glam.

HOW TO HAVE AN ACTUAL LUNCH BREAK AT YOUR DESK

"Try to put yourself into a bubble for 20 minutes or so," says Yochanan Altman, a professor of international human resource management at Middlesex University in London. Headphones are your friend here; so is the sleep mode on your computer monitor. If you're not too self-conscious, it also helps to bow your head for a bit of at-desk meditation. Whatever you do, put down that sales report. "There are physiological studies that show that [a break improves] your mental and physical abilities to do your work," Altman says. "You're not doing anyone any favors by trying to work during your lunch."

DON'T FORGET TO WIPE

What's sweeter than dessert? A tidy workspace.

Wireless Wipes in pomegranate-citrus
Use these to clean up that coffee splatter or hot sauce spot. They're tech-friendly (i.e., prevent static), and they smell great.

Burt's Bees aloe and witch hazel hand sanitizer
A spritz before and after with this skin-soothing aloe and witch hazel blend keeps an employee healthy, wealthy, and wise.

Choward's mints
Even if you've never had one of these uniquely shaped, breath-freshening mints, you may have seen them before: *Mad Men*'s Peggy Olson kept a pack of these in her desk.

now its own publicly traded company with 100 locations, including ones in Moscow, Tokyo, and Abu Dhabi. At $5.29 for a single patty in the U.S., the burgers are more than twice as expensive as what you might get at McDonald's. But they're made with never-frozen 100 percent Angus beef prepared on-site and served on rolls made by a family-run company in Pennsylvania.

Consumers today have a "deep-rooted suspicion of manufactured food," Whiteman says. "Especially in urban areas, people are willing to spend a little more time and a little more money to get significantly higher quality than was available before." The average American drops $11 on lunch, according to a survey taken by Visa last year; 1 percent of respondents said they average $50 per day. Credit Chipotle for some of this: E. coli outbreaks aside, the restaurant created the blueprint for just about every "fast-casual" chain to come along after it, Shake Shack included. The idea was to offer high-quality, locally sourced food for only a little bit more than someone would pay at Taco Bell. Instead of seasoned ground beef, we got *barbacoa*. Ketchup and mustard weren't enough anymore: We had to put guacamole on everything.

Above all, the post-Chipotle consumer wants to "be connected to their food," says Nicolas Jammet, one of the three founders of the salad chain Sweetgreen. He and his partners were still undergrad business majors at Georgetown when they started the company in 2007. "We wanted a place to eat every day that made us feel good," Jammet says. "So you feel like you can go out and make a great decision with your dollars–for the community, for farmers, and for your body." Nine years after opening its first store just off campus, Sweetgreen has 54 locations and a fanatical following of roughage lovers who line up out the door for its signature salads: the Rad Thai (organic arugula and mesclun greens, shredded cabbage, citrus shrimp, and spicy cashew dressing) and the Guacamole Greens (organic mesclun, avocado, roasted chicken, tortilla chips, lime-cilantro-jalapeño vinaigrette). Told you so on the guacamole thing.

The sheer variety of what's available for lunch is astounding, especially to anyone who's been working long enough to remember those corner deli salad bars with the dry romaine lettuce and pale, watery tomato chunks piled behind Plexiglas sneeze guards. Sagaria says he sometimes picks a lunch place by walking around USHG's Manhattan headquarters and looking for takeout packaging he doesn't recognize. "People are exploring culinary options from their desks," he says, with a touch of awe. "It's like, 'Oh, I heard about this new *poke* place. I need to order it.'" That savvy employee had probably ordered from Wisefish Poké, a Manhattan-based shop hoping to make Hawaiian raw fish bowls the next big food phenomenon. On the West Coast, the leading poke purveyor is Santa Monica, Calif.-based Sweetfin Poké, whose ownership group includes David Swinghamer, who helped Meyer popularize Shake Shack.

If you aren't yet convinced that the midday meal is the center of our dining-verse, consider the list of chefs who've gotten into the lunch game in the last few years: ramen master David Chang, who hosted the first season of Netflix's *Mind of a Chef* and whose Maple delivery service has gotten rave reviews; *Top Chef* head judge Tom Colicchio, who opened his first 'Wichcraft sandwich shop in 2003 and now looks like a wizard for getting in on the trend so early; and former White House chef Sam Kass, who used to cook for the Obamas but left in 2014 to start a meal-delivery service called Sprig. As for Whiteman, the co-creator of the food court is still running his restaurant consulting firm. The firm is working on a food hall project, though he won't disclose the location.

Even automat-style commodity food is making a reimagined comeback. For the past year, San Franciscans have been lining up around the block to get lunch at a place called Eatsa, where they punch an order into an iPad and receive a $6.95 meal from a hole in the wall. The chain (slogan: "better, faster food") has already spread to Los Angeles; this fall, the first Eatsa will open in midtown Manhattan. The concept seems novel. It's quick. And the ingredients are fresh and healthy, if not exactly exciting. Eatsa's house specialty, the foundation for every dish, is quinoa. Ⓑ

My Week of ADVENTUROUS Eating

I have no routine, so I put myself on one

By Alis Atwell, Etc. photo art director

Supervising photo shoots at different times in different places means I can never get a consistent lunch thing going. Have to be in the studio at 11 a.m.? Guess it's lunch at 10 or 4. So I figured I should try smoothies and smoothielike things that were quick and portable and allowed for a free hand to help the stylists.

Pro tip: Liquid lunches kind of suck. I went to Juicy Cube one day for a smoothie (dried figs, raw almonds, strawberry, papaya, almond milk) and finished it before I got back to work. Was that really a lunch break? I drank it so fast that I was freezing when I got back to my thoroughly air-conditioned office. I had the opposite problem the next day when I ordered chicken broth with coconut milk at a place called Brodo. It has a takeout window only, so I had to drink hot broth in 90-degree heat. By 5 p.m. I was famished. I fantasized about Indian food for the next 24 hours.

The one meal that didn't leave me with a headache or hunger pangs so severe I wanted to vomit: virgin bloody marys with a college friend. Salvation through tomato juice.

The bottom line A smoothie isn't a real lunch.

The Case for Skipping Lunch

I don't think there's any downside. I understand the value of taking breaks, and I encourage my team members to do so, but I don't need lunch. If I'm hungry, I follow President Obama's lead and eat almonds while I work. I try to portion them out into microcourses. Sometimes I'll grab a handful and eat them while pacing during a meeting. I get in at 8 a.m. and leave at 6 p.m.—I just don't think about food during the day. The upside is that I get more done and demonstrate to my employees that when we get to work, we're hustling from start to finish. If we hustle hard enough, we can leave early and eat all the "lupper" our hearts desire.

—Jake Rozmaryn, 26, chief executive officer, Eco Branding, as told to Katie Morell

THE *New* POWER LUNCH

A business meeting doesn't have to include a white tablecloth at one of these 18 modern spots—all client-ready, all waiting for your reservation.
By Sierra Tishgart

Atlanta

Bread & Butterfly

Take a business trip to Paris by way of cold-smoked trout ($10), potato-and-raclette gratin ($9), and a Champagne cocktail ($14). *bread-and-butterfly.com*

Austin

June's

Much-loved local restaurateur Larry McGuire's newest concept, which opened in July, is an all-day cafe, complete with a jukebox, bone marrow Bolognese ($23), and a knockout wine list. *junesallday.com*

Boston

Juliet

Whether you'd rather nibble a lobster roll on saffron brioche ($18) or a chicken-liver mousse *bánh mì* ($10), you'll find it at this lunch-only spot in Union Square. *julietsomerville.com*

Chicago

Bernie's Lunch & Supper

With its blue banquettes and artful steak salad ($18), this retro-diner-style River North spot will disarm even the most difficult client. *bernieslunchand supper.com*

Detroit

Fountain Detroit

Surprise colleagues with an alfresco meal of tuna *poke* tacos ($11) at this open-air restaurant while the weather is still mild. *fountaindetroit.com*

Houston

Helen Greek Food and Wine

Let the greens-'n'-cheese pie ($12) and gyro with oregano fries ($10) break the ice, while the all-Greek wine list and sleek décor seal the deal. *helengreekfood andwine.com*

Aqimero in Philadelphia

Indianapolis

Milktooth

If your dining companions can get on board with chef Jonathan Brook's imaginative creations—grilled rib-eye with okra gumbo and a sunny-side-up egg ($22) or steamed buns with spicy rabbit rillette and Indiana gherkins ($8)—you're bound to get along. *milktoothindy.com*

Los Angeles

Kali

Veteran restaurateurs Kevin Meehan and Drew Langley are behind this elegant restaurant on Melrose, named after the Hindu goddess of creation, destruction, and power. *kalirestaurant.com*

Miami

Alter

Any client would be impressed by Brad Kilgore's five-course tasting menu ($39), with dishes such as risotto *cacio e pepe* with duck confit and bone marrow butter. *altermiami.com*

Milwaukee

Engine Company No. 3

Much of the meat at this converted fire-house restaurant is house-smoked—an irony you and your colleagues can appreciate while sampling the chicken sausage ($6) and cured bacon ($2). *enginecompany3.com*

Nashville

Butcher & Bee

This Charleston, S.C., favorite recently hopped two state lines. Recommend the surprisingly refined fried avocado sandwich on baguette ($11), and you'll have your companions eating out of your hand. *butcherandbee.com*

New Orleans

Caribbean Room

There's no stronger power lunch move than the Fridays-only, jacket-required meal at the Pontchartrain Hotel. Chefs John Besh and Chris Lusk recently restored the restaurant; their lunch menu includes foie gras with pickled figs ($24), seafood gumbo ($12), and caramelized goat-cheese *agnolotti* ($15). *thepontchartrainhotel .com/caribbean-room*

Steak salad at Bernie's Lunch & Supper in Chicago

New York

Agern

This Nordic-leaning restaurant from Noma co-founder Claus Meyer is conveniently located in Grand Central Terminal, so you can fine-dine and dash. *agernrestaurant.com*

Philadelphia

Aqimero

Opened in June at the posh Ritz-Carlton, Richard Sandoval's new restaurant has a menu of refined tacos ($12 to $18) and refreshing ceviches ($15 or $16) that will help you power through your afternoon. *richardsandoval .com/aqimero*

Portland, Ore.

Pine Street Market

This expertly curated new food market is the perfect place to go with a group. You'll find Japanese ramen (Marukin), perfect hot dogs (Op Wurst), and Israeli street food (Shalom Y'all). *pinestreetpdx.com*

San Francisco

In Situ

The menu at Michelin-starred chef Corey Lee's ambitious restaurant inside SFMOMA is an homage to more than 80 dishes created by his culinary heroes. *insitu.sfmoma.org*

Seattle

The Butcher's Table

Lardo-topped sea urchin ($12) and sweet corn fried rice ($15) are both excellent reasons to take a long lunch. *thebutcherstable.com*

Washington

Pineapple & Pearls

It can be hard to squeeze in for the popular nightly tasting menu. Your clients can still say they've been there if you take them for lunch, when chef Aaron Silverman serves his modestly priced sandwiches ($7 to $9) at the coffee bar. *pineappleandpearls.com*

Caribbean Room in New Orleans

GET WITH THE (MEAL) PLAN

Food52's cookbooks editor, Ali Slagle, helped us develop a weeklong, bring-from-home lunch program that's so quick, easy, affordable, and satisfying you'll have no excuse not to follow it. For more great weekday meal plans that go all the way through the evening, check out Food52's upcoming cookbook, *A New Way to Dinner*, out on Oct. 18 (Ten Speed Press, $35).

SHOPPING LIST

Meat and seafood

5 oz. chicken breast

4 oz. shrimp

Can of tuna
Oil-packed is more luxurious, but water-packed works, too

Pantry items

Capers

Extra virgin olive oil

Dijon mustard

Superfine sugar

Mayo
If you like

Grain of your choice

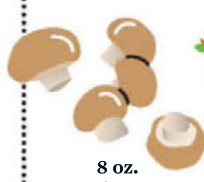
Pack of pitas

Loaf of crusty bread

Produce and herbs

6 lemons

2 shallots



8 oz. mushrooms

Rosemary, thyme, oregano

1 avocado

8 oz. salad greens

Assorted vegetables
Celery, cucumbers, fennel, or others that taste good raw

4 oz. new potatoes

4 oz. string beans

Dairy and eggs

6 oz. yogurt

Half-dozen eggs

SUNDAY PREP

Make 3 batches of the dressing recipe

April Bloomfield's lemon-caper dressing
Makes about 1 cup

Ingredients

2 medium lemons
3 tbsp. finely chopped shallot
2 tbsp. Dijon mustard
(Choose one that has a flavor you like on its own; Food52 uses Maille)
2 tbsp. capers, drained and finely chopped
½ tsp. Maldon or other flaky sea salt
½ tsp. superfine sugar
¼ cup extra virgin olive oil

Instructions

1. Segment the lemons: Use a sharp knife to cut off just enough of the peel on the top and bottom to expose a full circle of flesh on both ends. Stand the lemon on one end, place the knife point at the seam where the fruit meets the pith, and use a gentle back-and-forth motion to cut away a wide strip of pith and peel, following the curve of the fruit from top to bottom. Repeat the process until you've removed all of the peel; if you've missed any pith, trim it off. Holding the fruit over a bowl to catch the dripping juices, use the knife to separate each segment from the inner membrane and gently pry it out. Flick out any seeds and set the segments aside for the last step, reserving the juicy membrane.

2. Squeeze the remaining juice from the membrane into the bowl, add the rest of the ingredients, and stir well.

3. Add the lemon segments and toss gently to coat them without breaking them up.

Prep your chicken

Marinate it in some dressing for a few hours in the fridge, then throw it on the grill outside (or in a grill pan on your stove).

Prep your shrimp

Because of all the lemon, this dressing isn't far from a pickling liquid. Blanch the shrimp in boiling water, then dunk them immediately in an ice water bath. Transfer the shrimp to a big jar and cover them with dressing. Add other ingredients—chili flakes, sliced onions or fennel, celery seed or fennel seed—for a more classic pickle flavor, or just keep it simple and leave as is.

Prep your mushrooms

Sauté them in a dry pan until they start to give off liquid. Add dressing and a few sprigs of herbs (however much looks right) and continue cooking until the liquid has reduced just a bit.

Cook the rest

Cook a cup of grains, boil your potatoes, and hard-boil the eggs.

ILLUSTRATIONS BY JACI KESSLER LUBLINER

My Week of ADVENTUROUS Eating

Instead of snacking on graham crackers, I tried to make a proper lunch

By Jillian Goodman, Etc. deputy editor

In the past few months, I've developed the habit of noshing on the snacks available in the Bloomberg pantry around lunchtime. Most of the time, it's a combination of graham crackers, freshly ground peanut butter, apples, and trail mix, sometimes with celery or seaweed snacks. It's tasty, healthy enough, free, and requires no planning. In other words, it's perfect.

A responsible adult should be able to plan ahead enough to bring her lunch, so I decided to try it—and now I know why I don't do it more often. Who has time for all the prep? I was hardly ever home: Between spending time at my significant other's place and going about my normal social schedule, the most I could manage was to throw together a quick sandwich every day.

If I'd been more organized, the week would've been great—I think. I'll keep trying, but on the days I can't get there, there will always be graham crackers.

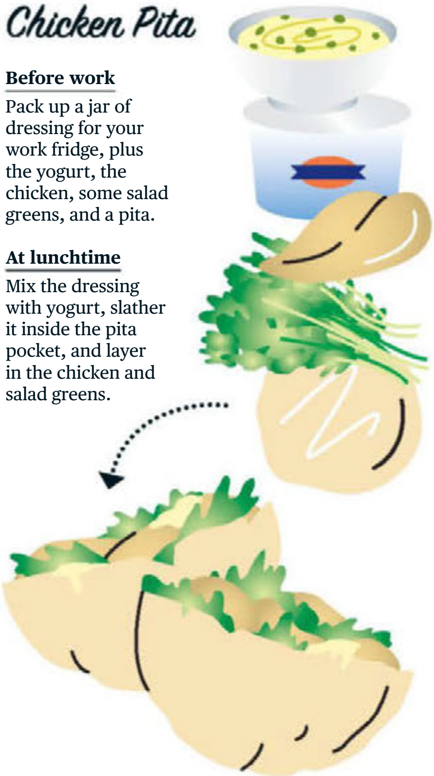
The bottom line Planning ahead is hard, but woman cannot live on nuts alone.

MONDAY

Chicken Pita

Before work
Pack up a jar of dressing for your work fridge, plus the yogurt, the chicken, some salad greens, and a pita.

At lunchtime
Mix the dressing with yogurt, slather it inside the pita pocket, and layer in the chicken and salad greens.



TUESDAY

Shrimp, Mushroom & Avocado Toast

Before work
Grab some marinated mushrooms, the pickled shrimp, avocado, 3 slices of bread, and more salad greens.

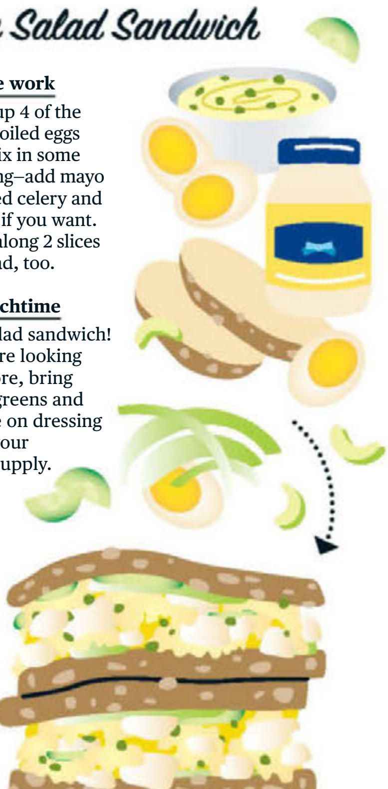
At lunchtime
Toast the bread slices if you can, then spread on a little dressing. (You already have it at work, right?) Top one with mushrooms, one with shrimp, and one with avocado, then scatter some greens over all. Alternatively, because you marinated the shrimp and mushrooms in the same dressing, you can mix them and make a sandwich.

WEDNESDAY

Egg Salad Sandwich

Before work
Chop up 4 of the hard-boiled eggs and mix in some dressing–add mayo or diced celery and fennel if you want. Bring along 2 slices of bread, too.

At lunchtime
Egg salad sandwich! If you're looking for more, bring salad greens and drizzle on dressing from your work supply.

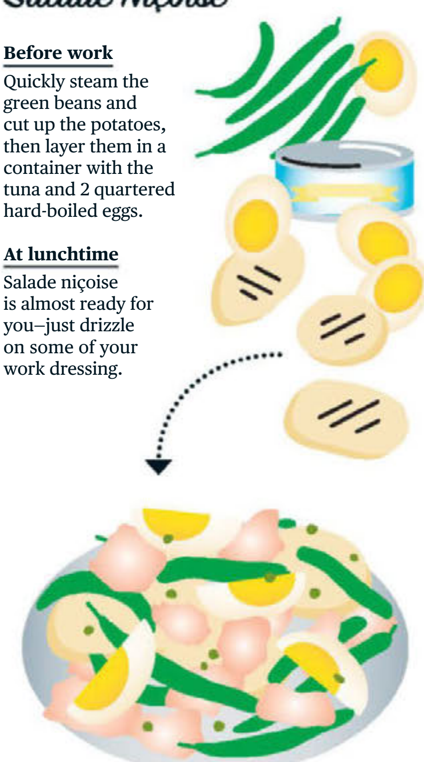


THURSDAY

Salade Niçoise

Before work
Quickly steam the green beans and cut up the potatoes, then layer them in a container with the tuna and 2 quartered hard-boiled eggs.

At lunchtime
Salade niçoise is almost ready for you–just drizzle on some of your work dressing.



FRIDAY

Shortcut Mushroom Risotto

Before work
Throw your cooked grains into a bowl with the rest of the marinated mushrooms and whatever vegetables you have left, then mix in the last of your home dressing. Pack up the rest of the salad greens separately, if they're still looking good.

At lunchtime
Add a little water to your grains, and warm in the microwave to create a creamy, risottolike porridge. Dress the greens and eat them alongside.

How Did I Get Here?

“I’ve become much more conscious of what I eat over the years: My diet is increasingly—but not entirely—plant-based. My all-time favorite lunch is the Spicy Thai Salad With Chicken, and I also love our Green Goddess Cobb Salad.”

RON SHAICH

Chairman and chief executive officer, Panera Bread

“I went to HBS not knowing what an investment banker was.”

❸ Graduating from Harvard Business School

Education

Livingston High School, Livingston, N.J., class of 1971

Clark University, Worcester, Mass., class of 1976

Harvard Business School, class of 1978

❶ Class photo, 1968

“I went off to D.C. and did political campaign consulting. We were using geo-demographic targeting with voters, the forerunner to what people now call Big Data.”

“Nobody bought cookies before noon. So I decided to put in French baked goods and became a licensee of a three-store chain called Au Bon Pain. Sometimes they billed me, sometimes they didn’t—they were out of control.”

Work Experience

1978–79
Eastern regional manager, Original Cookie Company

1979–80
President, Targeting Systems

1980–81
Founder, the Cookie Jar

1981–99
Co-founder, co-chairman, CEO, Au Bon Pain

1999–2010
Chairman and CEO, Panera Bread

2010–Present
Co-founder, No Labels

2010–13
Executive chairman, Panera

2013–Present
Chairman and CEO, Panera

“We reached an agreement to take my one cookie store and the Au Bon Pain bakeries and create a new company, of which I got 60 percent of the stock. They had $3 million in debt.”

❶ One of the original St. Louis Bread Co. locations, 1993

❶ With Au Bon Pain co-founder, Louis Kane, 1991

“I met a couple of guys with 19 stores called St. Louis Bread Company. I thought, ‘Maybe we should buy it. Au Bon Pain can do urban, and these guys can do suburban.’ We later renamed it Panera.”

“It’s an advocacy group about reducing the hyperpartisanship in D.C. It’s got a million members today.”

“We’ve got 2,000 stores, over 100,000 employees, $5 billion in market cap, and serve 3 to 4 percent of all Americans every week.”

Life Lessons

❶ “Growth isn’t about pressing the accelerator; it’s about opportunities to move in specific directions.” ❷ “The job of leadership is to figure out where the world is going and make sure your organization is there.” ❸ “We may serve 10 million people a week, but if we’re going to be competitive, it’s all about one guest’s experience.”

Courtesy subject (5). Courtesy Panera (4)

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