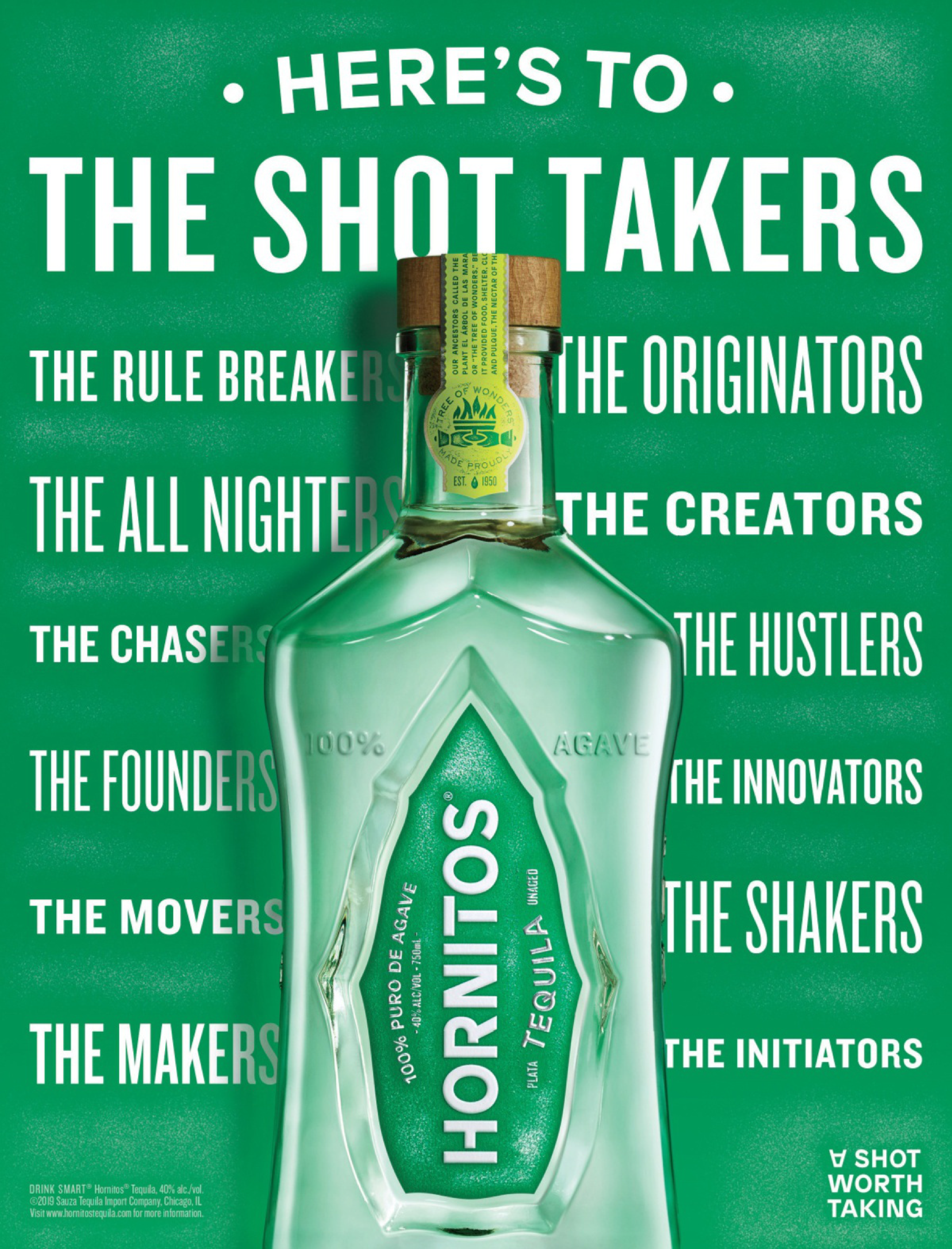

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THE ALL NIGHTERS
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25 SMALL GIANTS COMPANIES THAT VALUE GREATNESS OVER GROWTH

Forbes

MAY 31, 2019

REFORMED BARBARIAN
HENRY KRAVIS

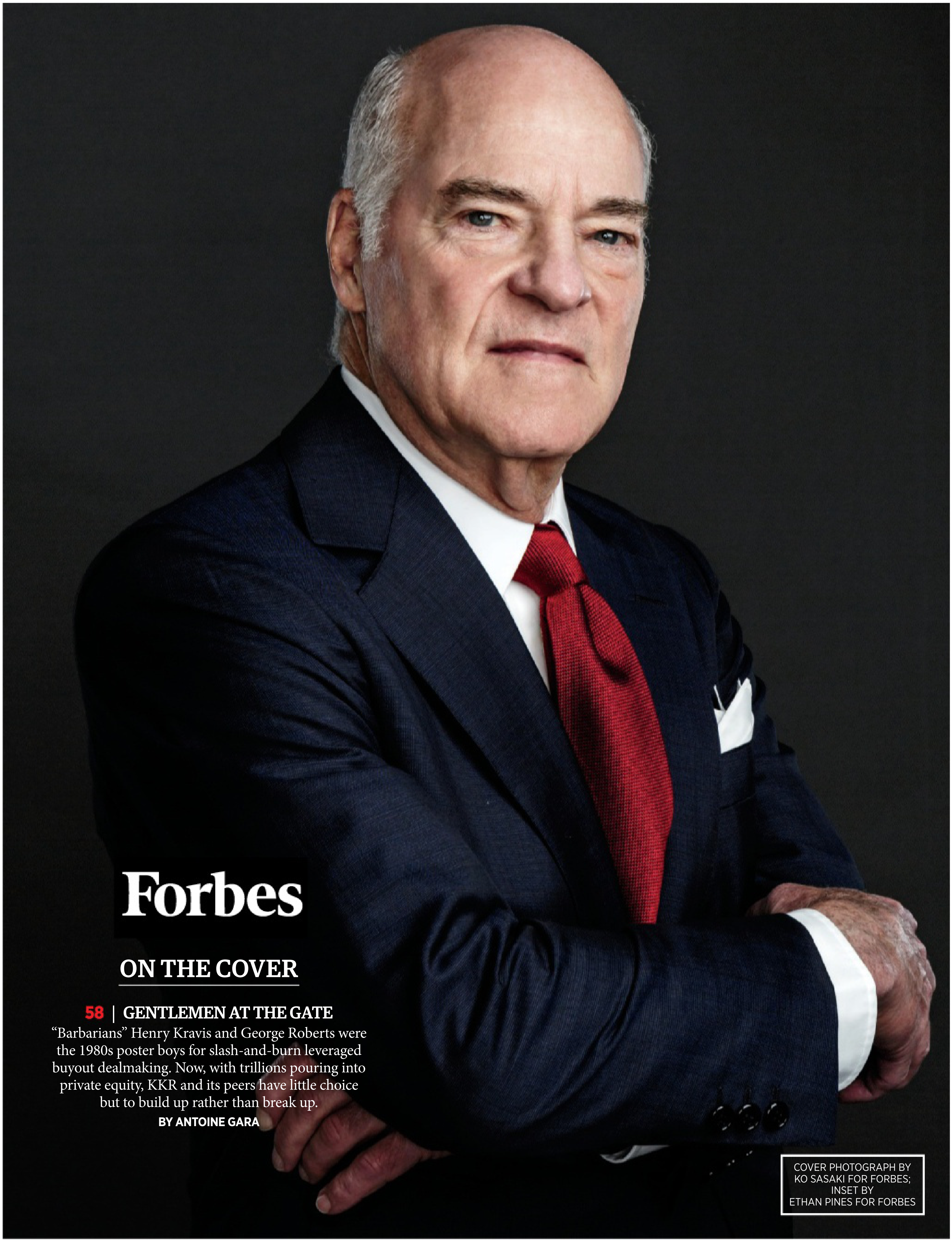
"YOU CAN'T BUY A COMPANY AND STRIP OUT ALL THE COSTS. IT'S NOT A SUSTAINABLE BUSINESS MODEL."

INSIDE THE ZOOM BOOM!

ZOOM ZILLIONAIRE
ERIC YUAN

MR. NICE GUY

WITH TRILLIONS FLOODING IN, PRIVATE EQUITY IS TRADING BREAKING UP FOR BUILDING UP.
WELCOME TO THE ERA OF PUBLIC EQUITY (STARRING KKR, NO LESS).



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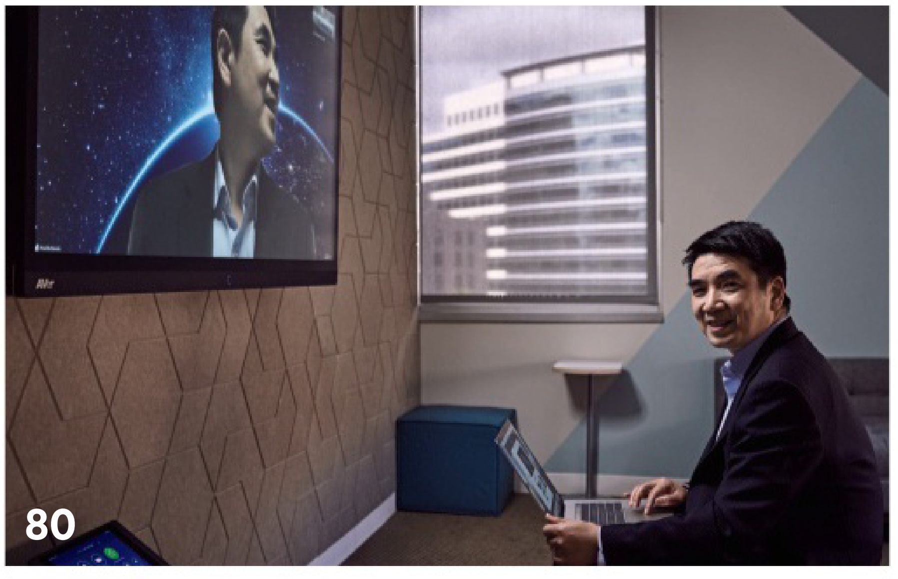
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92

STRATEGIES

INVESTING

FEATURES

FORBES LIFE


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SIDELINES

Money Games

SOME OF MY FONDEST memories from my first stint at *Forbes*, in the 1990s, revolve around sports: tagging along with Jack Nicklaus as he traded up his private jet, or with Nike's Phil Knight as he walked through the Olympic Village he helped fund; eating breakfast pancakes in Vegas with George Foreman as he revealed the marketing alchemy of pay-per-view, or jumbo shrimp in Orlando with a young Shaquille O'Neal at his rap-album launch party, a pioneer of the multiplatform-celebrity era.

It felt heady and big, but in retrospect it's clear that sports business was in its infancy. The millions I chronicled became billions, as you can see in our annual Major League Baseball rankings, on page 19. (A paltry $4.6 billion for the Yankees, anyone?) Our coverage has gotten exponentially stronger to match. From team valuations to player earnings to brand equity, no media outlet tops *Forbes*. (When teams change hands, *Forbes'* valuations are the yardstick—a fact no small number of owners have confirmed to me.)

Forbes' SportsMoney team: From left, Brett Knight, Kurt Badenhausen, Dan Kleinman, Mike Ozanian and Chris Smith.

That's largely due to Mike Ozanian and Kurt Badenhausen, who for over 20 years have been expanding and beefing up our coverage—entrepreneurially when necessary. "When I came to *Forbes* in 1997, I was told by my editors not to undertake the team valuations," says Ozanian, who hosts our four-time Emmy-winning *SportsMoney* television show on the YES Network. "Kurt and I did them in secret the first year."

A newer crew, led by Chris Smith, Brett Knight, Christina Settimi and Dan Kleinman, exhibit similar brio as they work at enhancing our real-time coverage—this time with our explicit encouragement! A site-within-a-site at Forbes.com, SportsMoney now has a correspondent assigned to almost every major U.S. pro sports team—130 contributors in all, each providing a money-driven perspective you won't find on traditional sports sites. "We're the only people who do what we do," Smith says.

There's more to come. A relaunched SportsMoney home page, a growing newsletter, more rankings—hello, esports—and premium data tools and indexes. Big plans befitting a big business.

NICK GRAHAM

—RANDALL LANE, CHIEF CONTENT OFFICER

"With all thy getting, get understanding"

CAPITALISM AIN'T KAPUT

BY STEVE FORBES, EDITOR-IN-CHIEF

HARDLY A DAY goes by without some eminence from business or finance proclaiming with furrowed brow and seeming sorrow that capitalism is in crisis and must be overhauled if it is to survive and not be replaced with some variant of socialism. Inequality, climate change, obscene levels of corporate profits, stagnant wages, soaring healthcare costs, crushing levels of student debt, rampant Wall Street greed, high-tech monsters and much more are all laid at the feet of an allegedly heartless, unresponsive capitalistic system.

It ain't so. Contrary to all this highbrow hand-wringing, the problem is bad government policies and, worse, a fundamental misunderstanding of free markets. It's time for a reality check regarding this much-maligned system.

Capitalism, free enterprise, free markets—whatever you label our system—is moral because one succeeds by meeting the needs and wants of other people. An entrepreneur tries to discern needs people don't know they have until a product or service is introduced to the market. Think Steve Jobs and the iPhone and iPad. Businesspeople try to persuade you to buy what they offer. Unless the government gets involved, there is no coercion. Countless people are trying to come up with ways to make everyone's lives better. If they succeed, they might (gasp!) get rich, but we are all better off.

Ever more sophisticated supply chains rise up, which work precisely because no tsar or central planner is in charge.

Government mistakes—not inherent flaws in free markets—are at the root of *every* economic crisis in modern times. The Great Depression was triggered by the draconian Smoot-Hawley Tariff Act, which imposed higher taxes on thousands of import items, triggering a global trade war that devastated economies. This felony was compounded when countries—Germany, Britain and the U.S. were the worst offenders—substantially raised taxes in the teeth of a sharp downturn.

The terrible inflation of the 1970s was the result of the Federal Reserve and other central banks repeatedly printing too much money. The crisis of 2008–09 sprang from the U.S. deliberately weakening the dollar, which set off a flight to hard assets such as housing.

High taxes are growth-killers. Taxes are a burden. Countries that keep the burden light do better than those that don't. After it recovered from WWII, Europe had growth rates comparable to or even better than those of the U.S. But in the 1970s the weight of taxation became heavier and heavier with the imposition of VATs and higher effective income tax rates. Result: microscopic paces of expansion.

Every time the U.S. has enacted big tax cuts, its economy has blossomed. The economy's post-Obama pickup came from the 2017 tax reduction and deregulation.

Excessive regulations hurt. Regulatory expert Philip Howard cites a typical example: An upstate New York apple orchard is subject to 5,000 rules from 17 different programs. Regulations cost the U.S. some $2 trillion a year. On average, a manufacturer pays $2,000 to $4,000 in annual taxes per worker; its regulatory burden is $20,000 to $35,000. Is it any wonder that manufacturing has suffered until recently?

Don't blame student debt on free enterprise. Government is the villain. With the best intentions Washington created programs to help people pay for college, primarily Pell Grants and student loans. Studies from the New York Fed and others confirm that the more money colleges collected via these schemes, the more students were charged.

High-priced healthcare is not a failure of capitalism. Free markets are the solution here, not more government control. Ours is a third-party healthcare system: government (primarily Medicare and Medicaid), insurance companies and large employers, not consumers. Hospitals' revenues depend on how well they negotiate with third parties, not on how well they please their patients. What a drug company charges for a medicine is far smaller than what you see reflected on a hospital bill. A big chunk of the price charged goes to pay pharmaceutical benefit managers. Discovering in advance what a procedure might cost is a Herculean effort.

In normal markets, if you make an advance in productivity, competitors will likely follow suit quickly. Not so in healthcare or higher ed.

The Surgery Center of Oklahoma posts all of its prices online. It has topflight surgeons; its overhead is low, by industry standards; and the cost of an operation is a fraction of that charged at traditional hospitals and clinics because patients pay cash in advance. (Prices are higher if a patient wants the center to file their insurance claim.) Yet it has few imitators. Why? Because there is no consumer market. Since third parties foot most of the bill, most patients have no incentive to compare quality and prices, and would be hard put to do so even if they wanted to.

Take electronic records. Every dry cleaner and gas station has had them for 20 years. But not healthcare providers: There was no competitive advantage. Then Washington decided to mandate them but did so destructively, in a manner worthy of the defunct Soviet Union.

Purdue University president Mitch Daniels has frozen tuitions since he took office in 2013. He has enacted numerous efficiencies, so that to attend this prestigious institution a student today pays less than a student did six years ago. By the way, Daniels has *boosted* the number of Purdue's tenured professors.

But just as with the case of the Surgery Center of Oklahoma and other hospitals, there's no stampede of colleges and universities urgently following Purdue's example.

Free markets reduce poverty. Real incomes per person have risen over 50-fold since we achieved independence. Before the Industrial Revolution, which capitalism made possible, individual incomes in the world grew imperceptibly. Today, despite all the economic policy mistakes, poverty is plummeting. Over the past 20 years, 1 billion people have escaped abject poverty.

Free markets always turn scarcity into abundance, today's luxuries into tomorrow's common products. Among countless examples is the handheld phone. The first cellphone of the early 1980s—which could only make calls—was as large as a shoe box, weighed as much as a brick, had barely an hour of battery life and cost $3,995. Today there are billions of cellphones, and most have the capability that a supercomputer had a couple of decades ago.

The same happy phenomenon of getting more for less would happen in healthcare if certain free-market reforms were enacted, such as nationwide shopping for medical insurance and removing restrictions on medical savings accounts.

Inequality? Wages, until recently, had stagnated since the financial crisis of 2008, and they hadn't been improving much in the decade before then. Once again, the problem was faulty government actions.

Capitalism is the target of more and more protests.

Investment is the *sine qua non* for progress, and more investment takes place when money has a stable value. Until the 1970s the dollar had been fixed to gold, and the U.S. economy had grown as no other nation's ever had before. But since then our average growth has declined 25% or more. And guess what: Income growth hasn't been as robust as when we were on the gold standard, either.

Another factor: relentlessly rising medical costs. Employer-provided insurance counts as part of an employee's compensation. Even though compensation has risen, the cash part has lagged. Not helping, either, has been the surge in federal payroll taxes, labeled "FICA" on your paycheck stub. With a regime of low taxes, a trustworthy dollar and a patient-oriented healthcare system, *cash* wages would rise very nicely.

Profits are essential. They are moral. Without them, the economy stagnates and regresses. The economist Joseph Schumpeter famously coined the phrase "creative destruction." Vibrant economies need enormous amounts of new capital to move forward. Change constantly destroys old capital—look at what the internet did to the value of legacy newspaper and magazine publishers—which must be replaced. Capital is needed to finance startups (most fail) and expansions as well as the productivity improvements of existing businesses. Capital comes from profits and savings. In that sense profit is a *cost* of doing business.

More and more young people want to work for outfits that are not "just" business. This is one of the great virtues of capitalism: The system seamlessly adjusts to people's wants and expectations. Wise companies quickly pick up and respond to these changes. *Forbes* has written frequently about these companies and the individuals pioneering their efforts.

Some people in business do bad, amoral or unethical things. Yes, they do, but that's not something unique to capitalism. People were guilty of bad behavior long before Adam Smith penned his capitalist classic, *An Inquiry into the Nature and Causes of the Wealth of Nations*, in 1776. Moreover, in an open, free-market and democratic system, the bad ones are usually flushed out, unlike in authoritarian or socialist regimes.

Socialism never works. It always leads to blood, tyranny and tears, as can be seen today in Venezuela, Cuba and North Korea and in the recent past in the Soviet Union, Maoist China and communist Cambodia (where, in less than four years, the regime slaughtered more than one fourth of the population).

What about the "socialism" of Scandinavia and Europe? They are not socialist in the sense that the government owns and runs the economy. Many of these countries have elaborate welfare programs, restrictive labor laws and overtaxation. But all this is beginning to change.

What self-styled American socialists overlook is that countries like Sweden have been scaling back government. Sweden has been cutting taxes. It has no inheritance tax, and it allows school choice, which is anathema to Bernie Sanders and his ilk. As for the rest of the EU, the average rate of economic growth since the crisis of 2008 has been minuscule, less than half that of the U.S.

More to the point, capitalism creates the wealth that makes welfare states possible. That's why more and more Europeans are looking at pro-capitalist reforms, such as low taxes, to gin up their economies. F

OCCUPY WALL STREET BY SPENCER PLATT/GETTY IMAGES


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MANNY HAPPY RETURNS

THE AVERAGE BALLPLAYER faces a tough reality: MLB salaries are flat, up less than 1% per year since 2014, the result of a new collective bargaining agreement and the sport's now intensely data-driven approach to gauging value. Only the brightest stars still command big paydays. Stars like Manny Machado.

The San Diego Padres' third baseman is in the first year of a decadelong, $300 million deal that was the largest-ever free-agent signing in American sports. (For a

Bat's all, folks: the San Diego Padres' Manny Machado and his $300 million lumber.

PHOTOGRAPH BY ETHAN PINES FOR FORBES

TURN THE PAGE
BASEBALL'S MOST VALUABLE TEAMS 2019

few days, anyway. Nine days after the Padres and Machado came to terms last winter, fellow free agent Bryce Harper inked an even bigger contract, $330 million over 13 years.) "A lot of things go into picking your future, and San Diego checked every box," Machado says. He cites the team's farm system, perfect weather (he's a native Floridian) and family-oriented environment fostered by the front office and ownership.

San Diego has long been a baseball wasteland. In 50 years, the Padres have made only five trips to the playoffs, none in the last 12 years. They haven't even finished within 15 games of first place in their division since 2010. Machado, 26, wants to change that narrative: "I want to take this team to the playoffs and bring a championship to San Diego for the first time."

The biggest force in baseball economics right now is local TV deals, and the Padres are no exception. Their long-term agreement with Fox Sports paid roughly $40 million last season, and the team owns an estimated 20% of Fox Sports San Diego. Star players and winning teams drive higher ratings, resulting in more ad revenue. Meaning Machado, a Gold Glove–winning infielder who has averaged 180 hits and 36 home runs a year for the last four seasons, is likely worth every penny.

Machado insists he's not feeling the pressure of his big deal. "The hard part was everything that came before the contract," he says: negotiating, weighing his options, getting past a disappointing World Series loss with the Los Angeles Dodgers last year. "Now I just go out and play baseball and enjoy myself."

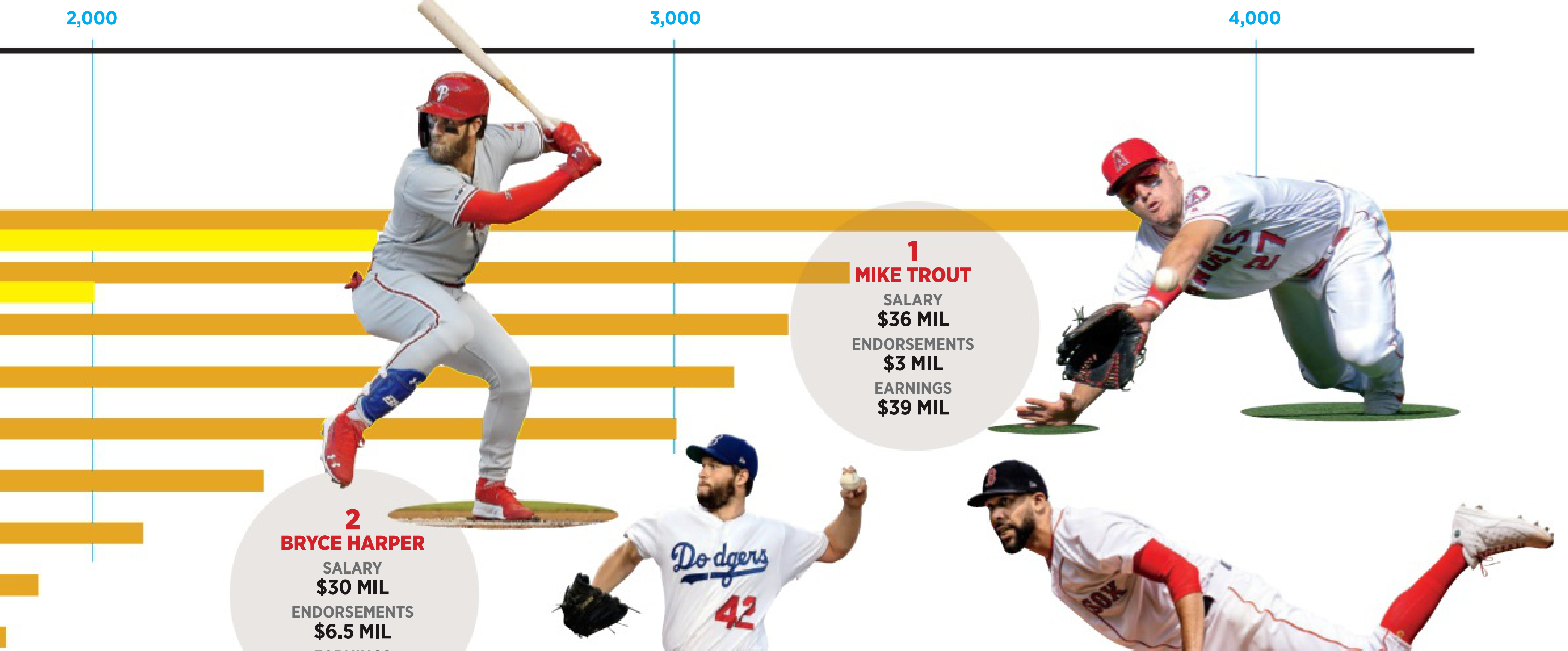
MLB Team Valuations

1,000 ($MIL)

RANK	TEAM	CURRENT[1] VALUE ($MIL)	2014 VALUE ($MIL)	1-YEAR CHANGE %	5-YEAR CHANGE %
1	NEW YORK YANKEES	4,600	2,500	15	84
2	LOS ANGELES DODGERS	3,300	2,000	10	65
3	BOSTON RED SOX	3,200	1,500	14	113
4	CHICAGO CUBS	3,100	1,200	7	158
5	SAN FRANCISCO GIANTS	3,000	1,000	5	200
6	NEW YORK METS	2,300	800	10	188
7	ST. LOUIS CARDINALS	2,100	820	11	156
8	LOS ANGELES ANGELS	1,900	775	6	145
9	PHILADELPHIA PHILLIES	1,850	975	9	90
10	HOUSTON ASTROS	1,775	530	8	235
11	WASHINGTON NATIONALS	1,750	700	4	150
12	ATLANTA BRAVES	1,700	730	5	133
13	TEXAS RANGERS	1,650	825	3	100
14	CHICAGO WHITE SOX	1,600	695	7	130
15	SEATTLE MARINERS	1,575	710	9	122
16	TORONTO BLUE JAYS	1,500	610	11	146
17	SAN DIEGO PADRES	1,350	615	6	120
18	ARIZONA DIAMONDBACKS	1,290	585	7	121
19	BALTIMORE ORIOLES	1,280	620	7	106
20	PITTSBURGH PIRATES	1,275	572	1	123
21	DETROIT TIGERS	1,250	680	2	84
22	COLORADO ROCKIES	1,225	575	11	113
23	MINNESOTA TWINS	1,200	605	4	98
24	MILWAUKEE BREWERS	1,175	565	14	108
25	CLEVELAND INDIANS	1,150	570	10	102
26	OAKLAND ATHLETICS	1,100	495	8	122
27	CINCINNATI REDS	1,050	600	4	75
28	KANSAS CITY ROYALS	1,025	490	1	109
29	TAMPA BAY RAYS	1,010	485	12	108
30	MIAMI MARLINS	1,000	500	0	100
	LEAGUE AVERAGE	1,776	811	7	

[1]Enterprise value of team based on current stadium deal (unless new stadium is pending)

5(t)
MANNY MACHADO
SALARY
$30 MIL
ENDORSEMENTS
$500,000
EARNINGS
$30.5 MIL



1
MIKE TROUT
SALARY
$36 MIL
ENDORSEMENTS
$3 MIL
EARNINGS
$39 MIL

2
BRYCE HARPER
SALARY
$30 MIL
ENDORSEMENTS
$6.5 MIL
EARNINGS
$36.5 MIL

5(t)
MIGUEL CABRERA
SALARY
$30 MIL
ENDORSEMENTS
$500,000
EARNINGS
$30.5 MIL

4
CLAYTON KERSHAW
SALARY
$31 MIL
ENDORSEMENTS
$750,000
EARNINGS
$31.8 MIL

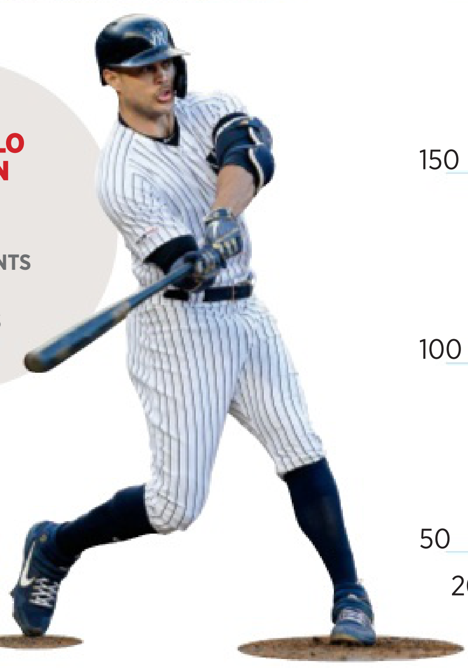
3
DAVID PRICE
SALARY
$31 MIL
ENDORSEMENTS
$950,000
EARNINGS
$32 MIL

9
ALBERT PUJOLS
SALARY
$28 MIL
ENDORSEMENTS
$800,000
EARNINGS
$28.8 MIL

7
YOENIS CESPEDES
SALARY
$29 MIL
ENDORSEMENTS
$500,000
EARNINGS
$29.5 MIL

Baseball's Top-Earning Players

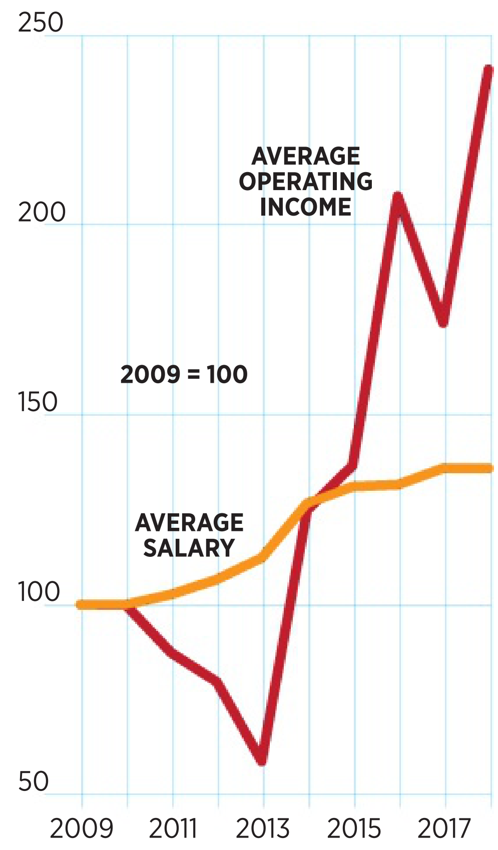
10
GIANCARLO STANTON
SALARY
$26 MIL
ENDORSEMENTS
$2 MIL
EARNINGS
$28 MIL



8
JUSTIN VERLANDER
SALARY
$28 MIL
ENDORSEMENTS
$1 MIL
EARNINGS
$29 MIL

Lowballing

Team profits are rising faster than MLB players' salaries.



BY KURT BADENHAUSEN, CHRISTINA SETTIMI AND MICHAEL K. OZANIAN

NEW BILLIONAIRE

EMPEROR OF EPHEMERA

Shintaro Yamada believes his online flea market can succeed not only in his native Japan but even in more competitive markets like America.

IN A TEN-MINUTE span last month, all these items were sold on Mercari, an online "flea market": a long-sleeved Lululemon shirt ($22), a cyclopean doll from Mattel's Monster High toy line ($25), a pair of size-nine Naot shoes ($50) and a brownish Coach purse ($8), which the seller admitted was in "poor" condition with a "dirty" bottom.

There was enough demand for secondhand Barbies and dingy bags last year for Tokyo-based Mercari to pull in $324 million in sales, taking a 10% cut of every transaction. Founder Shintaro Yamada, 41, can surely afford to buy everything he wants new: His 32% stake in the firm is now worth $1.3 billion; company stock has zigzagged upward since its June 2018 IPO. "Our mission: to create new value," he told *Forbes Japan* in November. "We've had a pretty good response" ever since Mercari (a Latin verb meaning "to trade") was founded in 2013. "Many items have been put on Mercari because clothing or other items lying around people's homes had no value for their owners and [would have] been thrown away."

Yamada's boldest move was probably his decision to take on eBay directly. Within 14 months of starting Mercari in Japan, he launched it in America—where he experienced immediate culture shock. "In the Japanese organization, everybody helps each other out. Younger people are groomed, and the company gets bigger. But in Silicon Valley"—well, there only "the fittest ones survive." Mercari is so far proving to be less than fit: The U.S. represents only 6% of its business. Yamada expressed indifference as to whether the gambit will pay off. "Failure," he said, "is a necessary step toward success."

BY ABRAM BROWN
SHINTARO YAMADA BY JAN BUUS


Retirement Plan Fee Analysis
FEE ANALYSIS: YOUR 401K PLAN
YOUR ACCOUNT BALANCE: $83,665
You are paying $1,094 in annual fees in your retirement plan. Learn more
You may be able to grow your investments faster by reducing your fees when you roll over your old plan to an IRA from TD Ameritrade.
Do Nothing
$271,601
Rollover IRA with Similar funds
$335,935
Rollover IRA with Lower cost funds
$376,002
Compare the impact of fees
Similar portfolio
Lower cost portfolio
We compared the existing holdings in your plan to the funds available in an IRA from TD Ameritrade. Here is the most similar match:
YOUR EXISTING PLAN
ROLLOVER IRA
$271,601
Estimated balance in 30 years
$335,935
Estimated balance in 30 years
Additional growth potential from fee savings in an IRA
$64,334
Estimated over 30 years

BUY, HOLD, SELL

BRING ON THE BUBBLY, JETTISON KOONS

Wine, watches, fine art: expert advice on luxe investments.

VICTORIA JAMES

Author, sommelier, partner and beverage director at Cote in Manhattan

BUY

Special Club Champagne

A tiny consortium of 28 growers who release their top wines in identical packaging. Pierre Gimonnet's Blanc de Blancs, around $125 upon release, quickly becomes a collectible.

HOLD

German Rieslings

Sweet and dry can both age majestically. Think Dönhoff, Von Winning and Peter Lauer. Often a steal for under $50 when released, they can skyrocket after a decade.

SELL

2004 Red Burgundy

Rain, rot . . . and ladybugs. An infestation meant that many of the cute red insects were crushed up with the grapes, creating tainted wine. Hope for maybe $200 when you move it.

JOHN REARDON

International head of watches, Christie's

BUY

Steel Audemars Piguet

These Swiss watches are getting hotter by the minute. Start with the self-winding Royal Oak, with a new in-house movement, at $19,200.

HOLD

Tourbillons

The whirlwind trend of owning an exquisitely complex tourbillon (at $10,000 and up) is becoming a memory. Time to hold until this complication comes back into the limelight.

SELL

Vintage Rolex Daytona

Positive momentum continues for examples passing stringent condition checks—many fetch over $250,000—but the fever seems to be breaking.

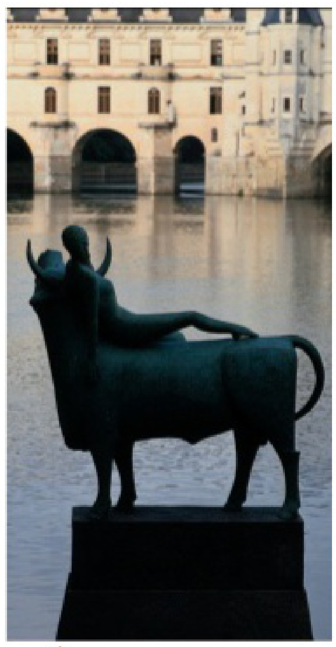
MOTI SHNIBERG

Chairman of MutualArt, a comprehensive online art-market information guide

BUY

Cassi Namoda

The vibrant paintings of this currently active artist explore female sexuality and gender in East Africa. They typically fetch between $4,500 and $16,000; expect that to rise.



HOLD

Claude Lalanne

The recent passing of this prolific French sculptor has renewed interest in her copper-and-gilt-bronze designs. Lalanne's work frequently appears at auction, often exceeding $100,000—and it's likely headed north.

SELL

Jeff Koons

Backlash against his tone-deaf spray-of-flowers memorial to victims of the Bataclan massacre in Paris has prompted a dropoff for this famously pricey artist. If you put millions into a Koons, don't expect it to move soon.

PHILANTHROPY

LANDMARKS AND LARGESSE

WITHIN HOURS OF the devastating fire at Notre Dame last month, three French billionaires (Bernard Arnault, Françoise Bettencourt Meyers and François Pinault) and an American (Henry Kravis) pledged almost $700 million to help restore the Paris cathedral. Over the past few years, it has become increasingly common for tycoons with monumental fortunes to donate to monuments in need.

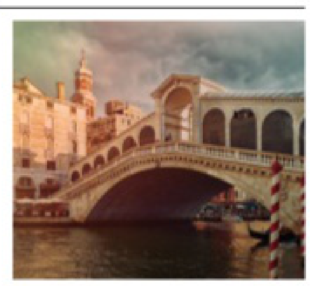
WASHINGTON MONUMENT
WASHINGTON, D.C.
David Rubenstein
Net worth: $2.8 billion
Amount donated, year: $10.5 million, 2012 and 2016
Restorations after 2011 earthquake, elevator repairs

COLOSSEUM
ROME
Diego Della Valle
$1.4 billion
$33 million, 2011
Cleaning stone surfaces, installing new iron gates, restoring basement

GREAT WALL OF CHINA
BEIJING AND BEYOND
Robert and Philip Ng
$12.1 billion
$1.6 million, 2018
Repairing a section of the wall and its lookout towers

CHÂTEAU CHAMBORD
LOIRE, FRANCE
Stephen Schwarzman
$14.4 billion
$4 million, 2016
Replanting its 18th-century French formal gardens

PONTE DI RIALTO
VENICE
Renzo Rosso
$2.9 billion
$6 million, 2013
Repairing the 427-year-old bridge, upgrading surrounding walkways



BUY, HOLD, SELL BY CHRISTIAN KREZNAR; PHILANTHROPY BY JENNIFER WANG
CLAUDE LALANNE BY FREDERIC REGLAIN-GAMMA-GETTY IMAGES; NOTRE DAME BY MICHEL STOUPAK-NURPHOTO-GETTY IMAGES; WASHINGTON MONUMENT BY THOMAS ALEXANDER-GETTY IMAGES; RIALTO BRIDGE BY KAREL MIRAGAYA-GETTY IMAGES; COLOSSEUM BY SORINCOLAC-GETTY IMAGES; CHATEAU CHAMBORD BY VLADISLAV ZOLOTOV-GETTY IMAGES; GREAT WALL OF CHINA BY ALAN COPSON-GETTY IMAGES

30 UNDER 30

FARMHANDS

Getting back to the land with the Forbes 30 Under 30, in 30 words or less.

ALLISON KOPF

Founder and CEO, Agrilyst | 29

This Brooklyn physicist's software enables indoor growers to predict yield, units, revenue, and when to harvest. Agrilyst's platform helps manage some $500 million of crops for a variety of companies.

COLIN HURD

Founder and CEO, Smart Ag | 29

Backed by seed billionaire Harry Stine and $6.5 million, the Iowan brings self-driving tech to cornfields. One product: a plug-in that taps into tractors' GPS to render them autonomous.

RYAN KNOPF

Cofounder and CTO, Root AI | 28

The University of Pennsylvania graduate raised $2.3 million from First Round Capital and others to build a modern greenhouse with patent-pending robots trained via AI to pick produce at peak freshness.

ABRAHAM ESPINOZA, MATTHEW ROODA

Cofounders, SwineTech | 25, 26

Former University of Iowa pals' wearable sensors stop pigs from crushing their piglets, which kills 160 million annually. With John Deere and Quake Capital backing, they project $1.4 million in 2019 revenue.

THOMAS PALOMARES, SÉBASTIEN BOYER

Cofounders, FarmWise | 27, 26

The French-immigrant duo raised $6.3 million to try to make herbicides obsolete. Instead of deploying powerful chemicals, large-scale farmers can use FarmWise's roving robot, culling weeds while protecting crops.

RICHEST BY STATE

GEORGIA

POPULATION: **10.4 MILLION**
GROSS STATE PRODUCT: **$554 BILLION** (2.7% GROWTH)
GSP PER CAPITA: **$53,145** (RANKS 30TH)
NUMBER OF BILLIONAIRES: **13**
RICHEST: **JIM KENNEDY**
NET WORTH: **$9.7 BILLION**

"I WAS NO GREAT JOURNALIST," Jim Kennedy admitted to *Forbes* back in 2015. But "my heart was in newspapers." After graduating from the University of Denver, he went to work for his family's media company, Cox Enterprises, started by his grandfather with the purchase of the *Daily News* in Dayton, Ohio, and expanded to a dozen or so newspapers, including the flagship *Atlanta Journal-Constitution.* Kennedy rose up the ranks from production assistant to reporter to copy editor—and eventually to executive vice president in the newspaper division.

Now the Coxes are parting with some of their crown jewels. The Atlanta company's 14 local television stations have struggled lately, so it's selling those to Apollo Global Management. The $3 billion deal, likely to close later this year, also included three radio stations and three newspapers. (The *Dayton Daily News* was one.) The slimmed-down Cox Enterprises will continue to be chaired by Kennedy and led by his cousin, CEO Alex Taylor. It retains a lucrative cable TV business (available mostly in the Southeast) and substantial automotive assets such as the online car marketplace Autotrader.

Kennedy's mother, Barbara Cox Anthony, and aunt, Anne Cox Chambers, were inaugural members of The Forbes 400 in 1982, but generally the Cox clan has kept a low profile. The last Cox to crave the spotlight: Kennedy's grandfather, who lost as the Democratic nominee for president—with FDR as his veep—in 1920.

"The money is good," said Kennedy, 71. "But it doesn't define us. If it ever does become about the money for the family, we're toast."

30 UNDER 30 BY ALEXANDRA WILSON; RICHEST BY STATE BY ABRAM BROWN AND NOAH KIRSCH
JAMEL TOPPIN FOR FORBES; ILLUSTRATIONS BY AARON SACCO

FROM THE VAULT

PIXELS AND PORTFOLIOS: MAY 6, 1985

THIRTY-FOUR YEARS AGO, the dawn of "electronic investing" was upon us. Nerdy enthusiasts could suddenly compete with market professionals. Well, sort of. You could get stock quotes via an FM radio device for about $300 ($710 today) or pay CompuServe, owned by H&R Block, 10 cents per quote during market hours. Dow Jones let you access *Barron's* and the *Wall Street Journal* for $2.40 a minute, while something called the Radio Exchange ($279, or $660 today) dropped limited financial data directly into your Lotus 1-2-3 spreadsheet.

The only thing you absolutely couldn't do in 1985 was trade digitally. To buy or sell, you had to pick up the phone—and pay a broker. Still, the speed of it all seemed intoxicating. "Like buying a Porsche that seduces you to drive too fast, having instant access to market information can tempt you to trade stocks too quickly."

You were warned.

FROM THE EDITOR'S DESK

Shoe-In

The same year Nike introduced its Air Jordans, editor in chief Malcolm Forbes declared the shoemaker "miles ahead of the pack, every foot covered along the way."

AMAZING AD

Bond Bonanza

There was nothing small about Drexel Burnham Lambert, the investment bank made famous by Michael Milken. Its profits had grown to $150 million (roughly $360 million today), a 2,400% increase in less than a decade.

SIGN OF THE TIMES

Smarter Phones, Slower Sales

The breakup of AT&T ended the practice of leasing telephones, and store shelves were now crowded with handsets to purchase. "While phones with high-technology features materialized, customers for them did not," we observed. "Only 2 million feature-function phones—the kind with built-in memory and redial capability—were sold" in 1984, less than half the forecast.

BY ABRAM BROWN
PARAMOUNT PICTURES-NEWSCOM; FOCUS ON SPORTS-GETTY IMAGES

LeaderBoard

CONVERSATION

CAN WEB 1.0 PIONEER and venture capitalist Marc Andreessen reinvent himself . . . again? The cover star of our 18th annual Midas List of top VCs (April 30) told *Forbes* he's remaking his venture shop, Andreessen Horowitz, into a hedge fund of sorts, registering all 150 employees as financial advisors. That'll make riskier bets—on cryptocurrencies, say—easier to pursue. Meltem Demirors, chief strategy officer of digital asset manager CoinShares, thinks this marks the flowering of a major VC transformation. "It's been done by small shops here and there, but [Andreessen Horowitz] is clearly the market leader, so their move will be followed by many," Demirors tweeted. Crunchbase editor in chief Alex Wilhelm isn't so sure. "The whole gambit strikes me as a mini-Berkshire [Hathaway], but with other people's money and a weird payback period; I don't get it in that sense," he tweeted. Still, he added, "It's going to be fun to watch."

ROUGH JUSTICE

A billionaire politician with murky taxes and trouble paying his bills? We speak, of course, of West Virginia governor Jim Justice.

@JIMJUSTICEWV: "It's been a long battle, but every tax has been paid or will be paid. To characterize me as a deadbeat is just dead wrong."

VALARIE PARBS ARNOLDUSSEN: "That's why Trump likes him. A businessman who has to be taken to court to pay his bills is one to stay away from. Far away. Unethical, uncaring individual."

JAMES EYEHI: "It's hard to fathom how an individual who cheats the working class to maintain profit can remain in office, let alone get elected."

@JEFF_A_MARTIN: "My question: Did you switch parties [Justice became a Republican after six months in office] to ensure your buddy in the White House would take care of this for you? Maybe, just maybe. . . ."

BETTY JARNAC: "How is it our laws don't make sure these billionaires/millionaires are paying their taxes? We need a revamp of all these loopholes."

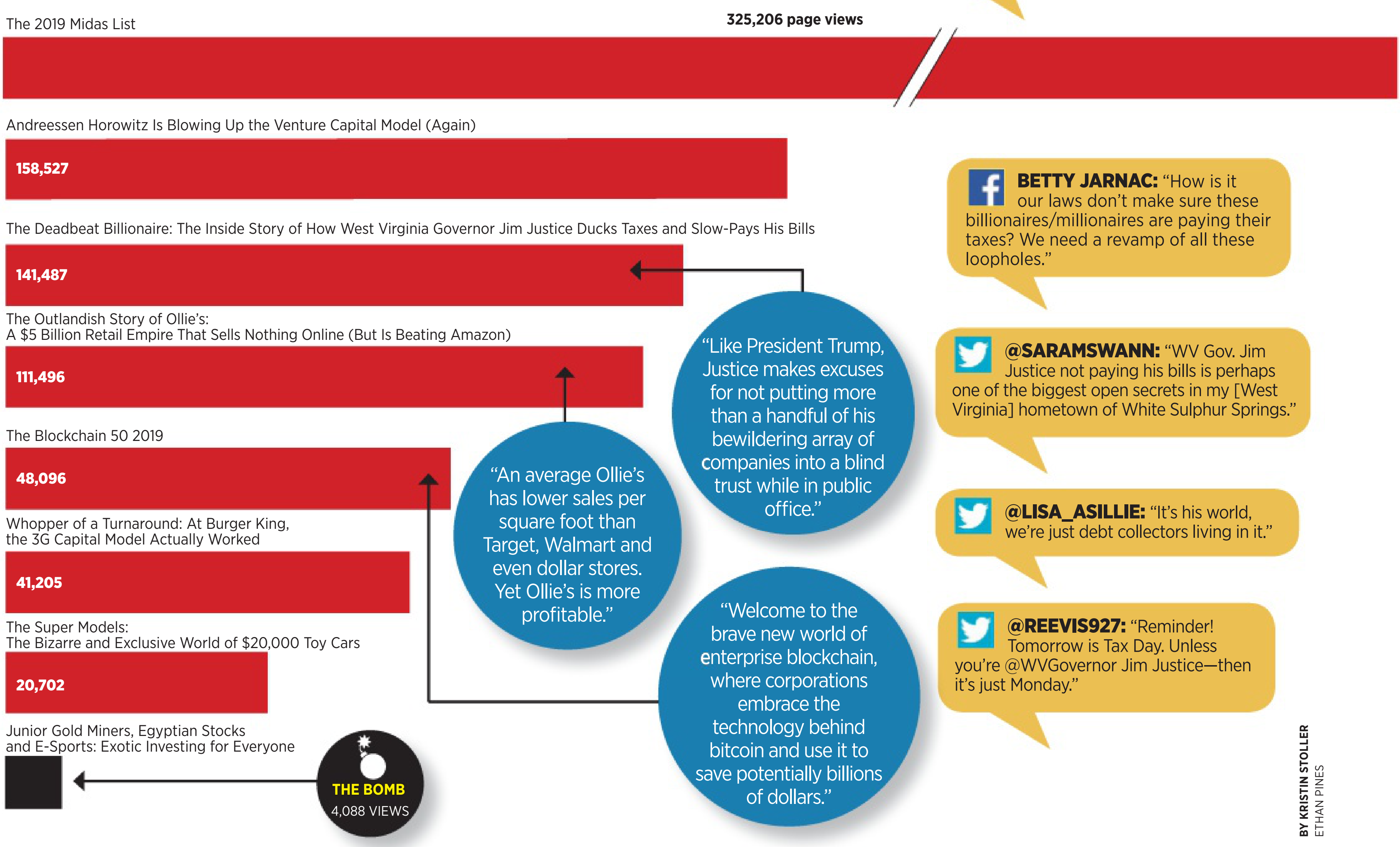
@SARAMSWANN: "WV Gov. Jim Justice not paying his bills is perhaps one of the biggest open secrets in my [West Virginia] hometown of White Sulphur Springs."

@LISA_ASILLIE: "It's his world, we're just debt collectors living in it."

@REEVIS927: "Reminder! Tomorrow is Tax Day. Unless you're @WVGovernor Jim Justice—then it's just Monday."

THE INTEREST GRAPH

Nothing gold can be ignored: Readers by the tens of thousands touched our 18th annual Midas List, the most-read piece in our April 30 issue online.



BY KRISTIN STOLLER
ETHAN PINES


Marcus the Manatee
Volunteer Sea Life Spokesmanatee for Recycle Across America®
Dear Humans,™
We need your help. Seriously.
I want to float this by you...
Did you know that six out of ten human items most commonly found in my ocean are recyclable? I notice a lot of these items floating near the surface. Not to be picky, but I don't like plastic bottles mixed in with the plants I'm eating. If humans were better at recycling, it would keep all that stuff out of our oceans and waterways.
That's why we need humans to use standardized labels on recycling bins society-wide...they make it easy to recycle more and recycle right. The U.S. generates more waste than any other country in the world, so we need the U.S. to lead the way!
Here's how you can help – text FIX IT to 40649 to ask your elected officials to display the standardized labels on recycling bins in your community.
Let's get waste and recyclables out of oceans and waterways once and for all! Please recycle right, and if you have trash, be sure to throw it in the trash bin (and put a lid on it).
Oh, and one more thing – when someone offers you a plastic straw or a plastic bag, please REFUSE IT, DON'T USE IT™! They are a huge problem for all of us living here in the oceans.
Yours truly,
paper
glass cans plastic
compost
landfill
Let's recycle right!® Society-wide standardized labels on bins make it easy.
Let's recycle right!®
Text FIX IT to 40649
to ask community leaders to join the nonprofit solution to fix the confusion at the bin.
Message and data rates may apply. Text STOP to cancel or HELP for help.
Go to recycleacrossamerica.org/privacy-policy for privacy and terms
recycle across america®.org
Recycle Across America is a 501(c)(3) nonprofit organization dedicated to expediting environmental progress by introducing society-wide standardized labels on recycling bins, to make it easy and possible for the public to begin to recycle properly, wherever they might be.

Verticals

PRESCRIPTION FOR INNOVATION

Gene Hackers

Entrepreneurs are taking genetic-editing technology from the lab to the clinic—with grand ambitions. But who owns the patents?

BY ELLIE KINCAID AND MICHELA TINDERA

TIMOTHY ARCHIBALD FOR FORBES

Caribou Biosciences cofounder and CEO Rachel Haurwitz, 34, in her startup's headquarters in Berkeley, California. Caribou is working on a cell-therapy cancer treatment that uses its own adaptation of Crispr technology.

When Rachel Haurwitz started her biology Ph.D. at the University of California, Berkeley, the award-winning biochemist Jennifer Doudna suggested Haurwitz investigate part of a bacterial immune system. She studied how microbes store genetic mementos of attacking viruses and recognize them to fight off future assaults. "It was an esoteric project," Haurwitz says.

It's esoteric no more. This system, called Crispr, has become one of the hottest technologies in biology, with the potential to give scientists control of the building blocks of life and give investors rich rewards. Crispr had no obvious relevance to human health when it was first described in 1987, but Doudna, who won the Breakthrough Prize in Life Sciences for her Crispr work, and other pioneers have discovered ways to turn it into a gene-editing tool. Haurwitz and Doudna helped found Caribou Biosciences in 2011 to get in on the action. Haurwitz, still in her 20s, became CEO the next year.

Haurwitz is not the only young entrepreneur who sees opportunity in gene editing. Doudna cofounded Mammoth Biosciences with some of her other doctoral students and two Stanford Ph.D.s. Trevor Martin, the company's 30-year-old CEO, has raised $23 million from such investors as Apple CEO Tim Cook. In 2015, in Cambridge, Massachusetts, 29-year-old Luhan Yang founded eGenesis with her mentor, Harvard geneticist George Church, to use Crispr to help transplant pig organs into people. Omar Abudayyeh and Jonathan Gootenberg, also in their 20s, cofounded Sherlock Biosciences with another Crispr pioneer, 37-year-old Feng Zhang of the Broad Institute of MIT and Harvard.

"They may be young, but in both cases these are people at the top of their game scientifically," Doudna says of her cofounders. "They're fearless in all the right ways and very aware of the ethical challenges."

Given that no one had built a Crispr company until a few years ago, "there's maybe more of an opportunity for people with nontraditional backgrounds," Haurwitz says.

Crispr is an acronym for "clustered regularly interspaced short palindromic repeats." It refers to the way bacteria store, in their genomes, snippets of viral DNA, like mug shots. Those markers are used to identify invaders that return, much as a human immune system uses telltale elements of a polio virus remembered from a vaccine.

If an invading virus matches a stored mug shot, enzymes associated with Crispr break the virus' lethal DNA into harmless pieces. Doudna and others figured out how to use those enzymes to snip DNA at precise points in order to insert or modify genes. Thus does Crispr promise to make the expensive and buggy process of rewriting DNA easier, opening up new ways to treat diseases caused by genetic mutations, create cheaper diagnostic tests and engineer cells that kill cancer.

Eight years after its start in Berkeley, Caribou has raised $41 million and cut licensing deals—potentially worth hundreds of millions of dollars—with DuPont Pioneer, Novartis and others. It's starting to develop medical therapies.

Haurwitz grew up in Austin, Texas, and earned a bachelor's degree in biology at Harvard. She didn't have a clear plan when she went on to UC Berkeley, but she thought she might later become a patent attorney.

That thinking changed as her Ph.D. work got more exciting. Haurwitz and Doudna spent a lot of time talking about how they could repurpose Crispr for modifying genomes to cure disease. Program the naturally occurring Crispr system to cut the gene you want to modify, and it's theoretically possible to use it to change the genetic code to either fix "misspellings" that cause illness or disrupt the production of an unwanted protein.

Caribou started out with the notion of making Crispr technology available for DNA editing in applications such as drug development, agriculture and basic biological research. Haurwitz's cofounders didn't want to leave academia and were "crazy enough to let a 26-year-old who had never worked for a company in her life take on the role of president and CEO," she says.

Haurwitz took a few business classes before getting her Ph.D., then pitched venture capitalists on funding a technology they didn't really understand. Caribou was securing an exclusive license to some Crispr patents held by the University of California system and the University of Vienna. Still, "pretty much every VC we talked to kind of said, 'Meh,'" Haurwitz remembers. This was 2012, and they thought she was overestimating Crispr's potential.

The papers that propelled Crispr into the lime-

Young scientists and entrepreneurs working in Crispr at the Forbes Under 30 Summit in Boston: From left, Omar Abudayyeh of Sherlock Biosciences; Catherine Freije, Ph.D. candidate at the Broad Institute of MIT and Harvard; Trevor Martin of Mammoth Biosciences; Cameron Myhrvold, postdoctoral fellow at the Broad; and Jonathan Gootenberg of Sherlock Biosciences. Freije and Myhrvold co-authored a paper in *Science*, with Gootenberg and Abudayyeh, that has become foundational for Sherlock's technologies.

JAMEL TOPPIN FOR FORBES


HOW CAN WE HELP DOCTORS AND PATIENTS BUILD EVEN STRONGER RELATIONSHIPS?
HOW
WE KNOW HOW. WE ARE THE HOW.
At Optum, we collaborate and partner deeply, driven by a shared vision of health care that works for everyone.
OPTUM.COM
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OPTUM®
HOW WELL GETS DONE

light came the next year, and investor dollars and a wave of new companies quickly followed. Editas Medicine, cofounded by Sherlock's Feng Zhang, raised $43 million to apply the technology to medical therapies. Next was Intellia Therapeutics, cofounded by Caribou, which raised $15 million in its 2014 launch. And Crispr Therapeutics, founded by Crispr pioneer Emmanuelle Charpentier, raised $89 million. The three went public in 2016 and now have a combined market capitalization of $3.8 billion.

Meanwhile, Haurwitz was being cold-called by plant-breeding and drug companies. DuPont led an $11 million investment in 2015. Caribou raised another $30 million the next year and has been able to sustain itself on that funding and payments from licensing and partnership deals.

Caribou licensed to Integrated DNA Technologies the right to sell biology researchers what they'd need for gene-editing experiments. Genus, an animal genetics firm, paid Caribou an undisclosed amount for the exclusive right to use its proprietary Crispr technology to engineer the genes of pigs and other livestock. Similarly, the Jackson Laboratory is paying Caribou to use Crispr to engineer new populations of research mice that model human diseases.

Haurwitz will soon have to seek venture capital again, as Caribou has pivoted to drug development, which is expensive but potentially more lucrative. Her first focus: improve on existing cancer therapies that take patients' immune cells and train them to attack cancer. Crispr, she says, could be used to edit the DNA of immune cells from healthy donors so that these cells could be given to any cancer patient. The company plans to start trials in humans next year. There's competition, from Allogene Therapeutics and its partner Cellectis, which have a combined market cap of $3.9 billion.

Caribou is also developing a program in another buzzy area: the microbiome, or the many bacteria that inhabit all parts of the human body, particularly the gut. This time, investors know what Crispr is, and Haurwitz has already won some over. "She's one of the few people that I've met in my life that is able to toggle between business talk and scientific talk in a heartbeat," says Ambar Bhattacharyya, a Caribou investor at Maverick Ventures.

Beyond the competition, there is an intellectual property conflict. Overlapping patent claims from the University of California and the Broad Institute emerged for the foundational technology, which involves an enzyme called Cas9, used to cut DNA. A lawsuit between the institutions was decided in favor of the Broad, but the U.S. Patent Office has granted patents to both. UC's patents claim broader rights than were demonstrated in its application, says Lisa Ouellette, a Stanford Law School professor, and could make them vulnerable to a legal challenge. (UC disagrees.)

Whoever owns the technology will command fat fees. Caribou might run trials related to a particular gene, but if other companies want to run trials related to other genes, they may have to approach Caribou, says Jacob Sherkow, a professor at New York Law School. "They're going to have to pay handsomely."

Legal battles aside, the new field risks public backlash. In November, Chinese scientist He Jiankui announced he'd used Crispr to tinker with the genomes of human embryos born as twin girls, thereby heightening pressure on Crispr scientists to consider the ethics of how they're using the life-altering tech. Caribou's license agreements include language to prevent its use on human embryos, Haurwitz says.

Doudna says researchers need to vet the science of editing the genes of embryos, and then people need to discuss how to use it responsibly. "Are there real unmet medical needs that would require this kind of editing or not? I think that's one question."

Debate over the answer will shape Crispr's path to commercialization, one that holds immense potential for its youthful founders—and the likelihood of yet more controversy and conflict. ✱

HOW TO PLAY IT BY KEN KAM

Crispr technology may be the key to a range of blockbuster new drugs, but the road ahead could be filled with potholes. Years from now, the Crispr companies that successfully run the drug-discovery gauntlet will need a sales force. The lion's share of a drug's economic value often ends up with the marketer, not the developer. It is common for a drug's marketer to pay a royalty to a drug's developer in the range of 20% or less. Companies that will likely be the marketers of these drugs, such as **Eli Lilly, Amgen** and **Gilead,** are good ways to invest in Crispr technology with much less risk.

Ken Kam is a former mutual fund manager and the founder and chief executive of Marketocracy.

PROTOTYPE

OUR SWIPES, OURSELVES

Data breaches seem to happen so often these days that we're almost numb to them, but they're a big problem for the finance industry, which loses billions to fraud and identity theft every year. The Israeli machine-learning firm **BioCatch (biocatch.com)** thinks it has a better solution. It turns out that the way you swipe, type and otherwise interact with your phone, tablet and laptop are unique to you—nobody else could use your devices in quite the same way. BioCatch's technology can analyze that behavior and determine whether it's you or a ne'er-do-well accessing your account or applying for a loan. Bonus: It quietly enhances security without adding yet more complications to the user experience. The company has big believers in the financial world, including ACI Worldwide, American Express and the Royal Bank of Scotland. Investors like what they see, too: BioCatch has raised more than $40 million since its 2011 founding.

DAVID MALAN/ GETTY IMAGES

PROTOTYPE BY ALEX KNAPP

FINAL THOUGHT

✱ *"We are survival machines—robot vehicles blindly programmed to preserve the selfish molecules known as genes."* —**RICHARD DAWKINS**

Brokers Begone

Two industry outsiders are using AI and do-good marketing to make the centuries-old property insurance business Millennial-friendly—and make themselves rich.

BY JEFF KAUFLIN AND KRISTIN STOLLER

BEN KELMER

Lemonade CEO Daniel Schreiber at the Tel Aviv office of his New York-based insurance company. About 40% of the fintech's staff—but none of its customers—are in Israel.

In the summer of 2017, a Los Angeles man in his mid-20s put on a necklace, blond wig and makeup and made a cellphone video describing how his camera and other electronics had been stolen. He submitted the video to his renters insurance provider, Lemonade, which paid the $677 claim in two days. Three months later, dressed in jeans and a T-shirt and using a different name, email address and phone number, the same man submitted a video claim for a stolen $5,000 camera. But this time, the algorithms that are a crucial part of Lemonade's highly automated systems flagged the claim as suspicious. Last year, the persistent fraudster, this time wearing a pink dress, tried again, only to be foiled once more by Lemonade's computers.

Using artificial intelligence, a mobile app and other tech-centric methods, Lemonade founders Daniel Schreiber and Shai Wininger are turning the centuries-old business of property insurance into a Millennial-friendly consumer product. In 2018, its second full year offering renters and homeowners insurance, Lemonade took in $57 million in premium revenue from 425,000 customers, 75% of them under 35 and 90% of them buying such insurance for the first time. Already operating in 22 states, the 170-employee New York-based startup expects to double revenue this year and expand to all 50 states and Europe. To fund that growth, Lemonade raised $300 million in April at a valuation, says a source, of more than $2 billion. That would make the founders' combined 20% stake worth in excess of $400 million—not bad for two middle-aged guys who until 2015 knew almost nothing about the insurance business.

Not surprisingly, the founders cast their status as insurance industry outsiders as a plus, since it freed them to think differently. CEO Schreiber, 48, was born in Britain, raised in Israel, earned a law degree in London and started working on tech mergers at a Tel Aviv firm. At 26, he quit law to cofound an internet security company. While that startup wasn't a big success, Schreiber went on to hold senior marketing and management jobs in tech, most recently as president of Israeli wireless-charger maker Powermat.

But he wanted another go at his own startup and kept looking for a big idea. By 2015, he had concluded that insurance was ripe for tech disruption because, he says, "every person in the nation, in the world, needs insurance," and yet many distrust traditional insurers. A VC introduced Schreiber to Wininger, a self-taught Israeli coding and design whiz who had already cofounded four businesses, including Fiverr, an Israel-based marketplace for freelance work. Wininger, now 45, quickly signed on as cofounder, heading up tech and prod-

uct design. “When you’re an entrepreneur and you find something like that, it’s a once-in-a-lifetime opportunity that you have to go after,” he says.

Holed up in a room with a whiteboard, the founders sketched out what an ideal insurer would look like—from a Millennial’s point of view. It would be online only (no paper or insurance brokers), low-cost, easy to deal with and “trustworthy.” They weren’t naïve about needing insurance expertise and, in May 2015, recruited Ty Sagalow, a 36-year industry veteran, naming him chief insurance officer. Together, the three made a crucial and gutsy decision: Rather than sell policies backed by established insurers (the way fintech competitors Hippo and Jetty do), Lemonade would become a licensed carrier itself, retaining claim liability on its own balance sheet. That meant Lemonade could pay claims faster and operate under a unique business model that has become a pillar of its marketing. The company takes 25% of insurance premium revenue for administrative costs and potential profits. The other 75% is used to fund customer claims, buy reinsurance (laying off some risk) and pay certain taxes and fees, with anything left going to charities that customers choose. The social-compact pitch: Lemonade can’t profit from denying legit claims, and customers making bogus claims are cheating charity, not some greedy insurer.

Still, becoming a real, regulated insurance carrier meant Lemonade needed more time to launch and more capital to grow. (A carrier typically must maintain cash reserves equal to at least a third of revenue, Sagalow notes.) So far, the capital has flowed—and from some big names. Through 2017, Lemonade raised $180 million in four rounds. In 2019, it raised $300 million, led by billionaire Masayoshi Son’s SoftBank with participation from GV (Alphabet’s venture arm), Josh Kushner’s Thrive Capital, German insurer Allianz, General Catalyst and OurCrowd.

Lemonade issued its first policies in September 2016 in New York. By January, marketing man Schreiber was boasting in a press release and blog post that Lemonade had set a world record by paying one New Yorker’s claim for his stolen Canada Goose parka in three seconds—the time it took Lemonade’s claims bot to run 18 antifraud algorithms and send bank instructions to deposit $729 in the man’s account. Automation also allows Lemonade to offer policies at a very low price: renters insurance starting at $5 a month and homeowners starting at $25. On the review site Clearsurance, Lemonade ranks second in customer satisfaction for renters insurance, behind only USAA.

While Lemonade’s growth has been steep, so too has its learning curve. At the end of 2017, its loss ratio—the amount it pays in claims divided by the premiums it collects—was an unsustainable 166%, compared to 65% to 70% for large insurers. Part of the problem was that Lemonade had too little customer experience on which to train its algorithms, which it uses for approving applicants, pricing risk and determining whether a claim should be paid without humans getting involved (30% are). Indeed, by the first quarter of 2019, its loss ratio had dropped to a healthier 86%. Schreiber predicts it will continue to fall. “What we’re seeing here is something that is going to be very traumatic for the whole insurance space,” he says. “Data is overtaking expertise.”

So far, Lemonade is only a bit player, with a 0.1% share of the homeowners and renters insurance markets combined, compared with 19% for State Farm and 10% for Allstate, according to data from 17 states collected by the Insurance Information Institute. But the big guys have taken note. In October 2018, State Farm released a star-studded ad spoofing budget insurance bots and suggesting they couldn’t compete with human agents. Lemonade’s cheeky response? It tweeted the ad and paid to promote it on YouTube. “This is 2019,” Schreiber scoffs. “You don’t produce ads mocking the power of technology.” *

HOW TO PLAY IT BY JOHN REESE

Berkshire Hathaway’s heavy investment in Geico and other insurers and Warren Buffett’s $87 billion net worth are living proof that the economics of the property and casualty business favor the house. Pennsylvania’s **Erie Indemnity** is the 9th-largest homeowners insurer and 11th-largest automobile insurer in the U.S. Since its humble beginnings in 1925, the company has grown to employ over 5,000 people and work with over 12,000 independent agents. Erie has healthy margins, little debt and double-digit long-term earnings and sales growth. This under-the-radar company has had tech-stock returns recently (up 35% year to date) and offers a 2% dividend yield.

John Reese is the CEO of Validea.com.

FINAL THOUGHT

* *“That’s why you pay for insurance, right? If you never file a claim, then they’ve beaten you.”* —JONATHAN TROPPER

MARGIN PROPHET

MILK MONEY

In 2013, when **Tania Boler** pitched the wearable Elvie Trainer, which guides new moms through Kegel workouts to help them rebuild their pelvic floor, many male investors were uncomfortable. Unbowed, Boler has developed the Elvie Pump, a silent, slim, wireless breast pump that connects to an app to help mothers track milk output. The London startup just raised $42 million.

What led you to invent the Elvie Trainer?

I have a Ph.D. in reproductive health and had no idea about Kegels’ importance. I was shocked that one in three women suffer incontinence due to pelvic-floor damage after childbirth, and sanitary pads are their only solution.

And then why redesign the breast pump?

Why do we put up with a throwback from the 1980s? I worked with Alexander Asseily, who cofounded wearable-tech company Jawbone. We started with a blank piece of paper and said the new pump had to be user-friendly, discreet, quiet and wearable.

What’s behind your focus on U.S. growth?

Last February, the Elvie Pump sold out within six minutes when it debuted in the U.S. It’s an essential product under the Affordable Care Act. “FemTech” is not just about product innovation. We need to change the conversation around women’s health.

MARGIN PROPHET BY TANYA BENEDICTO-KLICH


Ad Council
I am very sensitive to lights and sounds
Jacob Sanchez
Diagnosed with autism
Sensory sensitivity is a sign of autism.
Learn the others at autismspeaks.org/signs.
AUTISM SPEAKS

From his home in Rosslyn, Virginia, Appian CEO Matt Calkins finds board games give him a boardroom edge: "It's a great way to evaluate complexity."

JAMEL TOPPIN FOR FORBES

Board Game God, Geek Billionaire

Are you good at complicated strategy games? Then you might have the talent to be a software mogul like Matt Calkins.

BY ALEX KONRAD

"I feel like I should apologize," Matt Calkins tells his opponent as they shake hands. It's mid-evening in the log-lined cafeteria at the Seven Springs Mountain Resort, and Calkins, from a trailing position, has just played a decisive move in the board game Sekigahara. His opponent shakes his head at the suggestion Calkins prevailed through luck. "You sprung a trap on me," he says.

Luck? Nonsense. Calkins is a board game whiz. That has something to do with being a business success. On the side, when he's not designing or playing games, he runs Appian Corp., a Reston, Virginia, firm that sells software to help businesses build apps more quickly. Appian, which went public in 2017, is worth $2.1 billion; Calkins owns just under half.

The Seven Springs event last July drew 1,700 players to the Allegheny Mountains of southwestern Pennsylvania to compete in 185 games. Calkins wasn't just a player. He created two of those games: Sekigahara, which re-creates a decisive battle of shogunate Japan, and Tin Goose, which challenges players to build one of the first commercial airlines.

And then there's his other life. Calkins, 46, cofounded Appian 20 years ago; it initially built software tools, such as an intranet portal for the U.S. Army. Since 2004 the company has been tackling the bigger problem of making digitization less coding-intensive for programmers. With Appian software, a corporate client can create its own applications (say, for a bank's users to check their balances or for a government agency to handle payments) at a lower cost than it could on its own.

What's that got to do with designing games? Both involve breaking down every big concept or rule to its simplest mechanics. "I like understanding complicated things and rendering them comprehensible," Calkins says.

Growing up just north of San Francisco, the son of a real estate developer and a math teacher, Calkins spent his time camping, studying music and playing games. At Dartmouth, where he graduated in 1994 as the top economics student in his class, Calkins migrated from the tactics of the strategy game Diplomacy to the intricacies of game theory (one thesis paper he wrote explained when a losing hockey team should pull its goalie). He took a few computer science courses and after college joined MicroStrategy, a business software vendor that saw meteoric success (and then a stock-market crash) in the dot-com bubble.

By 1999, Calkins and three friends were meeting to teach each other coding languages. He left MicroStrategy that year to launch Appian with them. "I thought, I can do this," Calkins said. "Overconfidence helped."

Other startups soared after raising large sums from venture capitalists and then flamed out just as fast. Calkins bootstrapped. Appian wouldn't seek major outside funding until 2008, when it raised $10 million, followed by a $36 million round led by venture capital firm NEA in 2014.

Appian's shtick is "low code." By offering building blocks of code to businesses, Appian shortens the time it takes a customer to make its own app. Appian handles all the trickier details, like making sure the app works across Web browsers, mobile devices and computers. Customers like Sprint and Bayer AG gain peace of mind; at Goldman Sachs, even well-trained engineers used Appian to assemble programs quickly without having to write them from scratch. "It's not just faster but more powerful software," Calkins says.

Demand for Appian grew as more companies realized that customers expected the same streamlined experience they knew from their favorite smartphone apps. Sales and its stock, nearly triple its IPO price, soared—though not profits. Like many software-as-a-service companies, it still runs at a loss to support increased marketing and R&D.

While he managed the growing company, Calkins kept up his competitive board gaming. He has collected 700 games and dissects them for their mechanics. For almost two decades, he has been a regular at the World Boardgaming Championships, missing days here and there, such as for a Morgan Stanley summer conference the year before Appian went public.

Games provide a clear feedback loop, Calkins says. Each game starts from equal footing. It has only two true outcomes, a win or a loss. Calkins doesn't lose much, but when he does, he'll recreate the crucial position and stay up all night studying it. "I come back from a tournament and my mind's just going a million miles an hour," he says. "I feel like all the meetings have just slowed down because I'm catching so much detail and I'm aware of everybody around the table."

One of Appian's competitors is the Boston firm Pegasystems. That outfit is run by Alan Trefler, also a billionaire Dartmouth grad and, not so surprisingly, cochampion of the 1975 World Open in chess. Playing games requires you to hone your pattern recognition and deep evaluation skills and develop a sixth sense for mistakes, says Trefler. "If you lose concentration, you die. And that's true in business," he says.

Designing board games forces Calkins to distill historical narratives and hundreds of feature choices into a coherent set of rules. The result has to be fun, too; his friends shunned early versions of Sekigahara as tedious and overly complex. The work flow of an Appian client's needs requires a similar process.

The game and software worlds intersect at Appian, which boasts its own board game library. Employees are invited to monthly gaming nights at Calkins' house; all 42 interns showed up to one session last year. "Junior staffers want to try to win games against him," says David Metzger, the company's vice president of talent, who befriended Calkins at the board game championships and then joined Appian. "Not many are successful at it."

The challenge may be enough to keep young talent from jumping ship for a flashier venture in Silicon Valley. BTIG analyst Joel Fishbein notes that while Appian has well-positioned technology and a strong relationship with consulting firms like Accenture, PwC and KPMG, it faces an uphill perception battle about its category, which, though in "early innings," does not have the allure of artificial intelligence or rocket ships.

This summer Calkins will be back competing in Seven Springs, looking to top his 2018 showing, when he swept two categories and finished seventh overall. He's unperturbed by the attention and says he plans to be solving problems in both environments for a long time. "You are what you did at your last game," he says. "Don't tell us who you are. Just sit down and show it." ✱

HOW TO PLAY IT BY WILLIAM BALDWIN

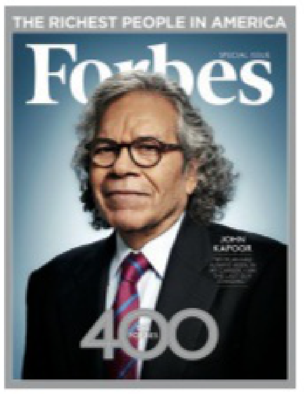
What a marvelous business is software as a service! It costs nothing to copy software, so profits are immense—at least, if you don't count other costs, like marketing. To capture investors' exuberant feeling for this sector, let us suppose that these ten companies merge: Appian (featured here), Atlassian, Box, DocuSign, HubSpot, Salesforce.com, ServiceNow, Workday, Zendesk and Zuora. Saas Inc., as we'll call it, has doubled revenue in three years, but spends lavishly to get and keep customers. Enterprise value is $266 billion, or 387 times Ebitda. My imaginary company (ticker: BUBL) doesn't trade, but if it did I'd short it.

William Baldwin is Forbes' Investment Strategies columnist.

FINAL THOUGHT

✱ *"When you strip away the technological complexities, all games share four defining traits: a goal, rules, a feedback system and voluntary participation."* —**JANE MCGONIGAL**

FOLLOW-THROUGH



PAIN POINTS

"I've always taken the company to the finish line," Insys Therapeutics founder **John Kapoor** told *Forbes* in late 2016. "If something happens, I don't just run away and say, 'Okay, I'm done.' " Kapoor was then worth $2.1 billion thanks to his majority stake in Insys, maker of Subsys, a fast-acting form of fentanyl, a narcotic up to 100 times stronger than morphine.

A year after appearing on the cover of The Forbes 400 *(October 25, 2016)*, Kapoor was arrested for conspiring to bribe doctors to prescribe Subsys. He resigned as CEO and, with Insys shares down two thirds over the last five years, lost his billionaire status in December.

Witnesses at the recent trial of Kapoor—who denies all allegations—testified that Insys paid doctors sham speaking fees and used attractive sales reps (and in at least one case a lap dance) to woo them. As of press time, a verdict was expected soon. Kapoor is still Insys' majority shareholder, but he ceded his voting rights to a trust and could be forced to divest. The company is exploring a sale of Subsys.

FOLLOW-THROUGH BY HAYLEY CUCCINELLO

Forbes

WOMEN'S

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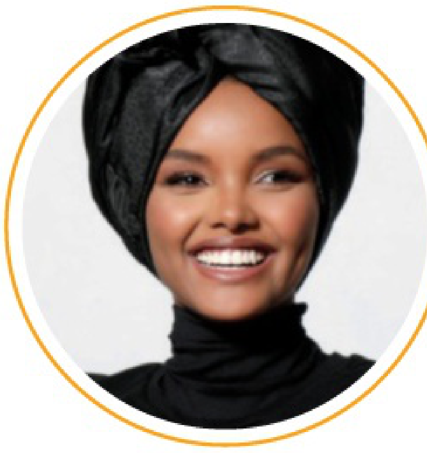


HALIMA ADEN

Model & Activist

EVA LONGORIA

Actress, Producer, Director, Entrepreneur & Philanthropist

Leading the Way

The **2019 Forbes Women's Summit** brings together a community of inspiring and innovative visionaries whose ambitious actions are changing the world with unprecedented scale. Across industries and generations, the gathering spotlights how leading women are navigating monumental change to rearchitect industries, spark major movements and unlock opportunities for others. Featuring keynote conversations and dynamic panel discussions, the Forbes Women's Summit will convene a diverse range of female luminaries from the worlds of business, media, entertainment and politics.

PRESENTED BY Audi Vanguard

#FORBESWOMEN

Mogul Money Moves

If you ever dreamed of rock-star riches, a service called Royalty Exchange is offering VIP access and eye-popping yields based on the rights to iconic songs, movies and television shows.

BY ZACK O'MALLEY GREENBURG

Alex Guiva had never heard of Cardi B before he invested in one of her songs. Artists in his portfolio include Cage the Elephant and Willow Smith.

TREVOR PAULHUS FOR FORBES

Alex Guiva's career arc doesn't fit that of a typical music impresario. Born in Ukraine, he moved to Arkansas in 1997 to attend Lyon College before settling into a corporate finance job at a Dallas investment boutique. Last year he stumbled across a site called Royalty Exchange and invested a five-figure sum in a catalog of music played on the sitcom *Modern Family* and in Barbie commercials.

When that first catalog delivered a 15% annualized return, Guiva decided to expand his portfolio and went searching for another piece of intellectual property on the platform. Eventually, he found a new song with double-digit yield potential and won a slice at auction for $110,000, even though he wasn't familiar with the tune itself, "Bodak Yellow," or its performer, a rising hip-hop star from the Bronx.

"To be frank, prior to seeing this, I had not heard of Cardi B," says Guiva, who has now committed about 10% of his overall portfolio to music royalties. "But I felt like [the song] had enough following. The comments on YouTube and everything else—I felt like she'll continue being popular."

"Bodak Yellow" is now certified 7x platinum, and the aggregate global value of music copyrights has soared to $28 billion, according to Spotify's chief economist, Will Page. Along with competitors like SongVest, Royalty Exchange has given entertainment aficionados with a penchant for DIY investing a way to tap into this market in bite-size chunks. Among the recent sales: $113,400 for a piece of a catalog featuring Jay-Z, Beyoncé and Justin Timberlake that has yielded $25,000, or 22%, over the past year; on the cheaper side, $22,300 for a K-Pop collection that threw off $5,900, a whopping 26% return, in its first year.

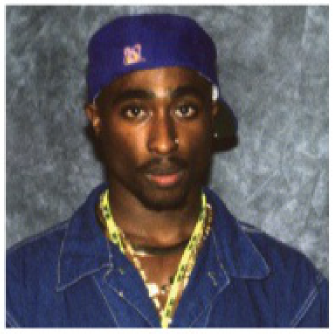
The price points are a major departure from the past, when catalogs generally changed hands only for tens or even hundreds of millions and were rarely chopped up song by song, let alone down to a percentage of a single track. Unlike startups, this asset class—which also includes film residuals, book publishing royalties and earnings from patents—has no accredited investor requirement. It also offers significant tax incentives for buyers, who can write off the purchase price over a period of years.

Part of the allure is the simplicity of the Web-based platforms. Royalty Exchange users sign into a free account and, after a phone verification for first-time bidders, can buy in three ways. There's the auction format Guiva used to acquire his slice of

Rhapsody in Green

STREAMING SERVICES HAVE REIGNITED THE RECORD BUSINESS, AND TODAY INVESTORS CAN BUY SMALL SLICES OF THEIR FAVORITE SONGS AND SHOWS. BUT BUYER BEWARE: THOSE EYE-POPPING RETURNS CAN FADE FAST.

1983 COMEDY CLASSIC *TRADING PLACES*
TERM: **LIFE OF RIGHTS**
ROYALTY TYPE: **FILM RESIDUALS**
PRICE / MULTIPLE / YIELD: **$140,300 / 17.5 / 6%**



EARLY TUPAC SHAKUR HITS
TERM: **10 YEARS**
ROYALTY TYPE: **PUBLIC PERFORMANCE**
PRICE / MULTIPLE / YIELD: **$56,000 / 9.2 / 11%**

THE DOOBIE BROTHERS (“BLACK WATER” AND OTHER SONGS)
TERM: **10 YEARS**
ROYALTY TYPE: **PUBLISHING**
PRICE / MULTIPLE / YIELD: **$160,000 / 6.6 / 15%**

JAY-Z’S “EMPIRE STATE OF MIND”
TERM: **10 YEARS**
ROYALTY TYPE: **PUBLIC PERFORMANCE**
PRICE / MULTIPLE / YIELD: **$190,500 / 5.8 / 17%**

BETTE MIDLER’S “THE ROSE”
TERM: **LIFE OF RIGHTS**
ROYALTY TYPE: **PUBLISHING**
PRICE / MULTIPLE / YIELD: **$106,000 / 15.4 / 6%**

ETTA JAMES’ “SOMETHING’S GOT A HOLD ON ME”
TERM: **LIFE OF RIGHTS**
ROYALTY TYPE: **PUBLISHING**
PRICE / MULTIPLE / YIELD: **$144,000 / 6.9 / 14%**

SESAME STREET SONGS
TERM: **LIFE OF RIGHTS**
ROYALTY TYPE: **PUBLISHING**
PRICE / MULTIPLE / YIELD: **$580,000 / 5.3 / 19%**

CARDI B’S “BODAK YELLOW”
TERM: **10 YEARS**
ROYALTY TYPE: **PUBLIC PERFORMANCE**
PRICE / MULTIPLE / YIELD: **$110,000 / 3 / 33%**

BARRY WHITE’S “YOU’RE THE FIRST, THE LAST, MY EVERYTHING”
TERM: **LIFE OF RIGHTS**
ROYALTY TYPE: **PUBLISHING**
PRICE / MULTIPLE / YIELD: **$73,000 / 10.8 / 9%**

WIZ KHALIFA’S “SEE YOU AGAIN”
TERM: **LIFE OF RIGHTS**
ROYALTY TYPE: **SOUND RECORDING**
PRICE / MULTIPLE / YIELD: **$102,000 / 8.9 / 11%**

SOURCES: ROYALTY EXCHANGE; FORBES ESTIMATES.
NOTE: “MULTIPLE” REPRESENTS THE RATIO OF PURCHASE PRICE TO TRAILING 12-MONTH ROYALTY INCOME (OR ANNUALIZED INCOME FOR RIGHTS LESS THAN A YEAR OLD).

“Bodak Yellow”; there are private syndicates, which offer a chance to invest in a diversified batch of catalogs; and there’s an order book, which the company launched recently, where investors can specify the quantitative characteristics they’re after and a number of catalogs to spread the capital across.

Royalty Exchange takes a hefty cut, some 15% from the seller on a typical sale plus a one-time $500 fee at the end of each auction to cover future royalty administration. For the syndicates, the company takes a carry not unlike a hedge fund’s, but with no additional fees. It’s a lucrative business: Royalty Exchange has processed $60 million in transactions since 2016, $7.6 million of that coming in the first quarter of 2019 thanks to auctions.

“The vast majority of all the capital in the world is devoted to generating income,” says Matt Smith, 44, the company’s CEO. “There’s funds from private equity to family offices to sovereign wealth funds that are all eager to participate in music royalties. Because the way the markets are right now, it’s just really tough to get yield.”

Smith tuned into Royalty Exchange much the same way Guiva did, drawn more by income potential than by a particular band or song. The serial entrepreneur came across the service several years ago while looking for a way to invest in music copyrights. The North Carolina-based outfit, which was founded in 2011, was struggling at the time, and Smith decided not to buy any catalogs—but he did end up purchasing the company’s assets for an undisclosed sum.

Smith had been CEO of Stansberry Research, a publisher of aggressively marketed investment newsletters, including Retirement Millionaire, Cannabis Capitalist and Commodity Supercycles. He knew that ever since the Fed tanked interest rates, retail investors were clamoring for any assets that could generate high income. Selling royalty streams for popular music, television shows and films presented a golden

Turn the page and open the fold to see the top wealth advisors in every state.

NEWSCOM; TIMOTHY MOSENFELDER-GETTY IMAGES; MICHAEL OCHS ARCHIVES-GETTY IMAGES; GETTY IMAGES; ALAMY; GETTY IMAGES (3); ABC ARCHIVES-GETTY IMAGES; GETTY IMAGES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Best-In-State Wealth Advisors

Thanks to big shifts in technology and the evolution of markets, prudent investing requires global knowledge and a macro approach. But when it comes to financial planning and advice, having local expertise and on-the-ground networks can make all the difference. The Forbes/Shook Best-In-State Wealth Advisors (500 listed here, with an additional 2,978 online) features the top advisors across the country and U.S. territories who, combined, manage over $3 trillion in client assets.

For the full list visit:
www.forbes.com/best-in-state-wealth-advisors

BY HALAH TOURYALAI, ASHLEA EBELING, SARAH HANSEN, JONATHAN PONCIANO AND KRISTIN STOLLER

KEY
STATE
Wealth Advisor
Company
City
Assets Under Mgmt

ALABAMA

1 Moss Crosby
HighTower Advisors
HUNTSVILLE
$1.07B

2 Tony Smith
UBS Financial Services
BIRMINGHAM
$3.2B

3 Mark Mantooth
Merrill Lynch Wealth Mgmt
HUNTSVILLE
$883M

4 Camper O'Neal
Merrill Lynch Wealth Mgmt
BIRMINGHAM
$812M

5 Michael Warr
Morgan Stanley Wealth Mgmt
TUSCALOOSA
$1.3B

ALASKA

1 Tom Konop
Morgan Stanley Wealth Mgmt
ANCHORAGE
$247M

2 Tommy Kibler
Merrill Lynch Wealth Mgmt
ANCHORAGE
$360M

3 Robert Bell II
Wells Fargo Advisors
FAIRBANKS
$178M

ARIZONA

1 Allan Flader
RBC Wealth Mgmt
PHOENIX
$607M

2 Steven Schultz
UBS Financial Services
PHOENIX
$1.9B

3 Glenn Pahnke
RBC Wealth Mgmt
SCOTTSDALE
$650M$

4 Robert Bancroft
Morgan Stanley Private Wealth Mgmt
SCOTTSDALE
$1.2B

5 Joe DiVito
RBC Wealth Mgmt
PHOENIX
$500M

6 Tony Bebbington
UBS Financial Services
PHOENIX
$461M

7 Vance Falbaum
RBC Wealth Mgmt
TUCSON
$505M

8 Paul Groves
Morgan Stanley Private Wealth Mgmt
SCOTTSDALE
$1.2B

9 Jacob Duffy
Baird
SCOTTSDALE
$426M

10 Mark Feldman
MRA Associates
PHOENIX
$2.4B

11 Susan Bailey
UBS Financial Services
SCOTTSDALE
$229M

12 Fernando Gandara
Merrill Lynch Wealth Mgmt
TUCSON
$185M

13 Jane Rojas
Morgan Stanley Wealth Mgmt
TUCSON
$483M

ARKANSAS

1 Hardy Winburn
UBS Financial Services
LITTLE ROCK
$516M

2 Don McDonald
Merrill Lynch Wealth Mgmt
FORT SMITH
$3.5B

3 Edward Prewitt
Wells Fargo Advisors
FAYETTEVILLE
$331M

CALIFORNIA (LOS ANGELES AREA)

1 Randy C. Conner
Churchill Mgmt Grp
LOS ANGELES
$5.4B

2 David Hou
First Republic Investment Mgmt
LOS ANGELES
$3.5B

3 Richard Jones
Merrill Lynch—Private Banking & Investment Grp
LOS ANGELES
$14B

4 Reza Zafari
Merrill Lynch—Private Banking & Investment Grp
LOS ANGELES
$14B

5 Rebecca Rothstein
Merrill Lynch—Private Banking & Investment Grp
BEVERLY HILLS
$3.2B

6 Drew Freides
UBS Financial Services
LOS ANGELES
$3.5B

7 Alan Whitman
Morgan Stanley Wealth Mgmt
PASADENA
$1.6B

8 Mark Schulten
Wells Fargo Advisors
LONG BEACH
$3.2B

9 Drew Zager
Morgan Stanley Private Wealth Mgmt
LOS ANGELES
$7.3B

10 Eric Gray
Merrill Lynch—Private Banking & Investment Grp
LOS ANGELES
$11B

11 Craig Chiate
UBS Financial Services
LOS ANGELES
$3.2B

12 Spuds Powell
Kayne Anderson Rudnick
LOS ANGELES
$4B

13 Mark Sear
First Republic Investment Mgmt
LOS ANGELES
$1.9B

14 Sean Yu
Morgan Stanley Private Wealth Mgmt
PASADENA
$685M

15 Bruce Munster
Merrill Lynch—Private Banking & Investment Grp
LOS ANGELES
$1.6B

16 Michael Kanigher
UBS Financial Services
LOS ANGELES
$3.5B

17 Brian Werdesheim
Oppenheimer & Co.
LOS ANGELES
$1.3B

18 Jeffrey Werdesheim
Oppenheimer & Co.
LOS ANGELES
$1.3B

19 Mark Binder
UBS Financial Services
LOS ANGELES
$3.2B

20 Lisa Detanna
Global Wealth Solutions Grp of Raymond James
BEVERLY HILLS
$985M

21 Richard Blosser
Wells Fargo Advisors
LOS ANGELES
$1.5B

22 Philippe Hartl
Merrill Lynch—Private Banking & Investment Grp
LOS ANGELES
$6B

23 James McCabe
Wells Fargo Advisors
BEVERLY HILLS
$1.7B

24 Roger Wacker
UBS Financial Services
LOS ANGELES
$1.6B

25 Glen Strauss
Wells Fargo Advisors
LOS ANGELES
$1.3B

CALIFORNIA (NORTHERN)

1 Andy Chase
Morgan Stanley Private Wealth Mgmt
MENLO PARK
$18B

2 Mark Curtis
Morgan Stanley Graystone
PALO ALTO
$30B

3 Greg Vaughan
Morgan Stanley Private Wealth Mgmt
MENLO PARK
$19.1B

4 Robert J. Skinner II
First Republic Investment Mgmt
PALO ALTO
$3.4B

5 Jon Goldstein
First Republic Investment Mgmt
PALO ALTO
$3B

6 Mark Douglass
Morgan Stanley Private Wealth Mgmt
MENLO PARK
$18B

7 Robert Gallo
Merrill Lynch Wealth Mgmt
WALNUT CREEK
$1.4B

8 Cheryl Young
Morgan Stanley Wealth Mgmt
LOS GATOS
$904M

9 Rich Petit
Morgan Stanley Private Wealth Mgmt
MENLO PARK
$4.8B

10 Dana Jackson
Morgan Stanley Private Wealth Mgmt
MENLO PARK
$5B

11 Dorian McKelvy
Morgan Stanley Wealth Mgmt
MENLO PARK
$6.6B

12 Mike Abrams
Wells Fargo Advisors
PALO ALTO
$5.5B

13 Alan Zafran
First Republic Investment Mgmt
PALO ALTO
$3.5B

CALIFORNIA (SAN FRANCISCO)

1 Elaine Meyers
J.P. Morgan Securities
$2.8B

2 Troy Griepp
Morgan Stanley Private Wealth Mgmt
$9.6B

3 Jesse Bromberg
Morgan Stanley Wealth Mgmt
$1B

4 Jeffrey Colin
Baker Street Advisors
$7.5B

5 Debra Wetherby
Wetherby Asset Mgmt
$4.7B

6 Shane Brisbin
Morgan Stanley Private Wealth Mgmt
$4.7B

7 Tim Emanuels
Morgan Stanley Private Wealth Mgmt
$4.9B

8 Ash Chopra
Merrill Lynch—Private Banking & Investment Grp
$2.3B

9 Dagny Maidman
First Republic Investment Mgmt
$1.9B

10 David Jasper
UBS Financial Services
$1.7B

11 Michael Evans
UBS Financial Services
$1.7B

12 Greg Onken
J.P. Morgan Securities
$3.3B

13 Gillian Yu
Morgan Stanley Private Wealth Mgmt
$4.5B

CALIFORNIA (SOUTHERN)

1 Laila Pence
Pence Wealth Mgmt
NEWPORT BEACH
$1.5B

2 David Bahnsen
HighTower Advisors
NEWPORT BEACH
$1.4B

3 Sonny Kothari
Merrill Lynch
BREA
$1B

4 Carolyn Taylor
Weatherly Asset Mgmt
DEL MAR
$778M

5 Chad Evans
Morgan Stanley Wealth Mgmt
NEWPORT BEACH
$2.3B

6 Dan Horgan
Raymond James & Associates
NEWPORT BEACH
$375M

7 Larry Smith
UBS Financial Services
BREA
$1B

8 Peter Huffman
Merrill Lynch Wealth Mgmt
LA JOLLA
$697M

9 Courtney Liddy
UBS Financial Services
SAN DIEGO
$488M

10 Gino Stumpo
UBS Financial Services
SEAL BEACH
$354M

11 Joseph D. Anderson
Pure Financial Advisors
SAN DIEGO
$2.1B

12 Anouchka Balog
Morgan Stanley Wealth Mgmt
LAGUNA NIGUEL
$626M

COLORADO

1 Shawn Fowler
Morgan Stanley Private Wealth Mgmt
DENVER
$3B

2 Wally Obermeyer
Obermeyer Wood Investment Counsel
ASPEN
$1.5B

3 Pamela Rosenau
HighTower Advisors
ASPEN
$1B

4 Mark Smith
M.J. Smith & Associates/Raymond James
GREENWOOD VILLAGE
$728M

5 Perry Mattern
Wells Fargo Advisors
CHERRY CREEK
$737M

6 Mark Brown
Brown and Company
DENVER
$449M

7 Ali Phillips
Obermeyer Wood Investment Counsel
ASPEN
$1.5B

8 Scott Thisted
Merrill Lynch—Private Banking & Investment Grp
DENVER
$1.2B

9 Melissa Corrado Harrison
UBS Financial Services
DENVER
$1.2B

10 Brent Hablutzel
Merrill Lynch Wealth Mgmt
GREENWOOD VILLAGE
$482M

11 Andrew Dodds
Dodds Wealth Mgmt
ENGLEWOOD
$432M

12 Donna Di Ianni
Merrill Lynch Wealth Mgmt
ASPEN
$869M

CONNECTICUT

1 Jeff Erdmann
Merrill Lynch—Private Banking & Investment Grp
GREENWICH
$10.2B

2 Paul Tramontano
First Republic Investment Mgmt
GREENWICH
$2B

3 William Greco
UBS Financial Services
HARTFORD
$4B

4 Brian Hetherington
Merrill Lynch—Private Banking & Investment Grp
NEW CANAAN
$2.5B

5 Ron Weiner
HighTower Advisors
WESTPORT
$757M

6 Harold Trischman
Morgan Stanley Wealth Mgmt
GREENWICH
$1.7B

7 Tom Vacheron
Merrill Lynch Wealth Mgmt
FAIRFIELD
$1.4B

8 Bryan Stepanian
Alex. Brown/Raymond James
GREENWICH
$1.1B

9 Teresa Jacobsen
UBS Financial Services
STAMFORD
$860M

DELAWARE

1 Thomas Weisenfels
Merrill Lynch Wealth Mgmt
WILMINGTON
$385M

2 Mike Koppenhaver
Merrill Lynch Wealth Mgmt
DOVER
$683M

3 David Plaza
Merrill Lynch Wealth Mgmt
WILMINGTON
$331M

4 Steve Felt
Morgan Stanley Wealth Mgmt
WILMINGTON
$314M

DISTRICT OF COLUMBIA

1 Marvin McIntyre
Morgan Stanley Private Wealth Mgmt
$3.4B

2 Keith Apton
UBS Financial Services
$1.3B

3 Greg Marcus
UBS Financial Services
$563M

4 Michael O'Neill
Morgan Stanley Private Wealth Mgmt
$1.9B

5 J.C. McKnight
Merrill Lynch Wealth Mgmt
$1B

6 Brett Anthony
Morgan Stanley Wealth Mgmt
$2.8B

7 William Slater III
Merrill Lynch—Private Banking & Investment Grp
$1.3B

8 Neil Kishter
Merrill Private Wealth Mgmt
$845M

FLORIDA (MIAMI AREA)

1 Patrick Dwyer
Merrill Lynch—Private Banking & Investment Grp
MIAMI
$3.8B

2 Louis Chiavacci
Merrill Lynch—Private Banking & Investment Grp
CORAL GABLES
$2.8B

3 Adam Carlin
Morgan Stanley Private Wealth Mgmt
CORAL GABLES
$2.8B

4 Andrew Schultz
Morgan Stanley Wealth Mgmt
MIAMI BEACH
$733M

5 Margaret Starner
Starner Grp of Raymond James
CORAL GABLES
$1B

6 Peter Bermont
The Bermont Advisory Grp of Raymond James
CORAL GABLES
$1.6B

7 Ghislain Gouraige
UBS Financial Services
CORAL GABLES
$2.2B

8 Jorge Gomez
UBS Financial Services
CORAL GABLES
$1.2B

9 John Elwaw
Morgan Stanley Wealth Mgmt
MIAMI
$1.5B

10 Faith Xenos
Singer Xenos Schechter Sosler Wealth Mgmt
CORAL GABLES
$1.5B

FLORIDA (NORTHERN)

1 Michael Valdes
Merrill Lynch—Private Banking & Investment Grp
TAMPA
$4.2B

2 Clarke Lemons
WaterOak Advisors
WINTER PARK
$2B

3 Bob Doyle
Doyle Wealth Mgmt
ST. PETERSBURG
$922M

4 Christopher Aitken
UBS Financial Services
PONTE VEDRA BEACH
$791M

5 Charlie Mulfinger
Morgan Stanley Graystone
TAMPA
$4.4B

6 George Jackson
Jackson Wealth Mgmt
LAKE MARY
$568M

7 Ken Burke
Merrill Lynch Wealth Mgmt
HEATHROW
$1.1B

FLORIDA (SOUTHERN)

1 Thomas Moran
Moran Edwards Asset Mgmt
NAPLES
$4B

2 Sal Tiano
J.P. Morgan Securities
PALM BEACH GARDENS
$3.1B

3 Don d'Adesky
The Americas Grp of Raymond James
BOCA RATON
$2.7B

4 Jason Stephens
UBS Financial Services
NAPLES
$944M

5 Todd Battaglia
Meg Green & Associates Wealth Mgmt
PLANTATION
$832M

6 Kurt Sylvia
J.P. Morgan Securities
PALM BEACH GARDENS
$825M

7 Barry Berg
First Republic Investment Mgmt
PALM BEACH
$524M

GEORGIA

1 Rod Westmoreland
Merrill Lynch—Private Banking & Investment Grp
ATLANTA
$4.9B

2 James Hansberger
Morgan Stanley Private Wealth Mgmt
ATLANTA
$2.5B

3 Brian Frank
Morgan Stanley Private Wealth Mgmt
ATLANTA
$1.8B

4 Andy Berg
Homrich Berg
ATLANTA
$5.6B

5 Hank McLarty
Gratus Capital
ATLANTA
$1.5B

6 Ron Hughes
Merrill Lynch—Private Banking & Investment Grp
ATLANTA
$969M

7 Buck Wiley III
Merrill Lynch—Private Banking & Investment Grp
ATLANTA
$2.2B

HAWAII

1 Alan Kodama
Ameriprise Financial
HONOLULU
$378M

2 Eric Fujimoto
Ameriprise Financial
HONOLULU
$610M

3 Peter Backus
Morgan Stanley Graystone
HONOLULU
$797M

IDAHO

1 Sandra Dalton
UBS Financial Services
BOISE
$540M

2 Brian King
RBC Wealth Mgmt
EAGLE
$800M

ILLINOIS (CHICAGO)

1 Raj Bhatia
Merrill Lynch—Private Banking & Investment Grp
$1.5B

2 Jim Moriarty
Morgan Stanley Private Wealth Mgmt
$1.8B

3 Christian Habitz
J.P. Morgan Securities
$750M

4 Thomas Salvino
William Blair & Co.
$1.2B

5 Sharon Oberlander
Merrill Lynch Wealth Mgmt
$1.1B

6 Mark Thorndyke
Merrill Lynch Wealth Mgmt
$1B

7 Louise Lane
William Blair & Co.
$920M

8 Stewart Mather
The Mather Grp
$1.6B

9 Daniel Fries
Merrill Lynch Wealth Mgmt
$889M

10 Matthew Dillig
HighTower Advisors
$1.1B

ILLINOIS (EXCLUDING CHICAGO)

1 Steve Hefter
Wells Fargo Advisors
HIGHLAND PARK
$2.3B

2 Brent Brodeski
Savant Capital
ROCKFORD
$5.8B

3 Scott Magnesen
Morgan Stanley Wealth Mgmt
OAK BROOK
$3.3B

4 Kyle Chudom
Morgan Stanley Wealth Mgmt
OAK BROOK
$827M

5 Ron Stenger
Morgan Stanley Wealth Mgmt
OAK BROOK
$652M

6 JR Gondeck
The Lerner Grp
DEERFIELD
$1.4B

7 Benjamin Klein
Merrill Lynch Wealth Mgmt
NORTHBROOK
$814M

8 Rod Loewenthal
UBS Financial Services
NORTHBROOK
$896M

9 Todd Moser
Ameriprise Financial
BARRINGTON
$1.4B

10 Steven Porter
Merrill Lynch Wealth Mgmt
NORTHBROOK
$660M

11 Benjamin Leshem
Wells Fargo Advisors
HIGHLAND PARK
$2.3B

12 Dave Sheppard
Merrill Lynch Wealth Mgmt
DEER PARK
$768M

INDIANA

1 Brian Cooke
Cooke Financial Grp at Noyes
INDIANAPOLIS
$1.9B

2 J. Chris Cooke
Cooke Financial Grp at Noyes
INDIANAPOLIS
$1.9B

3 Eric Payne
Merrill Lynch Wealth Mgmt
INDIANAPOLIS
$1.6B

IOWA

1 Matt Fryar
Wells Fargo Advisors
DES MOINES
$750M

2 Jerry Ask
Jerry Ask Investment Services/Raymond James
CEDAR RAPIDS
$384M

3 Malik Khaliq
Wells Fargo Advisors
DAVENPORT
$266M

KANSAS

1 Peter Mallouk
Creative Planning
OVERLAND PARK
$36B

2 Rick Homuth
Merrill Lynch Wealth Mgmt
LEAWOOD
$869M

3 Tim L. Werth
Raymond James Financial Services
HAYS
$584M

4 Philip Verhaeghe
Merrill Lynch Wealth Mgmt
LEAWOOD
$845M

KENTUCKY

1 Travis Musgrave
Merrill Lynch Wealth Mgmt
LEXINGTON
$621M

2 Barry Barlow
Merrill Lynch Wealth Mgmt
LOUISVILLE
$788M

3 Morgan Fister
Morgan Stanley Wealth Mgmt
LEXINGTON
$801M

LOUISIANA

1 Curtis Eustis
Merrill Lynch Wealth Mgmt
NEW ORLEANS
$860M

2 Rick Frayard
UBS Financial Services
LAFAYETTE
$2B

3 James Spiro
Morgan Stanley Wealth Mgmt
NEW ORLEANS
$2B

MAINE

1 Todd Doolan
Morgan Stanley Wealth Mgmt
PORTLAND
$388M

2 Gibson Wilkes
HighTower Advisors
PORTLAND
$503M

3 Jeremiah Burns
Morgan Stanley Private Wealth Mgmt
PORTLAND
$476M

4 Eric Dexter
Wells Fargo Advisors
PORTLAND
$309M

5 Nichole Raftopoulos
Nvest Financial Grp
KENNEBUNK
$205M

MARYLAND

1 Martin Eby
WMS Partners
TOWSON
$3.1B

2 Kent Pearce
Merrill Lynch Wealth Mgmt
TOWSON
$1.7B

3 Joseph Jacques
Jacques Financial
ROCKVILLE
$859M

4 Barry Garber
Alex. Brown/Raymond James
BALTIMORE
$2.1B

5 E. Geoffrey Sella
SPC Financial/Raymond James
ROCKVILLE
$772M

6 Jeff Leventhal
HighTower Advisors
BETHESDA
$950M

7 Ron Rubin
The Colony Grp
BETHESDA
$992M

8 Peter Maller
Lincoln Financial Advisors
HUNT VALLEY
$800M

9 Larry Boggs
Wells Fargo Advisors
CUMBERLAND
$1.1B

10 Gregory Baker
Merrill Lynch Wealth Mgmt
BETHESDA
$967M

11 Robert Collins
Collins Investment Grp
BETHESDA
$892M

MASSACHUSETTS (BOSTON)

1 Raj Sharma
Merrill Lynch—Private Banking & Investment Grp
$6.9B

2 Peter Princi
Morgan Stanley Graystone
$4B

3 Brian Strachan
Morgan Stanley Private Wealth Mgmt
$1B

4 Sean Dillon
UBS Financial Services
$1.5B

5 Devin Condron
Morgan Stanley Private Wealth Mgmt
$1.3B

6 Richard F. Connolly Jr.
Morgan Stanley Private Wealth Mgmt
$1.7B

7 William Sullivan
UBS Financial Services
$1.3B

8 Victor Livingstone
Morgan Stanley Private Wealth Mgmt
$1.2B

9 Raj Pathak
Morgan Stanley Wealth Mgmt
$680M

10 Mary Mullin
Merrill Lynch Wealth Mgmt
$1.9B

11 John Spooner
Morgan Stanley Wealth Mgmt
$1.1B

12 Marcie Behman
Merrill Lynch—Private Banking & Investment Grp
$1.5B

MASSACHUSETTS (EXCLUDING BOSTON)

1 Susan Kaplan
Kaplan Financial Services
NEWTON
$1.9B

2 Chuck Bean
Heritage Financial Services
WESTWOOD
$1.4B

3 Greg Miller
Wellesley Asset Mgmt
WELLESLEY
$2.8B

4 Debra Brede
D.K. Brede Investment Mgmt Company
NEEDHAM
$917M

5 Frederick Keator
Keator Grp
LENOX
$668M

MICHIGAN

1 Charles Zhang
Zhang Financial
PORTAGE
$2.9B

2 David Kudla
Mainstay Capital Mgmt
GRAND BLANC
$2.3B

3 Leo Stevenson
Merrill Lynch Wealth Mgmt
WYANDOTTE
$630M

4 Philip Appel
Merrill Lynch Wealth Mgmt
BLOOMFIELD HILLS
$2.4B

5 John Lesser
Plante Moran Financial Advisors
AUBURN HILLS
$7.9B

6 Dana Locniskar
Merrill Lynch—Private Banking & Investment Grp
TROY
$2.8B

7 Jeffrey Fratarcangeli
Fratarcangeli Wealth Mgmt
BIRMINGHAM
$1.2B

8 Melissa Spickler
Merrill Lynch Wealth Mgmt
BLOOMFIELD HILLS
$1.1B

9 Todd Sanford
Sanford Financial Services/Raymond James
PORTAGE
$826M

10 Timothy Long
Merrill Lynch Wealth Mgmt
GRAND RAPIDS
$6B

11 Frank Migliazzo
Merrill Lynch—Private Banking & Investment Grp
TROY
$1.2B

12 Sherri Stephens
Stephens Wealth Mgmt Grp/Raymond James
FLINT
$486M

MINNESOTA

1 Christina Boyd
Merrill Lynch Wealth Mgmt
WAYZATA
$1.2B

2 Richard S. Brown
JNBA Financial Advisors
MINNEAPOLIS
$981M

3 Rob Metcalf
UBS Financial Services
MINNEAPOLIS
$1.4B

4 Brad Wheelock
RBC Wealth Mgmt
ST. CLOUD
$1.2B

5 Ben Marks
Marks Grp Wealth Mgmt
MINNETONKA
$761M

6 Bryan Sweet
Sweet Financial Services/Raymond James
FAIRMONT
$421M

7 Judy Fredrickson
UBS Financial Services
MINNEAPOLIS
$1.4B

MISSISSIPPI

1 Mike Dowell
Morgan Stanley Wealth Mgmt
JACKSON
$1.3B

2 Rush Mosby
UBS Financial Services
JACKSON
$972M

ERIC FUJIMOTO
AMERIPRISE FINANCIAL
HONOLULU

The fifth-generation Hawaiian stresses legacy planning, including college savings, to clients: "Investing in your grandchildrens' potential income stream via college planning is among the best returns a grandparent could wish for," he says.

VICTOR LIVINGSTONE
MORGAN STANLEY PRIVATE WEALTH MANAGEMENT
BOSTON

Livingstone was three months into his first job at Lehman Brothers when the October 1987 market crash hit. That "quick education," as Livingstone puts it, forced him to be more tactical with client portfolios. When the 2008 crisis hit and wreaked havoc on stocks and bonds, Livingstone overweighted in undervalued bonds, boosting his client returns to near equity levels.

JONATHAN BEUKELMAN
UBS FINANCIAL SERVICES
LINCOLN, NEBRASKA

Beukelman practices tough love with clients: "We tell parents, 'I don't care how much money you have. When your kids get out of college, for three years, we want you to help them very little.'"

DEBRA BREDE*
D.K. BREDE INVESTMENT MANAGEMENT COMPANY
NEEDHAM, MASSACHUSETTS

"My mother would go through depression . . . and there were times I was scared she would put us in an orphanage. I was fearful, not knowing I would be okay," Brede says of her impoverished upbringing in Hopwood, Pennsylvania. Today she manages close to $1 billion in assets. Her top client priority: financial stability. "I am not afraid to tell my clients they are spending too much."

**Paid for expanded profile online.*

3 Arthur Finkelberg
Raymond James & Associates
RIDGELAND
$490M

MISSOURI

1 Mike Moeller
Wells Fargo Advisors
CHESTERFIELD
$1.4B

2 Bud King
UBS Financial Services
ST. LOUIS
$1.1B

3 Seth Murray
Ameriprise Financial
SPRINGFIELD
$2B

4 Diane Compardo
Moneta Grp Investment Advisors
CLAYTON
$1.3B

5 Dennis Williams
Morgan Stanley Private Wealth Mgmt
KANSAS CITY
$1B

6 Mark Wilkins
UBS Private Wealth Mgmt
CLAYTON
$497M

7 Kathleen Youngerman
Morgan Stanley Private Wealth Mgmt
CHESTERFIELD
$310M

8 Barbara Archer
HighTower Advisors
ST. LOUIS
$640M

MONTANA

1 James Stack
Stack Financial Mgmt
WHITEFISH
$1.2B

2 William Royer
UBS Financial Services
BILLINGS
$925M

3 John Hedge
Merrill Lynch Wealth Mgmt
BILLINGS
$1.1B

NEBRASKA

1 Jonathan Beukelman
UBS Financial Services
LINCOLN
$1.3B

2 Jason Dworak
UBS Financial Services
LINCOLN
$724M

3 Todd Feltz
Feltz WealthPLAN
OMAHA
$2.1B

NEVADA

1 Randy Garcia
The Investment Counsel Company
LAS VEGAS
$1B

2 Deborah Danielson
Danielson Financial Grp
LAS VEGAS
$630M

3 Michael Chudd
UBS Financial Services
LAS VEGAS
$826M

4 Jim Small
UBS Financial Services
LAS VEGAS
$697M

NEW HAMPSHIRE

1 John Habig
Morgan Stanley Wealth Mgmt
PORTSMOUTH
$340M

2 Sean Doyle
Merrill Lynch Wealth Mgmt
MANCHESTER
$382M

3 Bob Bonfiglio
Ameriprise Financial
BEDFORD
$313M

NEW JERSEY (NORTHERN)

1 Frank Seminara
Morgan Stanley Private Wealth Mgmt
FLORHAM PARK
$1.1B

2 Joseph Matina
UBS Financial Services
SHORT HILLS
$1.1B

3 Dan Schwartz
UBS Financial Services
PARAMUS
$1.4B

4 Elliott Kugel
Merrill Lynch Wealth Mgmt
BRIDGEWATER
$1.4B

5 Christopher Cook
Merrill Lynch
FLORHAM PARK
$1.9B

6 Mary Deatherage
Morgan Stanley Private Wealth Mgmt
LITTLE FALLS
$2.5B

7 Mark Cortazzo
MACRO Consulting Grp
PARSIPPANY
$465M

8 Steve Braverman
Pathstone
ENGLEWOOD
$13.3B

9 David Weinerman
Morgan Stanley Wealth Mgmt
FLORHAM PARK
$3.4B

10 Michael Ricca
Morgan Stanley Wealth Mgmt
FLORHAM PARK
$3.4B

11 Andy Schwartz
Bleakley Financial Grp
FAIRFIELD
$1.3B

12 Scott Mahoney
Morgan Stanley Private Wealth Mgmt
MORRISTOWN
$793M

13 Jack Riley
UBS Financial Services
WARREN
$2.5B

14 Patricia Bell
Merrill Lynch Wealth Mgmt
SHORT HILLS
$676M

15 James Maltese
Merrill Lynch Wealth Mgmt
ISELIN
$1.4B

16 Christine Heim
Merrill Lynch Wealth Mgmt
FLORHAM PARK
$469M

17 Michael Axelrod
Bleakley Financial Grp
FAIRFIELD
$390M

18 David Briegs
Merrill Lynch Wealth Mgmt
BRIDGEWATER
$1.4B

19 Yash Dalal
Morgan Stanley Wealth Mgmt
PARAMUS
$646M

20 Kathleen Entwistle
UBS Financial Services
PARAMUS
$360M

21 David Comito
Merrill Lynch Wealth Mgmt
FLORHAM PARK
$1.6B

22 Julia Bishop
Merrill Lynch Wealth Mgmt
FLORHAM PARK
$1.6B

NEW JERSEY (SOUTHERN)

1 Jim McLaughlin
Princeton Wealth Advisors of Raymond James
PRINCETON
$1.5B

2 Mark Fendrick
UBS Financial Services
MOUNT LAUREL
$909M

3 Tony Frigoletto
Wells Fargo Advisors
FREEHOLD
$565M

4 Christine McGinley
UBS Financial Services
MOUNT LAUREL
$782M

5 John R. Hudspeth
Merrill Lynch Wealth Mgmt
MOUNT LAUREL
$830M

6 Todd Sherman
SSG Executive Advisory Grp of Raymond James
MOUNT LAUREL
$550M

7 Michael Pron
Merrill Lynch Wealth Mgmt
PRINCETON
$862M

8 Steve Rothman
UBS Financial Services
RED BANK
$404M

9 Francis Bitterly
Morgan Stanley Wealth Mgmt
RED BANK
$408M

10 Michael Bonevento
Ameriprise Financial
WALL TOWNSHIP
$950M

11 David Finkel
Merrill Lynch Wealth Mgmt
EGG HARBOR TOWNSHIP
$809M

12 L. Marc Shegoski
UBS Financial Services
PRINCETON
$2.8B

13 Anthony Valente
Morgan Stanley Wealth Mgmt
SHREWSBURY
$984M

14 Jim Barry
Merrill Lynch Wealth Mgmt
PRINCETON
$1.4B

15 Jim Ferrare
Pinnacle Associates
RED BANK
$1.4B

16 Chuck Malamut
Morgan Stanley Wealth Mgmt
NORTHFIELD
$677B

17 Edward Penberthy
Morgan Stanley Wealth Mgmt
MOUNT LAUREL
$797M

18 Albert A. Fox
Morgan Stanley Wealth Mgmt
MOUNT LAUREL
$797M

NEW MEXICO

1 Brian Cochran
John Moore Associates/ Raymond James
ALBUQUERQUE
$503M

2 Michael Stevens
Merrill Lynch Wealth Mgmt
ALBUQUERQUE
$805M

3 Nathan Armstrong
Merrill Lynch—Private Banking & Investment Grp
ALBUQUERQUE
$474M

NEW YORK (EXCLUDING NYC)

1 Rob Clarfeld
Clarfeld Financial Advisors
TARRYTOWN
$6.5B

2 Kevin Peters
Morgan Stanley Wealth Mgmt
PURCHASE
$1.4B

3 Lori Van Dusen
LVW Advisors
PITTSFORD
$1.9B

4 Thomas Sullivan
Merrill Lynch Wealth Mgmt
GARDEN CITY
$2.2B

5 Daniel O'Connell
Merrill Lynch Wealth Mgmt
GARDEN CITY
$1.2B

6 Todd Silaika
Merrill Lynch
CLIFTON PARK
$1.1B

7 Frank Marzano
GM Advisory Grp
MELVILLE
$715M

8 Corby May
Merrill Lynch Wealth Mgmt
GARDEN CITY
$1.1B

9 Tony Maddalena
Morgan Stanley Wealth Mgmt
PURCHASE
$822M

10 Bill Schoff
UBS Financial Services
ROCHESTER
$1.4B

11 Eric Diton
Morgan Stanley Wealth Mgmt
MELVILLE
$648M

12 Jon Myers
Ameriprise Financial
VESTAL
$611M

13 Lee DeLorenzo
United Asset Strategies
GARDEN CITY
$919M

14 Keefe Gorman
Merrill Lynch Wealth Mgmt
ITHACA
$646M

15 Barry Mitchell Jr.
UBS Financial Services
WHITE PLAINS
$550M

16 Bruce Burrows
Morgan Stanley Wealth Mgmt
GARDEN CITY
$4B

NEW YORK (NYC, HIGH NET WORTH)

1 Jason Katz
UBS Financial Services
$2.3B

2 Gregg S. Fisher
Gerstein Fisher
$2.5B

3 John Olson
Merrill Lynch Wealth Mgmt
$1.9B

4 Gerard Klingman
Klingman & Associates/ Raymond James
$1.5B

5 Scott Siegel
Morgan Stanley Wealth Mgmt
$3.2B

6 Louise Gunderson
UBS Financial Services
$896M

7 Rich Abrams
UBS Financial Services
$740M

8 Jacqueline Willens
UBS Financial Services
$901M

9 William King
Merrill Lynch Wealth Mgmt
$1.1B

10 Nick Kavallieratos
Morgan Stanley Wealth Mgmt
$4B

11 Jay Canell
J.P. Morgan Securities
$1.8B

12 Neil Canell
J.P. Morgan Securities
$1.8B

NEW YORK (NYC, PRIVATE WEALTH)

1 Brian C. Pfeifler
Morgan Stanley Private Wealth Mgmt
$4.5B

2 Christopher Errico
UBS Financial Services
$2B

3 Lyon Polk
Morgan Stanley Private Wealth Mgmt
$7.6B

4 Richard Saperstein
HighTower Advisors
$8.4B

5 Martin Halbfinger
UBS Financial Services
$1.6B

6 Michael Poppo
UBS Financial Services
$1.3B

7 Ed Moldaver
Stifel
$2.7B

8 Ron Basu
Morgan Stanley Private Wealth Mgmt
$3.9B

9 Jordan Waxman
HighTower Advisors
$1.9B

10 Jeffrey Kobernick
UBS Financial Services
$3.3B

11 Rob Sechan
UBS Financial Services
$3.3B

12 Ron Vinder
Morgan Stanley Private Wealth Mgmt
$1.9B

13 Scott Stackman
UBS Financial Services
$2.4B

14 John Barrett
Merrill Lynch Wealth Mgmt
$1.7B

15 Shawn Rubin
Morgan Stanley Private Wealth Mgmt
$1.1B

16 Noel Weil
Merrill Lynch—Private Banking & Investment Grp
$11.6B

17 Mike Sawyer
Morgan Stanley Private Wealth Mgmt
$2B

18 Richard Pluta
Merrill Lynch Wealth Mgmt
$833M

19 Robert Waldele
Merrill Lynch Wealth Mgmt
$2.6B

20 Leigh Cohen
Merrill Lynch—Private Banking & Investment Grp
$11.6B

21 Mark Donohue
Morgan Stanley Private Wealth Mgmt
$903M

22 Glenn Degenaars
First Republic Investment Mgmt
$1.4B

23 Michael Bapis
Rockefeller Capital Mgmt
$1.2B

24 Peter Rukeyser
UBS Financial Services
$1.9B

25 Alex Williams
UBS Financial Services
$1.9B

26 Robert Dyer
Merrill Lynch—Private Banking & Investment Grp
$1.2B

27 Scott Wilson
Morgan Stanley Private Wealth Mgmt
$4.6B

28 David Bieber
Morgan Stanley Private Wealth Mgmt
$889M

29 Josh Malkin
Morgan Stanley Private Wealth Mgmt
$1B

30 Joseph Karas
Morgan Stanley Private Wealth Mgmt
$2B

31 Emily Rubin
UBS Financial Services
$1.3B

32 Fotios Piniros
Morgan Stanley Private Wealth Mgmt
$3.5B

33 Jack Broderick
Stifel
$1B

NORTH CAROLINA

1 Gregory Cash
Merrill Lynch—Private Banking & Investment Grp
CHARLOTTE
$8.6B

2 R. Mitchell Wickham
Merrill Lynch—Private Banking & Investment Grp
CHARLOTTE
$8.6B

3 Larry Carroll
Carroll Financial Associates
CHARLOTTE
$679M

4 Patrick Rush
Triad Financial Advisors
GREENSBORO
$618M

5 John McCardell
Merrill Lynch Wealth Mgmt
CHARLOTTE
$3.8B

6 Manish Mehta
UBS Financial Services
CHAPEL HILL
$782M

7 Chris Davis
Wells Fargo Advisors
DAVIDSON
$678M

8 Kelly Graves
Carroll Financial Associates
CHARLOTTE
$679M

NORTH DAKOTA

1 Dave Schlafman
Ameriprise Financial
BISMARCK
$1.9B

2 Dennis Draeger
Ameriprise Financial
FARGO
$1.9B

OHIO

1 David Singer
Merrill Lynch—Private Banking & Investment Grp
CINCINNATI
$3B

2 David Ellis III
UBS Private Wealth Mgmt
CINCINNATI
$1.5B

3 Kevin Myeroff
NCA Financial Planners
CLEVELAND
$1.2B

4 Rick Buoncore
MAI Capital Mgmt
CLEVELAND
$4.1B

5 Randy Carver
Carver Financial Services/ Raymond James
MENTOR
$1.3B

6 Rip Hale
Morgan Stanley Wealth Mgmt
BEAVERCREEK
$1B

7 Dean Trindle
Morgan Stanley Wealth Mgmt
CINCINNATI
$529M

8 Dan Roe
Budros, Ruhlin & Roe
COLUMBUS
$2.6B

9 Paul Carbetta
Ameriprise Financial
WORTHINGTON
$991M

10 Craig Findley
UBS Financial Services
SYLVANIA
$2.5B

11 Linnell Sullivan
Merrill Lynch Wealth Mgmt
CINCINNATI
$1B

12 Joe Chornyak
Chornyak & Associates
COLUMBUS
$1.1B

13 Kevin Bruegge
Merrill Lynch—Private Banking & Investment Grp
CINCINNATI
$3B

OKLAHOMA

1 Matt Monger
Merrill Lynch Wealth Mgmt
TULSA
$759M

2 Steve Jelley
Merrill Lynch Wealth Mgmt
TULSA
$881M

3 Don Jackson
UBS Financial Services
TULSA
$404M

OREGON

1 Judith McGee
McGee Wealth Mgmt
PORTLAND
$580M

2 Lucas Newman
First Republic Investment Mgmt
PORTLAND
$670M

3 Rebecca DeCesaro
First Republic Investment Mgmt
PORTLAND
$1.4B

4 Jeffrey Yandle
First Republic Investment Mgmt
PORTLAND
$424M

PENNSYLVANIA

1 John Waldron
Waldron Private Wealth
BRIDGEVILLE
$1.8B

2 Peter Rohr
Merrill Private Wealth Mgmt
WAYNE
$4.5B

3 Patti Brennan
Key Financial
WEST CHESTER
$896M

4 Robert Fragasso
Fragasso Financial Advisors
PITTSBURGH
$1B

5 David Lees
myCIO Wealth Partners
PHILADELPHIA
$4.3B

6 George Mastrogiorgos
Ameriprise Financial
EXTON
$712M

7 Pete Strope
UBS Financial Services
CANONSBURG
$937M

8 Peter Sargent
Janney Montgomery Scott
YARDLEY
$661M

RHODE ISLAND

1 Malcolm Makin
Professional Planning Grp/ Raymond James
WESTERLY
$1B

2 Edye De Marco
Merrill Lynch Wealth Mgmt
PROVIDENCE
$901M

SOUTH CAROLINA

1 Robert Vingi Jr.
Wells Fargo Advisors
CHARLESTON
$1.6B

2 Richard Migliore
Merrill Lynch Wealth Mgmt
COLUMBIA
$3.8B

3 E. Robertson Kibler
Merrill Lynch—Private Banking & Investment Grp
COLUMBIA
$5.5B

SOUTH DAKOTA

1 Nathan Quello
Raymond James Financial Services
SIOUX FALLS
$586M

2 Gordon Wollman
Cornerstone Financial Solutions/Raymond James
SIOUX FALLS
$404M

3 David Olson
Merrill Lynch Wealth Mgmt
SIOUX FALLS
$634M

TENNESSEE

1 Kent Kirby
UBS Financial Services
NASHVILLE
$2.1B

2 Tim Roberson
Merrill Lynch Wealth Mgmt
BRENTWOOD
$1.8B

3 Timothy Pagliara
CapWealth Advisors
FRANKLIN
$910M

4 Jeffrey Bates
Kings Point Capital Mgmt
BRENTWOOD
$903M

5 Stanton J. Jacobs
UBS Financial Services
OAK RIDGE
$385M

6 Matt Miller
Merrill Lynch—Private Banking & Investment Grp
BRENTWOOD
$777M

7 Brent Trentham
Ameriprise Financial
ALCOA
$415M

8 Eric Klindt
Merrill Lynch—Private Banking & Investment Grp
NASHVILLE
$1B

9 Christi Edwards
Morgan Stanley Wealth Mgmt
NASHVILLE
$865M

TEXAS (NORTHERN)

1 Charles McKinney
Morgan Stanley Private Wealth Mgmt
DALLAS
$1.5B

2 William Corbellini
Merrill Lynch—Private Banking & Investment Grp
DALLAS
$2.8B

3 Tommy McBride
Merrill Lynch Wealth Mgmt
DALLAS
$1.5B

4 Dwight Emanuelson Jr.
Merrill Lynch—Private Banking & Investment Grp
DALLAS
$2.8B

5 Kevin Blonkvist Sr.
RBC Wealth Mgmt
MIDLAND
$1.6B

6 Mark Moore
UBS Financial Services
AUSTIN
$1.5B

7 Van Pearcy
Van Pearcy's Wealth Services Team/Raymond James
MIDLAND
$1.1B

8 Stephen Engro
Beacon Financial Grp
DALLAS
$767M

9 Spencer McGowan
McGowan Grp Asset Mgmt
DALLAS
$675M

10 Rob Bertino
UBS Financial Services
DALLAS
$1B

11 Kevin Dickey
Morgan Stanley Private Wealth Mgmt
DALLAS
$1B

12 Ira Kravitz
UBS Financial Services
PLANO
$839M

13 Jeffery Price
Merrill Lynch Wealth Mgmt
SOUTHLAKE
$807M

14 R. Scot Smith
Morgan Stanley Wealth Mgmt
DALLAS
$553M

15 Shawn Smith
Ameriprise Financial
FORT WORTH
$430M

16 Steve Nagel
Merrill Lynch Wealth Mgmt
FRISCO
$1B

17 Marie Moore
Morgan Stanley Wealth Mgmt
DALLAS
$454M

TEXAS (SOUTHERN)

1 Nestor Vicknair
Merrill Lynch Wealth Mgmt
HOUSTON
$5.1B

2 Scott Tiras
Ameriprise Financial
HOUSTON
$1.7B

3 Bonner Barnes
Corda Investment Mgmt
HOUSTON
$1B

4 Darrell Pennington
Ameriprise Financial
HOUSTON
$787M

5 Pat Swanson
Oxbow Advisors
HOUSTON
$1.6B

6 Christopher Black
UBS Financial Services
HOUSTON
$1.1B

7 Will Huthnance
UBS Financial Services
HOUSTON
$1.1B

8 Brian Tramontano
Merrill Lynch Wealth Mgmt
SAN ANTONIO
$609M

9 Frank Mirabella Jr.
Merrill Lynch Wealth Mgmt
HOUSTON
$1.4B

10 Darren Fenz
Merrill Lynch Wealth Mgmt
HOUSTON
$1.4B

11 Fred De Groot
Merrill Lynch Wealth Mgmt
THE WOODLANDS
$1.8B

12 Ralph Schroeder
Ameriprise Financial
THE WOODLANDS
$599M

UTAH

1 Dane Runia
Merrill Lynch—Private Banking & Investment Grp
PROVO
$2.7B

2 Nick Bapis
Rockefeller Capital Mgmt
SALT LAKE CITY
$1.4B

3 John Van Wagoner
Merrill Lynch Wealth Mgmt
SALT LAKE CITY
$631M

VERMONT

1 Tim Stotz
Morgan Stanley Wealth Mgmt
COLCHESTER
$835M

2 Brian Pelkey
Morgan Stanley Wealth Mgmt
COLCHESTER
$836M

3 Christopher Dubie
Morgan Stanley Wealth Mgmt
COLCHESTER
$404M

VIRGINIA (NORTHERN)

1 Ric Edelman
Edelman Financial Services
FAIRFAX
$22.3B

2 Paul Pagnato
Pagnato Karp
RESTON
$1.8B

3 Jeff Grinspoon
HighTower Advisors
VIENNA
$1.3B

4 Gregory Smith
Baird
RESTON
$2B

5 Simon Hamilton
Baird
RESTON
$2B

6 Tristan Caudron
Wells Fargo Advisors
ALEXANDRIA
$1.6B

7 Ryan Sprowls
Wells Fargo Advisors
ALEXANDRIA
$1.1B

8 Robert Reich
Wells Fargo Advisors
MCLEAN
$632M

9 Susan Kim
Ameriprise Financial
VIENNA
$528M

VIRGINIA (SOUTHERN)

1 Joe Montgomery
Wells Fargo Advisors
WILLIAMSBURG
$1.2B

2 John Gill
BB&T Scott & Stringfellow
VIRGINIA BEACH
$750M

3 Jamie Cox
Harris Financial Grp
RICHMOND
$645M

4 Brett Hayes
Hayes-Nystrom-Sarrett Grp
RICHMOND
$550M

5 Allan Strange
Janney Montgomery Scott
RICHMOND
$621M

6 Eric Bartok
Merrill Lynch Wealth Mgmt
NORFOLK
$1.1B

7 Billy Barnes
Wells Fargo Advisors
WILLIAMSBURG
$334M

WASHINGTON

1 Terry Cook
UBS Financial Services
BELLEVUE
$1.3B

2 Michael Matthews
UBS Financial Services
BELLEVUE
$895M

3 Steve Hollomon
Merrill Lynch Wealth Mgmt
SEATTLE
$1.8B

4 Erin Scannell
Ameriprise Financial
MERCER ISLAND
$1.4B

5 Paul Ried
Paul R. Ried Financial Grp
BELLEVUE
$725M

6 Dean Braun
Morgan Stanley Private Wealth Mgmt
SEATTLE
$2.9B

7 Lowry West
Morgan Stanley Private Wealth Mgmt
SEATTLE
$1B

8 Mike Geri
RBC Wealth Mgmt
SEATTLE
$690M

WEST VIRGINIA

1 Fred Scheeren
Wells Fargo Advisors
WHEELING
$259M

2 John Dawson
Morgan Stanley Graystone
CHARLESTON
$1.8B

WISCONSIN

1 Andy Burish
UBS Financial Services
MADISON
$3.2B

2 Michael Klein
Baird
MILWAUKEE
$4.4B

3 Bryan Sadoff
Sadoff Investment Mgmt
MILWAUKEE
$1.3B

4 Michael Sadoff
Sadoff Investment Mgmt
MILWAUKEE
$1.3B

5 Jeffrey Kowal
Kowal Investment Grp/ Raymond James
WAUKESHA
$841M

WYOMING

1 Lester Brunker
UBS Financial Services
TETON VILLAGE
$338M

2 Jeff Vincent
Vincent Financial Services
RIVERTON
$257M

U.S. TERRITORIES

1 Franco Estrada-Velasco
UBS Financial Services
SAN JUAN
Puerto Rico
$497M

2 Daniel Roland
Raymond James & Associates
MAITE
Guam
$1.4B

3 Jason Miyashita
Raymond James & Associates
MAITE
Guam
$1.4B

JASON MIYASHITA

RAYMOND JAMES & ASSOCIATES
MAITE, GUAM

Working from Guam means that when Miyashita meets with clients, it's rarely in a traditional boardroom. In one island nation, he presents not only to high-ranking trustees but also to the entire island community–often in a traditional hut. "We are not coming in with a suit and tie," he says, adding that his services go beyond investments to recommendations for realtors, piano teachers and even plumbers.

HANK MCLARTY

GRATUS CAPITAL
ATLANTA

After 13 years at giant firms like Merrill and Morgan Stanley, McLarty went independent but wasn't going solo. He has now assembled a 30-person team of experts including financial advisors, investment analysts, real estate specialists and estate-planning pros. "[Our clients] can turn to us for literally every aspect of their wealth management life," McLarty says.

The ranking of Best-In-State Wealth Advisors, developed by Shook Research, is based on an algorithm of qualitative criteria, mostly gained through telephone and in-person interviews, and quantitative data. Assets under mgmt are as of 6/30/2018. For the complete list visit forbes.com/best-in-state-wealth-advisors.

ILLUSTRATIONS BY PATRICK WELSH

opportunity. So Smith rebooted the company in 2016, raising $6.4 million and moving its headquarters to Denver. Royalty Exchange did more business in the nine months after Smith took over, he says, than it had in its prior three years, and it was soon adding hundreds of new customers per month.

Part of Royalty Exchange's success traces back to changes Smith made—notably, adding the option to sell rights for a set term as opposed to the life of the copyright, which opened the door for creators reluctant to part with their intellectual property forever. But some of the success has to do with the direction of the broader business. Buoyed by the mass adoption of streaming, recorded music has seen three straight years of double-digit growth, reaching $9.8 billion last year (though sales are still down substantially from the pre-Napster peak of $14.6 billion). And consumption is immune to economic cycles.

"Music royalties earn money, year in and year

With retail investors clamoring for high income, selling royalty streams for popular music and films was a golden opportunity.

out, in a fashion that doesn't appear to be dependent on equity markets or inflation or interest rates," says Caroline Bienstock, chief of music publisher Carlin America. "Once an asset has found its baseline level of earnings, it doesn't tend to deviate that much."

Smith's ambitions, meanwhile, soared in tandem with the wider market. So when representatives for Bass Brothers, the Grammy-winning record producers behind hits like Eminem's "Lose Yourself," approached Royalty Exchange in 2017 with the idea of developing a way to securitize a slice of the rapper's catalog, Smith was intrigued. Hoping to raise as much as $50 million in a public offering, he set up a subsidiary called Royalty Flow to take advantage of a provision in the 2012 JOBS Act that facilitated small IPOs.

But before Smith could get his new venture up and running, three other small companies with JOBS Act offerings tanked in their over-the-counter debuts. Another firm, Longfin, which intended to incorporate cryptocurrency into its underwriting scheme, plummeted amid insider trading accusations from the SEC. Two days before Royalty Exchange was scheduled to go public in April 2018, Nasdaq delayed the launch to take a closer look. Smith pushed for a quick resolution but was turned down.

"That was a blessing in disguise, and I say that because the more interesting business has always been the exchange," says Smith, who subsequently abandoned the IPO to double down on connecting artists and investors trading smaller catalogs. "Solving the problem of trying to eliminate the market friction that makes it possible for these willing participants to interact, to transact and to make a transparent and fair way—I mean, it's way more stimulating."

For recording artists, songwriters, producers, backup singers and cowriters, who typically get a percentage of royalties, using Royalty Exchange is a snap. All they need to do is sign in with the credentials they already have from performing-rights organizations and they receive an instant appraisal of their catalogs. They can then place a portion up for auction, either for a specified term or for the life of the copyright.

Selling the rights to songs or performances hasn't always been a good decision for creators. The business is rife with stories of swindlers obtaining artists' rights in exchange for a Cadillac or even a bottle of wine. Superstars from Jay-Z to John Oates have been preaching the importance of ownership for years.

But even with its fees, Royalty Exchange provides useful liquidity for artists. There are tax incentives, too: The sale of a catalog is generally treated as a capital gain, whereas royalties are taxed at higher ordinary income rates.

Yield investors face different challenges. They must contend with the unpredictability of tastes in popular music. In general, income streams from catalogs containing newer songs diminish rapidly as hits fall from popular playlists.

In the case of Guiva's "Bodak Yellow" royalties, income was running at an estimated $12,000 per quarter before the auction but currently amounts to about $14,000 per year. "I now factor in some level of attrition," says Guiva, who recently shelled out $57,000 for a sliver of royalties on a different Cardi B catalog.

Would-be investors should be wary of the eye-popping yields advertised for auctions of chart-topping songs or TV shows. Mature royalty streams for works like the 1983 movie *Trading Places* or *Sesame Street*'s songs, by contrast, are likely to have steadier, more reliable flows.

And despite the new asset class' reputation as a hedge against swings in an economic cycle, show business may be one sector that is actually more prone to so-called black swan events. Just ask Milli Vanilli, Bill Cosby or R. Kelly. *

FINAL THOUGHT

* *"Don't look for the needle in the haystack. Just buy the haystack."* —**JOHN C. BOGLE**

$

SOUND STRATEGIES

GREEN BOOK

Brown Advisory's **David Powell** looks for companies that use sustainability to boost their bottom line. He comanages Brown's $1.1 billion (assets) Large Cap Sustainable Growth Fund, which has returned 17% annually the last five years. Two green picks:

MARVELL

5G is coming, but it's an electricity hog. Marvell makes energy-efficient semiconductors for tower base stations. Late last year the stock (and others like it) got pummeled on fears of Fed hikes and China trade ructions, but Powell thinks Marvell—trading at 15 times earnings—could surge 50% the next three years.

INTUIT

Its tax software helps filers eschew paper, and it has been carbon-neutral since 2015. It's a recurring-revenue machine but has struggled to convert those who want human help with their taxes. It recently launched TurboTax Live, via which filers can chat with experts, for a fee, to complete their return. (It's coming for Intuit QuickBooks as well.) Intuit's stock is up 50% over the past year; Powell thinks Live will drive double-digit earnings growth over the next five.

SOUND STRATEGIES BY JEFF KAUFLIN; JAMEL TOPPIN

Gentlemen at the Gate

"Barbarians" Henry Kravis and George Roberts were the 1980s poster boys for slash-and-burn leveraged buyouts. Now, with trillions pouring into private equity, KKR and its peers have little choice but to build up rather than break up.

BY ANTOINE GARA

PHOTOGRAPHS BY KO SASAKI FOR FORBES

For most of this decade, the saga of Gardner Denver, a Milwaukee-based manufacturer of industrial machinery since 1859, has played out like another sequel to Oliver Stone's iconic 1987 movie, *Wall Street*. Sales from its oil pumps and compressors slumped, its shares on the New York Stock Exchange languished, and in 2012 opportunistic financiers, now in the form of a hedge fund, pounded the table for change. Eventually management was shuffled, Goldman Sachs oversaw a sale, and a giant New York City buyout firm emerged as the winning bidder in 2013, paying some $3.9 billion, including $2.8 billion in new debt. The only thing missing was Michael Douglas insisting that greed was good.

But a funny thing happened on the way to the cliché of shuttered plants, downsized employees and pawned-off assets. More than $325 million was invested to update equipment, make plants safer and improve operations. New funding allowed the company to expand into the medical and environmental sectors. Its 6,400-person workforce increased by 5%, revenues rose by 15% and operating cash flow surged by 54%. When Gardner Denver returned to the NYSE nearly two years ago, every employee at the company was given stock equal to 40% of annual base pay, $100 million in all. "If we do better, the company does better, which means the shares grow," says Josh Shelle, a 29-year-old assembly line supervisor, who has taken financial education, courtesy of Gardner Denver, to think more like an owner. "Everybody wins."

This feel-good plot has two unlikely directors: Henry Kravis and George Roberts, the billionaire cofounders of KKR & Co., the now $200 billion (assets) private equity giant. "You can't buy a company and strip out all the costs. It's not a sustainable business model," says Kravis, 75, from his private meeting room in New York overlooking Central Park. "If you're not putting money back in to come up with new products, new plants and new ways of doing business in new geographies, you'll die eventually." Roberts, 75, his longtime partner, adds, "The businesses that have owners that care about them and management that cares about them are going to outperform."

Students of financial history can now remove their jaws from the floor. KKR, of course, popularized the leveraged buyout in the 1970s and 1980s and became the face of Wall Street's conquest of corporate America. Forever known as "barbarians," after the bestselling book that chronicled their $25 billion takeover of RJR Nabisco, KKR was grilled by Congress for tax avoidance and the aggressive use of debt as they swallowed up RJR and other corporate giants of yesteryear like Wometco Enterprises and Beatrice Foods.

Thirty years later they epitomize a fundamental shift. No longer a clubby partnership, KKR is now a publicly traded corporation. Half of its investments and the majority of its dealmakers live abroad, with its biggest growth potential in Asia. And rather than torture the management of assets they treat like chits, Kravis and Roberts *are* management, ultimately responsible for 114 companies around the globe, that generate $123 billion in annual sales and employ 753,000 people. In this sequel, it's the hedge funds that play the role of secretive, amoral financial engineers *(see p. 62)*. For KKR, and competitors like Blackstone and Apollo Global, we've entered the era of *public equity*, with PE as the white hats.

It's a transformation born of necessity. In the past five years alone, $3.7 trillion has poured into private equity funds. KKR operates on a different scale today than it did when it took over RJR. The firm's next U.S. buyout fund is expected to be a staggering $20 billion, its Asia fund $15 billion and its European $5 billion. At Apollo and Blackstone, funds push beyond $20 billion. Fees have swelled with assets—to $1.8 billion at KKR in 2018 and $3.1 billion at Blackstone—but the existential question is how to beat the S&P 500 and justify them. KKR's first five buyout funds, from 1976 to 1986, returned from 4 to 17 times their money. But today there are hundreds of private equity firms. Worse, the financial and operational maneuvers that buyout firms pioneered are now basic blocking and tackling for corporate CFOs. Since 2002 no KKR buyout fund has returned more than 2.4 times its money.

> FEES HAVE SWELLED WITH ASSETS, BUT THE EXISTENTIAL QUESTION IS HOW TO BEAT THE S&P 500 AND JUSTIFY THEM.

"Let's not delude ourselves," says John Skjervem, chief investment officer of the $100 billion Oregon State Treasury, a KKR investor since 1981. "This is getting much harder."

As George Roberts says of the leveraged buyout game, "There's no art in it anymore. What's relevant is what you're going to do with the business."

LIKE MOST ICONIC DUOS, Kravis and Roberts are a study in contrasts. They are first cousins and best friends going on 70 years with fathers who became wealthy from oil, and they attended college together at Claremont McKenna in California. They learned the art of dealmaking from the same mentor—KKR's third cofounder, Jerome Kohlberg—and have been business partners for 43 years, working in harmony virtually all that time, 2,930 miles apart, high-profile Kravis in New York and low-profile Roberts in San Francisco.

To see Kravis at his perch on 57th Street, visitors have to walk by a dark, mahogany-clad elevator bank toward a security guard who sits behind a formal window that resembles a casino cage. Once approved, visitors enter another reception area through imposing mahogany doors that open to a flood of light and majestic floor-to-ceiling views of Central Park and the Plaza and Pierre hotels. Down a long hallway that's decked in more mahogany, you pass formal meeting rooms and an

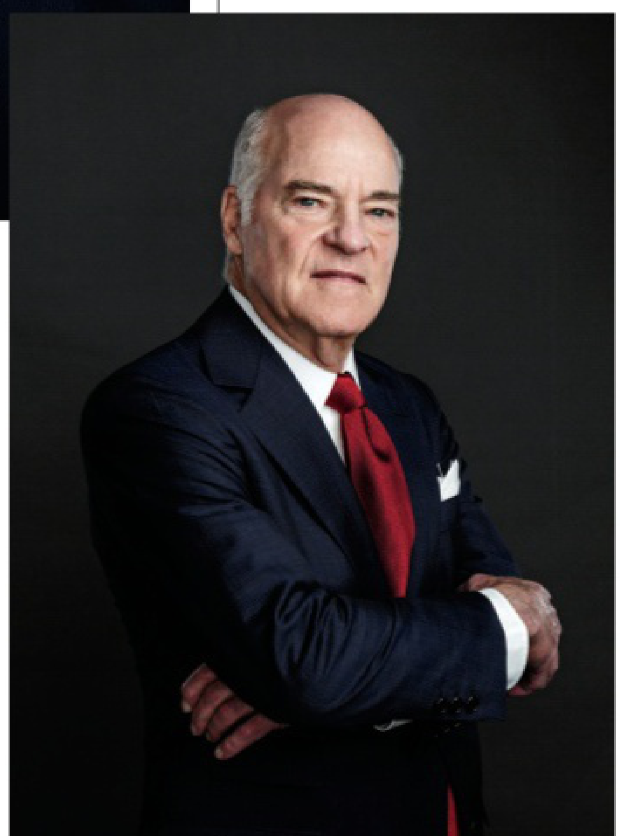
ominous array of masks made by Ugo Rondinone. At the end is Kravis, sitting in his private meeting room, fit and 5-foot-6 with piercing blue eyes, dressed in a tailored suit with a magenta tie.

The consummate pitchman, whose name graces wings at the Metropolitan Museum of Art, a building at Columbia Business School and a children's hospital at Mount Sinai, Kravis seems well rehearsed. "We've always thought of investing and acting and thinking like an industrialist," he says. "Don't congratulate us when we buy a company. Any fool can buy a company." In a meeting room brimming with plaques commemorating KKR conquests, the framed words from Machiavelli speak most authentically: "The innovator has for enemies all those who did well under the old system, and lukewarm defenders in those who might do well under the new."

Contrast that with Roberts' domain, a two-story building in Menlo Park set among tulips and purple foxgloves and singing wrens. The firm's airy lobby is shared with venture firm Sequoia Capital and decorated with gelatin silver photographic prints by Ansel Adams. It's hard to find the entrance to KKR until you spot the dark mahogany doors, but the art here is more whimsical and provocative, albeit no less expensive. There are red flowers and a large black-and-white drawing of Chairman Mao by Andy Warhol, a lithograph by Jasper Johns and a staircase painted in diagonal blue lines by the contemporary artist Terry Haggerty. In keeping with the Northern California setting, Roberts has an active Instagram profile for his dog (@Scruffy-Roberts) and challenges deep-thinking West Coast dealmakers with a puzzling, blue fluorescent-light display: "Do Not Pay More Than $18,000."

Roberts is responsible for the duo's start in the buyout business. As a junior at Claremont, then a men's college, he interned at Bear Stearns in New York, covering insurance companies. Ambitious, he would comb regulatory filings on his beat in the morning and look for extra work in the afternoons, catching the eye of Kohlberg, who as the head of the firm's corporate finance division was pioneering what was then known as "bootstrapped acquisitions," because they were highly levered. In the 1960s, corporate America was bloated by conglomerates built by ambitious businessmen like Harold Geneen of ITT. Kohlberg deployed novel financing techniques to move in the other direction, helping sharp divisional managers buy unloved businesses from their overstretched parents.

KKR's cofounders and first cousins, George Roberts (left) and Henry Kravis, say they last quarreled at age 7. Today both are worth $5.6 billion.



Kravis, who grew up in Tulsa, got his start working for the closed-end Madison Fund in New York, which controlled a railroad operator called Katy Industries and used its tax losses to make acquisitions. While getting his M.B.A. at Columbia, he canvassed the Southeast for oil service companies to buy. When Roberts moved up the ranks at Bear, he recommended Kravis to look at Kohlberg's buyout invention. In 1969, the three joined forces, running a small group at the investment bank, with Kravis based in New York while Roberts moved to California. After about a dozen successful deals, they set out on their own in 1976.

They were just in time for Michael Milken and the Drexel Burnham Lambert junk-bond money machine. Kravis and Roberts were buying large companies outright: Beatrice and Safeway in 1986, Owens-Illinois a year later. Duracell, Stop

& Shop and RJR at the apex of the debt-fueled 1980s. Kohlberg balked at the aggressive model and was pushed out in 1987, and Kravis and Roberts, particularly the former, became synonymous with the buyout era after the publication of *Barbarians at the Gate*.

KKR'S TRANSFORMATION BEGAN before the 2008 financial crisis, surprisingly with one of its worst deals, for the Texas-based power producer TXU. The $45 billion buyout, inked in February 2007, was controversial from the start because of TXU's expansion plans in coal. As KKR and its partners cut the deal, they reached out to the Environmental Defense Fund, an advocacy group that got McDonald's to stop using polystyrene containers. Kravis and Roberts were interested in the connection between environmental efficiency and profits.

Within a year of closing TXU, KKR and the nonprofit formalized a pioneering "green portfolio" partnership in which KKR would rigorously track its companies' waste, greenhouse gas emissions, water consumption and use of toxic materials. Within five years, the conservation efforts saved its portfolio companies nearly $1 billion, most notably at retailer Dollar General, which saved $775 million alone—or 6 million tons of waste—and was one of the crisis era's most successful buyouts, making KKR 4.5 times its money. "Twenty years ago I wasn't a big believer in ESG [environmental, social and governance]. I thought the most important thing is if you make good money for the company, all stakeholders will benefit," Kravis says. "I'm a convert."

Helping its portfolio companies became a top priority for the firm. To that end it expanded its in-house consulting arm, KKR Capstone, which now has 66 consultants advising the portfolio of companies on growth plans, acquisitions and cost savings. To spot risks, KKR has added teams to study global macroeconomics, technological disruption and political change.

In 2010, a Chicagoan named Pete Stavros was made head of KKR's industrial buyout division. Stavros, now 44, the son of a Greek-American construction worker and a first-generation college graduate, believed productivity and profitability would increase if you gave equity to hourly workers on manufacturing lines, truckers and other nonexecutive employees. At Harvard Business School, Stavros dedicated his thesis to the benefits of employee stock ownership. He put his idea in play at KKR, giving 10,000-plus workers over $200 million of equity in the eight deals his group has done.

Gardner Denver is a shining example. The stock is up 37% since its IPO in May 2017. All told, the $4 billion of equity Stavros and his team have invested in their eight industrial buyouts, including Capsugel, Capital Safety and CHI Overhead Doors, is now worth $12 billion. "This is a different way of operating. You need to be willing to engage with people in a different way," Stavros says. "Treat them like business partners."

Few cases illustrate Stavros' thesis better than KKR's experience with Toys "R" Us. Acquired for $6.6 billion in 2005, the retailer wound up filing for bankruptcy in 2017 and shuttering its U.S. stores in 2018. Rather than simply lick its wounds and walk away, as KKR might have 30 years ago, the firm and its deal partners contributed $20 million to a severance fund set up for former employees.

Despicable Funds

What a difference 30 years makes.

At the end of the 1980s, Henry Kravis, George Roberts and their ilk epitomized the evils of Wall Street. Today that dubious honor goes to hedge funds, which offer a potent cocktail of dismal returns, short-term trading and bad behavior.

The old buyout mantra was "Buy, strip, sell." That's the strategy of $1 billion New York hedge fund Alden Global Capital, the owner of the *Denver Post* and about 100 other newspapers. Alden has gutted newsrooms and real estate, generating protests from journalists. Now on the prowl for Gannett, the publisher of *USA Today,* it's being accused of underhanded negotiating tactics and faces a Department of Labor probe for allegedly stuffing $250 million in newsroom pensions into its own funds. (Alden denies any wrongdoing.)

Among credit funds, a crop of shady operators are employing "manufactured defaults," wherein buyers of credit-default swaps—securities designed to profit if the issuer misses an interest payment—persuade the debtor to halt payments, triggering a default and a windfall for the fund. It's almost like buying insurance on a neighbor's house and burning it down.

Then there are hedge fund antics. Casual viewers of business news remember the spectacle on CNBC when hedge fund billionaires Carl Icahn and Bill Ackman berated each other over the stock of supplement maker Herbalife.

Even quantitative hedge funds get a bad rap. Michael Lewis' book *Flash Boys* excoriates these computerized traders for front-running trades and aggravating stock market swings. More media maligning is served weekly on the Showtime series *Billions*, whose characters are almost universally despicable.

So loathed are funds' tactics that in 2016 Senators Tammy Baldwin (D–Wis.) and Jeff Merkley (D–Ore.) introduced the Brokaw Act to stymie them after the village of Brokaw, Wisconsin, went broke because an activist fund pushed a company to abandon the town's paper mill. "We cannot allow our economy to be hijacked," said Senator Baldwin.

Legendary corporate attorney Martin Lipton, 87, who once represented big companies being pursued by acquirers like KKR, has no problem piling on. "The villains are the activist hedge funds," he says.

Perhaps all would be forgiven—or at least tolerated—if hedge funds pulled their weight in terms of performance. The HFRI Equity Hedge Index has returned 3.5% annually over the past five years, versus 11.5% for a standard low-fee S&P 500 index fund. —*A.G.*

Barbarian Evolution

1951: During grade school, Houston-born George Roberts visits cousin Henry Kravis in Tulsa. They fight and Henry ends up with 23 stitches. Henry claims it's the last fight they ever had.

1

1962–1967: The pair (1) attend Claremont Men's College. During summers they room together while Henry works at Goldman Sachs and George at Bear Stearns.

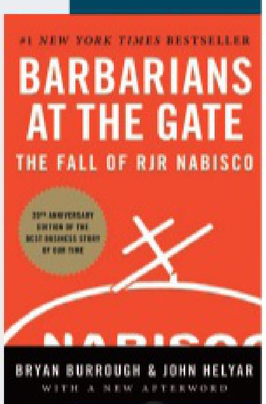
1966: George accepts a job at Bear Stearns. Henry graduates a year later and works for New York's Madison Fund, the largest shareholder of Katy Industries, arranging acquisitions.

2

1969: Henry joins George at Bear under buyout pioneer Jerome Kohlberg Jr. (2). The trio complete about a dozen "bootstrapped" deals, which borrow heavily to support management led carve-outs.

1976: Legendary Bear boss Cy Lewis refuses to support a proposed new venture, so the three leave to form Kohlberg Kravis Roberts & Co. with $120,000 in combined savings.

1978: *Forbes* introduces KKR in a cover story on a new highly profitable approach to dealmaking called "Do You Sincerely Want to Be Rich?" KKR's partnership has $30 million in capital.



4

1987: Kohlberg is pushed out. A year later, KKR launches a $25 billion hostile takeover of RJR Nabisco (3), marking the peak in an era of greed on Wall Street.

3

1989: Henry and George face grilling in Washington, are then vilified in *Barbarians at the Gate* (4).

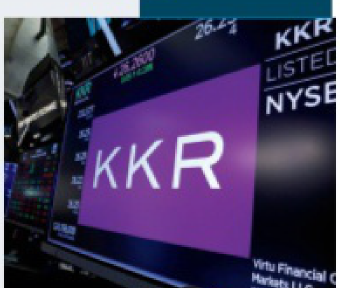
1993: Debt-burdened RJR's shares tank after Philip Morris slashes cigarette prices. *Forbes'* cover features Henry's head on a gold platter (5).

5

1997: George creates the Roberts Enterprise Development Fund, which pioneers venture philanthropy, backing over 175 social enterprises.

2000-2006: KKR launches important fee-generating businesses like the consulting operation KKR Capstone, and later it expands to credit and underwriting.

2006: Raises $5 billion from the public, and a $17.6 billion buyout fund is used to take over Alliance Boots, Dollar General, TXU.



6

2010: KKR lists on the NYSE (6) and embraces green investing. It also backs a plan to offer blue-collar workers stock. Henry gives $100 million to Columbia's B-school.

2017-2018: Henry and George name successors, convert KKR into a corporation and begin a big push in Asia.

2019: KKR's global reach extends to 114 companies with $123 billion in sales and 753,000 employees. As assets near $200 billion, KKR has $58 billion in dry powder.

JEROME KOHLBERG BY EDUARDO CONTRERAS/NEWSCOM; NABISCO BY RAZORPIX/ALAMY; KKR AND NYSE BY BRENDAN MCDERMID/REUTERS

"Clients want to invest in firms where they think people are doing right for the world and not ones that are destroying the planet, or the workforce," says Mason Morfit, chief investment officer of the hedge fund ValueAct Capital, KKR's largest outside shareholder.

While the amount invested in the Toys "R" Us severance fund was trivial for KKR's partners, the fact that its large pension investors, like the state investment boards of Minnesota and Washington, insisted they do so wasn't.

KKR'S TRANSFORMATION ISN'T only about doing good. It's also about fees, which today are on a scale that makes RJR Nabisco's $390 million in deal fees look quaint.

Take the firm's push into credit, which plugged up a giant hole in its capabilities. Fifteen years ago, KKR was still fairly one-dimensional and lacked a fixed-income operation that would allow it to lend funds to companies for restructurings and acquisitions. The firm's credit business now stands at $66 billion in assets. Despite losses in its alternative debt and its CLO business last year, KKR kicked off some $400 million in credit management and transaction fees in 2018.

The creation of an underwriting business has been another fee bonanza. "Between 2005 and 2007, we paid The Street almost $5 billion in fees, and we didn't get much back for it except we were invited into a few auctions," Kravis says. So Scott Nuttall, the firm's co-president, built an in-house underwriting business for KKR's portfolio companies, which underwrote 204 debt and equity offerings in 2018 and generated $631 million in fees.

KKR's fee revenues climbed 19% in 2018 to $1.8 billion, including more than $1 billion in so-called transaction and monitoring charges, which the firm earned for, among other things, management advice to its portfolio companies. There were also $147 million in reimbursements for expenses and $60 million in consulting fees.

Remember the feel-good IPO of Gardner Denver in 2017? After charging the company $3.4 million a year on average in transaction and monitoring fees, KKR levied a special onetime termination fee of $16.2 million in conjunction with its IPO. High fees translate to generous compensation for KKR partners. Last year the firm paid out an eye-watering $1.5 billion in compensation to its 1,300 staffers.

BY FAR THE BIGGEST INNOVATIONS at KKR have been structural. A few years ago, on a plane ride back to California, Roberts made a revealing calculation: Had KKR been able to hold on to its investments in perpetuity, it would have a bigger market capitalization than Berkshire Hathaway. To that end, in 2006 KKR was the first major U.S. buyout firm to tap public stock markets, raising $5 billion of permanent capital in Amsterdam to invest in its own deals. When shares in that public vehicle, KKR Private Equity Investors, plunged from $25 to below $2 during the financial crisis, Kravis and Roberts knew that many of their deals (like Dollar General and Hospital Corporation of America) were undervalued, trading for pennies on the dollar. So the partners shrewdly folded KKR's core operations into KKR Private Equity Investors and listed the new entity on the New York Stock Exchange. Since asset prices recovered, KKR's permanent capital has swelled to $13 billion and seeded its fundraising expansion into new sectors like infrastructure, real estate, healthcare and technology.

The new capital was also used to buy 35% of Marshall Wace, a quantitative hedge fund whose assets have since doubled to nearly $40 billion, and to resuscitate KKR's investment in the payments processor First Data, which now stands at $1.5 billion on the firm's balance sheet after a 67% surge in its stock price over the past year. "We made lemonade out of some lemons," Roberts says. "I have respect for our competitors, but none of them have the mousetrap we have."

Last year, KKR's overhaul strategy culminated with its conversion from a partnership into a corporation, eliminating the need for complicated K-1 tax filings by its public shareholders. This change, plus an earlier one, which fixed its dividend payout to a modest percentage of aftertax earnings (currently 13%), ensures that the firm will retain more profits than its competitors. It will also likely make its stock more desirable to a larger population of institutional investors. "We wanted to have the power of compounding," Kravis says, emboldened by the fact that KKR now holds $10 billion of its investments on its balance sheet. "If you think about Warren Buffett, who has never paid a penny out in dividends, and you look at how much capital he's been able to accumulate and the value of Berkshire today, it's really impressive. We can do the same thing."

THE HARD PART WILL BE MAINTAINING KKR'S ENTREPRENEURIAL DNA AS IT EXPANDS AS A PUBLICLY TRADED CORPORATION.

Among old-guard private equity giants, KKR was the first to formally announce lines of succession, naming Scott Nuttall, 46, and Joseph Bae, 47, as co-presidents and granting each $121 million in stock awards in 2017. Nuttall is a familiar face to public stockholders and is the driving force behind KKR's expansion in credit and capital markets. Bae oversees the firm's core global buyout business, which includes a big expansion in Asia as well as real estate and infrastructure. The firm's business in Asia now spans eight offices and $20 billion in assets.

"When you look at the complexity of what we do and how we operate around the world, you need two people," Roberts says.

The rich stock grants to Bae and Nuttall have caused grumbling inside the firm, when you consider that KKR has since significantly reduced stock compensation to staffers in what may be a maneuver to reduce share dilution and bolster the stock price. The performance of KKR stock, like that of other PE firms, has been underwhelming. Over the past five years it has returned on average just 4% annually, less than half the total return of Blackstone. Both underperformed the S&P 500's 12% annualized gain.

Of course, the hard part will be maintaining KKR's entrepreneurial DNA as it expands as a corporation.

Some of its newer ventures have already run into trouble. In 2012, KKR bet on hedge funds via a fund-of-funds business, buying $8 billion (assets) Prisma Capital Partners, only to see its performance languish. An $884 million natural-resources fund, raised in 2010, lost most of its value. Between 2012 and 2014, KKR raised over $5 billion in special-situations funds that have produced annual net returns of 3% or lower.

During much of the 1980s, KKR's dealmakers could fit in single boardroom.

"If you think about what this firm was, it basically was started with three guys and a broom—Jerry, George and me," Kravis says. By 1996, when KKR's heirs, Nuttall and Bae, joined the firm, it employed about two dozen investors. Now dealmakers number 447, and two thirds of the firm's 1,300 staffers don't invest, instead tending to tasks like back-office, tax and legal.

With its growing pains have come notable departures: Recent exits include David Liu and Julian Wolhardt, two top investors in Asia, and Alexander Navab, the former head of its U.S. buyout business, each now raising multibillion-dollar funds elsewhere.

Despite all the changes at KKR, Kravis and Roberts show no signs of slowing down—and are especially excited about prospects in Asia. Under the stewardship of Korean-born Bae and New Zealand-born Nuttall, KKR is building entire new businesses in the region.

According to Kravis, Japan is littered with cheaply priced conglomerates loaded with underperforming assets. He recalls asking the CEO of one of Japan's big trading companies how many subsidiaries the company owned. The Japanese executive said 2,000. When Kravis asked how many were core, the answer was still 2,000.

"I would have had a better conversation with a glass, but we got along just fine," Kravis says. In April KKR gathered its 75 partners for its annual meeting in Tokyo.

"I've been going to Japan since 1978. I always saw the light at the end of the tunnel. Now it's real," Kravis says with a youthful glint in his eye. Roberts adds, "Japan today reminds me of the 1960s and 1970s in the United States."

Only this time the nice guys at KKR will have to resist the urge to slash and burn, and instead figure out a way to buy and build. F

FAILURE TO LAUNCH

BY MATT PEREZ AND NATHAN VARDI

CHRIS ROBERTS HAS SPENT SEVEN YEARS AND RAISED NEARLY $300 MILLION—MOST OF IT FROM AVERAGE GAMERS—BUILDING *STAR CITIZEN.* IT'S ON PACE TO BE THE MOST EXPENSIVE VIDEO GAME EVER MADE AND—OUTSIDE OF CRYPTOCURRENCY—THE WORLD'S LARGEST CROWDFUNDED PROJECT. IT'S STILL NOT READY. IT MAY NEVER BE.

ETHAN PINES FOR FORBES

Space fantasy: At his Los Angeles studio, Cloud Imperium Games cofounder Chris Roberts stands in front of a rendering of one of the worlds he has created for his colossal, incomplete video game, *Star Citizen*.

It's October 2018 and 2,000 video game fanatics are jammed into Austin's Long Center for the Performing Arts to get a glimpse of *Star Citizen*, the sprawling online multiplayer game being made by legendary designer Chris Roberts. Most of the people here helped to pay for the game's development—on average, $200 each, although some backers have given thousands. An epic sci-fi fantasy, *Star Citizen* was supposed to be finished in 2014. But after seven years of work, no one—least of all Roberts—has a clue as to when it will be done. But despite the disappointments and delays, this crowd is cheering for Roberts. They roar as the 50-year-old Englishman jumps onto the stage and a big screen lights up with the latest test version of *Star Citizen*.

The demo starts small: Seeing through the eyes of the in-game character, the player wakes up in his living quarters, gets up and brews a cup of coffee. Applause quickly turns to laughter when the game promptly crashes. While his underlings scramble to get the demo running again, a practiced Roberts smoothly fills minutes of dead air by screening a commercial for the Kraken, a massive war machine spaceship. Eventually the Kraken, like all the starships that Roberts sells, will be playable in *Star Citizen*. At least that's the hope. But for $1,650 it could be yours, right away.

"Some days, I wish I could be like . . . 'You're not going to see anything until it's beautiful,'" Roberts later says at his Los Angeles studio. "A lot of times we'll show stuff and literally say, 'Now, this is rough.'"

What's really rough is the current state of *Star Citizen*. The company Roberts cofounded, Cloud Imperium Games, has raised $288 million to bring the PC game to life along with its companion, an offline single-player action game called *Squadron 42*. Of this haul, $242 million has been contributed by about 1.1 million fans, who have either bought digital toys like the Kraken or given cash online. Excluding cryptocurrencies, that makes *Star Citizen* far and away the biggest crowdfunded project ever.

Rough playable modes—alphas, not betas—are used to raise hopes and illustrate work being done. And Roberts has enticed gamers with a steady stream of hype, including promising a vast, playable universe with "100 star systems." But most of the money is gone, and the game is still far from finished. At the end of 2017, for example, Roberts was down to just $14 million in the bank. He has since raised more money. Those 100 star systems? He has not completed a single one. So far he has two mostly finished planets, nine moons and an asteroid.

This is not fraud—Roberts really is working on a game—but it is incompetence and mismanagement on a galactic scale. The heedless waste is fueled by easy money raised through crowdfunding, a Wild West territory nearly free of regulators and rules. Creatives are in charge here, not profit-driven bean counters or deadline-enforcing suits. Federal bureaucrats and state lawyers have intervened only in a few egregious situations where there was little effort to make good and a lot of the money was pocketed by the promoters. Many high-profile crowdfunded projects, like the Pebble smartwatch ($43.4 million raised) and the Ouya video game console ($8.6 million), have failed miserably.

If you don't play video games, you probably have never heard of Roberts. But in the world of consoles and controllers, he is Keith Richards: an aging rock star who can still get fans to reach into their pockets. Roberts first gained fame with his early 1990s hit *Wing Commander*, a space combat series that grossed over $400 million and featured Hollywood stars like Mark Hamill and Malcolm McDowell. He followed that success by starting his own studio, Digital Anvil, with Microsoft as an investor. There, he spent years working on *Freelancer*, a spiritual successor to *Wing Commander*, which was eventually released years behind schedule and was far from a blockbuster. Roberts also dabbled in Hollywood,

This is not fraud, but it is incompetence and mismanagement on a galactic scale.

spending tens of millions on a movie version of *Wing Commander* that he directed himself and that was a critical and commercial flop.

Forbes spoke to 20 people who used to work for Cloud Imperium, many of whom depict Roberts as a micromanager and poor steward of resources. They describe the work environment as chaotic.

"As the money rolled in, what I consider to be some of [Roberts'] old bad habits popped up—not being super-focused," says Mark Day, a producer on *Wing Commander IV* who runs a company that was contracted to do work on *Star Citizen* in 2013 and 2014. "It had got out of hand, in my opinion. The promises being made—call it feature creep, call it whatever it is—now we can do this, now we can do that. I was shocked."

"There is a plan. Don't worry—it's not complete madness," Roberts insists.

But what Roberts has stirred up does seem crazy. *Star Citizen* seems destined to be the most expensive video game ever made—and it might never be finished. To keep funding it and the 537 employees Cloud Imperium has working in five offices around the world, Roberts constantly needs to raise more money because he is constantly burning through cash.

Up to a point, Roberts has been transparent about where the money has been going. He released years' worth of financial statements last December. But he won't say how much he or other top Cloud Imperium execs have made from the project. His wife and his brother both work in senior positions at the company.

"There's no two ways about it, man. *Star Citizen* is nuts," says Jesse Schell, a prominent game developer and professor at Carnegie Mellon University. "This thing is unusual in about five dimensions. . . . It is very rare to be doing game development for seven years—that's not how it works. That's not normal at all."

IN THE FALL OF 2012, Chris Roberts stepped onto the stage of a different Austin auditorium and proclaimed, "I'm coming back." With a sleek video showing flying spaceships and a short demo he played from the podium, Roberts announced his first crowdfunding campaign, which quickly raised $6.2 million. It doesn't seem like a lot in a world where budgets for quality games can easily reach into the tens of millions, but Roberts left the impression that it would be enough. After all, *Star Citizen* was already "12 months into production." It seemed like a redemption song from a man who had been out of gaming for a decade after his partnership with Microsoft had gone sour. (Today, Roberts says that initial year of development doesn't count because "it was more proof-of-concept work.")

Growing up in Manchester, England, Roberts was a skilled coder with grand ambitions. He made games in his teens, including a soccer simulation for the BBC Micro, before landing in Austin in 1987. There, he met influential video game director Richard Garriott—famous to fans of the blockbuster *Ultima* series as Lord British—and at age 19 started working for Garriott's Origin Systems, where Roberts created *Wing Commander*. The PC game launched in 1990 and was wildly successful.

In 1996, Roberts left Origin and cofounded Digital Anvil to create games in partnership with Microsoft, which was beginning to take gaming seriously and had a minority stake. Fol-

RELEASE THE KRAKEN

WITH A WINK TO THE 1981 MOVIE *THE CLASH OF THE TITANS*, THE KRAKEN IS A *STAR CITIZEN* "CONCEPT" SHIP THAT CLOUD IMPERIUM **SOLD FOR $1,650 EACH** LAST YEAR. **AT A LENGTH OF 886 FEET** AND **MANNED BY A 10-PERSON CREW,** THE CARRIER IS DESCRIBED BY ITS FANTASY MANUFACTURER, DRAKE INTERPLANETARY, AS A "BEACON OF FREEDOM IN A TOO-OFTEN CRUEL UNIVERSE."

lowing the success of *Wing Commander*, Roberts authored another game at Origin, *Strike Commander*, known for its production headaches, and developed a reputation as an exacting boss. But he was still seen as gaming's golden boy.

Roberts expanded on the idea of a living, breathing universe when he announced *Freelancer* in 1999, two years after the start of development. At the same time, Roberts convinced 20th Century Fox to back a $30 million movie version of *Wing Commander*, which lost nearly $20 million. Stuart Moulder, the Microsoft general manager who oversaw the software giant's relationship with Digital Anvil, came to believe that Microsoft money intended for game development was instead used for the movie. "[Roberts'] energy and attention and some of the funds were siphoned off for that movie," Moulder says. "The Digital Anvil investment has to be looked at as largely a failure."

Roberts concedes that Microsoft was frustrated with the time he spent on the movie but says funds used for it were appropriate because they came from Microsoft's purchase of the minority stake, with the proceeds earmarked for general business purposes that included moviemaking. Either way, Microsoft acquired full control of Digital Anvil in 2001, and Roberts left the company. It would be another two years before *Freelancer* hit stores as a much smaller game than envisioned.

Free of Microsoft, Roberts went full Hollywood. He got in on the business side of things by cofounding production company Ascendant Pictures, which made several mostly forgettable movies like *Outlander* (2008) and *The Big White* (2005). Roberts got a producer credit on Ascendant's most successful film, *Lord of War,* starring Nicolas Cage.

But things were shaky. To make the movies, Roberts teamed up with a German lawyer, Ortwin Freyermuth, who is now vice chairman of Cloud Imperium. They arranged financing from an investment fund that was using a tax scheme to raise money in Germany for Hollywood movies. By 2006 the German government had stopped the practice and the fund's founder was sentenced to jail for tax fraud, according to *Variety*. Roberts and Freyermuth were not implicated.

With the German money dried up, things were bleak in Tinseltown. Kevin Costner sued Ascendant Pictures at the end of 2005, claiming it reneged on a deal to pay him $8 million to act in a comedy. (Ascendant denied wrongdoing and the suit was settled.) Roberts sold Ascendant Pictures in 2010 to a small production company called Bigfoot Entertainment, which had offices in Los Angeles and the Philippines.

Roberts' Hollywood days were over. It was time to get back to gaming.

ON A SUMMER SATURDAY IN 2007, a trespasser slipped by a security gate and entered Chris Roberts' L.A. home. Inside, Madison Peterson, Roberts' former common-law wife, with whom he had a long on-and-off relationship, was startled and feared her young daughter could be harmed or kidnapped. Peterson later identified the trespasser as Sandi Gardiner, who is now Roberts' wife (for the second time) and a cofounder of Cloud Imperium. Roberts reported the incident to police, and a Cal-

Free of Microsoft, Roberts went full Hollywood.

THE IGNORANCE OF CROWDS

OF THE FIVE LARGEST CROWDFUNDED PROJECTS—EXCLUDING CRYPTO-MADNESS—FOUR HAVE FAILED OR NOT LIVED UP TO THEIR HYPE.

STAR CITIZEN
Video Game
FUNDING STARTED: **2012**
RAISED: **$242 million**
In development.

ELIO MOTORS
Three-Wheeled Car
FUNDING STARTED: **2015**
RAISED: **$25 million**
OTC-listed. Shares down to $2 from a high of $60.

PEBBLE
Smartwatch
FUNDING STARTED: **2012**
RAISED: **$43.4 million**
Sold to Fitbit in 2016 for $23 million and discontinued.

GLOWFORGE
3-D Laser Printer
FUNDING STARTED: **2015**
RAISED: **$27.9 million**
Success! After delays it's now selling printers to the public.

COOLEST COOLER
Multipurpose Cooler
FUNDING STARTED: **2014**
RAISED: **$13.3 million**
Settled with Oregon Department of Justice after failing to deliver.

Sources: Cloud Imperium Games; Kickstarter; SEC filings.

ifornia judge issued a temporary restraining order that required Gardiner to stay 100 yards away from Peterson, who claimed in her temporary restraining order application that Gardiner had been stalking and threatening both her and her daughter for nearly three years.

"Ms. Gardiner has an unnatural and irrational fascination with my daughter and me," Peterson wrote. "I constantly and continually look to make sure my daughter and I are not watched."

In a court-filed declaration he signed at the time, Roberts said Gardiner had also visited Peterson's San Diego home and once became violent and tried to strangle him. "I believed that if she had a gun she would have killed me," Roberts said in the declaration. "I believe that Ms. Gardiner is not emotionally stable." After three months, the restraining order was dissolved. Today, Roberts says he cannot recall signing the declaration and that what is ascribed to him in the court filings was prepared by Peterson and false. Despite the documentation, Gardiner flatly denies the incidents took place.

A few years later, Roberts cofounded Cloud Imperium with Gardiner and Freyermuth, his lawyer partner from Hollywood. He had remarried Gardiner in 2009. Their first marriage was annulled in 2005, court records show. An actress who is still trying to make it in Hollywood, the 43-year-old Australian-born Gardiner is also Cloud Imperium's head of marketing and a driving force behind the company's fundraising.

The initial 2012 crowdfunding campaign was successful, but it turned out that $6.2 million wasn't nearly enough to feed Roberts' ambitions. But Roberts and Gardiner came up with an ingenious way to keep raising funds: They would sell spaceships—hundreds of thousands of them.

By *Forbes*' count Cloud Imperium has sold 135 different spaceship models for as much as $3,000 each.

Star Citizen has gigantic ships and tiny ships, exploration ships and cargo ships, refueling ships and mining ships, heavy fighters, light fighters, medium fighters, snub fighters, destroyers, gunships and many, many more. By *Forbes*' count, Cloud Imperium has sold 135 different spaceship models for as much as $3,000 apiece. Eighty-seven of these ships have been completed to the point that players can fly them in the buggy early versions of *Star Citizen*; some of the other 48 ships seem like little more than fancy images.

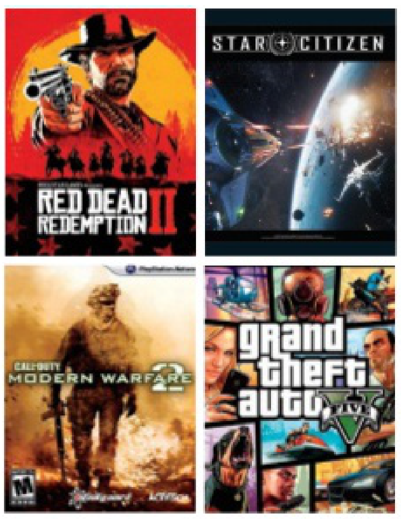
"Nobody is obligated to buy more than just the starter ship," says Gardiner. "All of the marketing is done by the fans virally, and a lot of those ships are because the community has asked for them."

"[The] marketing of the game has been an objective success, as we're the most crowdfunded anything, [and it] was overseen by Sandi," Roberts says.

To supercharge the money that Gardiner was raising, Roberts brought in a big outside investor for the first time last fall. Cloud Imperium received $46 million from Clive Calder, the South African billionaire behind Jive Records, and his son, Keith. The funds are meant for—what else?—more marketing.

Cloud Imperium has churned out new versions of ships it has already sold and allows players to trade in their old ships to help buy new ones. The company also introduced the concept of "warbonds," selling ships at a discount if new cash is used to purchase them. Players gain elite concierge club status by spending $1,000 (High Admiral) or $10,000 (Wing Commander). High-status players get bonus items like the "arclight II laser pistol executive edition" or a digital bottle of space whiskey.

It may seem silly, but there are real victims. Ken Lord is a 39-year-old data scientist from the Denver area, who suffers from worsening multiple sclerosis. Lord first backed *Star Citizen* in 2013 and eventually spent $4,500 buying spaceships. Last year, Lord unsuccessfully sued Cloud Imperium for a refund.



PRICEY PLAYTHINGS

MOST FLAGSHIP VIDEO GAMES TAKE YEARS TO MAKE, EMPLOY HUNDREDS AND COST OVER $100 MILLION TO PRODUCE. BUT EVEN AMONG THIS CROWD, *STAR CITIZEN* STANDS OUT.

GAME	DEVELOPER	RELEASE	EST. BUDGET	DEV LENGTH	EST. REVENUE
RED DEAD REDEMPTION 2	Rockstar Games	2018	**$320 million**	8 years	**$1.4 billion** (2 months)
STAR CITIZEN	Cloud Imperium Games	???	**$288 million**	7 years	N/A
GRAND THEFT AUTO V	Rockstar Games	2013	**$265 million**	4 years	**$6 billion** (2013-18)
CALL OF DUTY: MODERN WARFARE 2	Infinity Ward	2009	**$250 million**	2 years	**$1 billion+** (2 months)

Sources: Analyst estimates; court documents; press reports.

"You take something that is bad, like spending too much money on a video game, and turn it into a socially exclusive club and make it desirable—cheers to their marketing department," he says. (Bizarrely, Lord, who claims to have "poor impulse control," continued to buy more spaceships after his lawsuit failed.)

"It's not my place to talk about what people spend their money on," says Gardiner.

When asked what it was like to work at Cloud Imperium, one former senior game maker who left in 2018 messaged a link to the *Spinal Tap* movie scene with an amplifier volume knob turned to 11. Former employees say Roberts gets involved in the smallest details and pushes huge and complex investments in areas that are not worth the effort. At one point, one of the company's senior graphics engineers was ordered by Roberts to spend months, through several iterations, getting the visual effects of the ship shields just right. In addition, workers have had to spend weeks on end making demos so that Cloud Imperium can keep selling spaceships—and raising more money.

Before David Jennison quit as Cloud Imperium's lead character artist in 2015, he wrote a letter to human resources—it leaked on the internet—trying to explain why he completed only five characters in 17 months. One problem, Jennison said, was that Roberts frequently reversed approvals for the characters he was working on. "All the decisions for the character pipeline and approach had been made by Roberts," Jennison wrote. "It became clear that this was a companywide pattern—CR dictates all."

A company spokesman retorts: "It does say 'Chris Roberts' on the box, so one would naturally expect him to be quite involved with decision-making."

As in the past, Roberts also seems superfocused on the blockbuster-movie aspect of his game. Cloud Imperium hired a large and presumably expensive cast, even by today's gaming standards, including Gary Oldman, Mark Hamill, Gillian Anderson and several other prominent actors, and flew them to London. There Roberts personally directed them for *Squadron 42* in a motion-capture studio built by actor Andy Serkis. Gardiner also joined the cast.

At one point, Roberts set the release date for *Squadron 42* in the fall of 2015, with a full commercial version of *Star Citizen* coming in 2016. Roberts now says a beta version of *Squadron 42* will come out in 2020 and has stopped trying to guess when *Star Citizen* will happen. But the footage of Oldman and Hamill in their motion-capture suits has already proved useful, making its way into promotional videos. "Having a cinematic story with big actors is what people expect from me," Roberts says.

THE FEDERAL TRADE COMMISSION has received 129 consumer complaints related to Cloud Imperium, involving requests for refunds as high as $24,000, according to information revealed by a Freedom of Information Act request. "The game they promised us can't even barely run. The performance is terrible and it's still in an 'Alpha' state," complained a Florida resident who claimed last year to have spent $1,000. "I want out. They lied to us."

Cloud Imperium says its policy of granting refunds to fans who make requests within 30 days is fair, adding that the company is being transparent about its game development. Even though not a single one of the 100 promised star systems has been finished, Roberts says Cloud Imperium has built tools that will expedite the building of future planets and moons, and claims the first star system will be the largest and most complex. For now, fans pay $45 for an introductory ship and access to what has been built, and the backers have something in their hands. Calling it a game is a stretch, but that doesn't stop Roberts.

"*Star Citizen* is a playable game," Roberts insists. "It has more functionality and content than a lot of finished games." He adds that 40,000 people played the game together online over a recent week and that criticism of Cloud Imperium's development work is fueled by online trolls. There are many believers. "I have complete faith," says Dan Paulsen, a backer of *Star Citizen* since 2016. "If there's a delay, it's for a good reason. It's because they want it to be a better project."

"The game they promised us can't even barely run. The performance is terrible. . . . I want out. They lied to us."

Last year Cloud Imperium released financials that showed its biggest expense was annual salaries of $30 million. But the documents did not detail how much Roberts and Gardiner have been paid over the years. In September 2018, the Roberts Family Trust, with Gardiner as its trustee, purchased a house for $4.7 million in L.A.'s Pacific Palisades neighborhood. Prior to that, Roberts had been renting. Roberts says he sold his Hollywood house in 2007 because he wanted to experience living near the ocean. He then rented for ten years because he wasn't sure if he would like it or stay in L.A. long-term.

"I was quite successful before I founded Cloud Imperium," Roberts says, adding that he was a partner at Origin, which EA bought in 1992 for $37 million, and that he was paid as the majority owner of Digital Anvil when Microsoft acquired it. Roberts has emphatically said he is not lining his pockets from Cloud Imperium and that the company's fundraising is ethical. Roberts says he is compensated like a typical C-suite game executive.

"I know everyone thinks we just have $200 million in the bank and we dive off into it like Scrooge McDuck or something," he says, and points out that many players view *Star Citizen* as a hobby they spend money on, like golf. "All I know is when people come to me, I say, 'Look, you don't need to spend anything more on this game than $45.' " F

Tempest in a Tea Bottle

George Thomas Dave convinced America to love a tangy, tart, fermented beverage from Asia called kombucha—and it made him a billionaire. His greater challenge: surviving the rush of competitors flooding a market he once had all to himself.

BY CHLOE SORVINO

Before entering his kingdom, George Thomas Dave dons his crown—a blue hairnet pulled over a fashionably short buzz cut. He pushes open the doors of his year-old factory, releasing a gust of cold air and the scent of vinegar. The interior is all steel and fluorescence, light glinting off Dave's diamond-sheathed Rolex, the metallic studs on his dress shoes and the platinum rings on his forefinger, ring finger and little finger.

Winding his way through the place, he watches a batch of his bestselling organic ginger kombucha get pumped into 16-ounce glass bottles, 100 at time. Each has a white label touting the fermented tea's ingredients (electrolytes, probiotics, enzymes) and purported benefits (reawaken, rebirth, renewal). Dave reaches the end of the 200-foot bottling line, where four robotic arms fill, stack and move cases of kombucha. He spent $40 million building in Vernon, California, 5 miles south of Los Angeles, allowing him to produce more than 1 million gallons a year. "This is the next level for us," says the impeccably cheekboned Dave, known as "GT" since before he began brewing kombucha at his mother's kitchen table.

Dave, 41, takes the opportunity to make a point, one very important to him and his GT's Living Foods, a business with an estimated $275 million in sales. This new, 260,000-square-foot factory doesn't mean he's changing how his kombucha is made. Unlike many of his rivals, he says, he makes his authentically, and it'll stay like that: "From day one, I tried to emulate a homemade process." Dave lets nature do much of the work, as he has since the beginning: fermenting a blend of black and green teas in small batches of 5-gallon jars for a month. It is not pasteurized, though doing so would make the beverage less perishable and easier to ship. And Dave does not skim away the mix of yeast and bacteria that does the fermenting, leaving small amounts floating gelatinously in the drink. "This is what the customer wants," he insists.

Dave's absolute certainty that he knows best—and that GT's Living Food should change little about its hit product—has played out in a number of other ways. He has rebuffed numerous acquisition offers, taken no outside funding and remains the sole owner of GT's, a firm conservatively worth over $900 million. His stake in GT's, plus homes in Beverly Hills, 8 acres in Kauai and a growing contemporary art collection, makes Dave a billionaire. (Here, he'd like the record to be clear. "I didn't start making kombucha," a drink with humble origins in the Far East, likely among pilgrims and travelers on the Silk Road, "because I wanted to be rich.")

"He has been able to scale his company while retaining his craft ethos and independent spir-

ETHAN PINES FOR FORBES

it," says Greg Steltenpohl, an admirer of Dave's and a founder of the Odwalla juice company. Steltenpohl knows what it's like to give up independence, chafing at the chains wrapped around him by public shareholders after Odwalla's 1993 IPO. He long ago left Odwalla and has a new nutmilk startup, Califia Farms. Dave has "the freedom to still be 100% himself," Steltenpohl says. "I can't point to a single other beverage entrepreneur who has done that."

A less sure-minded person in Dave's position might be waffling on his convictions right now, for his kingdom is increasingly under siege. He was the first to put kombucha on store shelves, in the late 1990s, and GT's is still the biggest manufacturer, owning 40% of the U.S. market. His \$3 to \$4 bottles can be found at retailers like Walmart, Costco and Kroger. But the shelves are getting crowded. There are more than 350 kombucha makers in the world (most in the U.S.), and they've slurped up roughly \$340 million in funding from venture capital, private equity and big conglomerates like Coca-Cola and PepsiCo, which paid \$260 million for GT's biggest rival, Kevita, three years ago.

These well-funded competitors are eating away at Dave's first-mover advantage, putting him on his heels and prompting him to fire off defensive potshots. With the sanctimoniousness of a perturbed monk, he decries competitors who have "bastardized" kombucha. He turns his ire on fast-growing rival Health-Ade, which now has \$50 million in sales. "You know what they are? . . . Cherry-berry. Tropical punch. . . . [They] make it basic, make it mainstream." Health-Ade sells its drink in medicinal-looking yellow-tinted bottles, which draw even more of his disdain. "If your claim to fame is that you're in amber bottles, or you're three cool hipsters behind this product, and that's it? Your days are numbered, in my opinion."

Dave makes no secret what he considers his company's greatest asset: "Our saving grace is that at the end of the day this company truly is an extension of me."

THE FIRST TIME Dave tried kombucha, at 13, he nearly spat it out. He was at his family's Bel Air home, and the tea was one of the first batches made by his parents. The Daves were the type of family who vacationed at Indian ashrams, and they'd received a starter lump of bacteria and yeast from a vegan friend, who in turn had gotten it from a Buddhist nun. "I thought it smelled weird. I thought it tasted weird. I thought it looked weird," Dave recalls. The living cultures of yeast and bacteria suspended in the drink—made when they feed off carbohydrates, usually from the fruit juices often added to flavor kombucha—were particularly unappetizing.

His perspective changed the next year when his mother, Laraine, received a sudden cancer diagnosis. He recalls the grim time in their lives unfolding like this: Laraine's initial prognosis was bad, a growing golf-ball-size tumor in her breast. Doctors scheduled a bone marrow transplant before additional tests came back. When the doctors finally got them, they were astonished. Despite their initial guess, the tumor was years old but dormant.

They asked if she had been eating anything unusual. No, she said. But she had drunk homemade kombucha every day for the past two years. The doctors raised their eyebrows and, Dave says, deemed her condition "miraculous."

That prompted him to research kombucha at a local library. Its origins are mysterious, no one quite sure exactly where it began. What's clear is that ancient Asian warriors consumed it as an "immortality tonic" to acquire great strength before a battle. It became a peasant's drink in Russia and parts of eastern Europe, and in the 20th century, it became a supposed immune-booster for HIV patients during the AIDS epidemic.

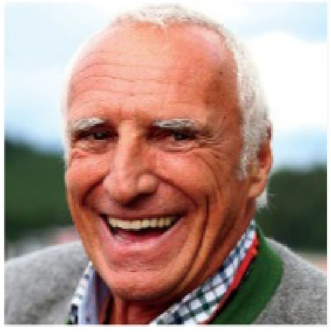
Kombucha captured Dave's interest at an opportune moment. Almost 16, he was failing his classes at Beverly Hills High and had fallen in with a crowd that had "lots of money, lots of drugs." He needed an exit. "You quickly can get swept up in it. I certainly did, until I caught myself." He passed his GED and left school early, thinking he would start fresh at a city college. Then it dawned on him to make kombucha instead.

He lived at home and began GT's there in 1995. Within a year he was selling some 20 cases a day to natural food stores around L.A., generating north of \$150,000 in sales, and moved out to a rented commercial kitchen in Los Angeles. He used the same batch of yeast and bacteria his parents had received years prior (he still uses the same colony today).

"I was a one-man show. I brewed, bottled, delivered, labeled—you name it," Dave says. "This product was something re-

Big Gulps

A SIX-PACK OF BEVERAGE BILLIONAIRES.



DIETRICH MATESCHITZ
74, AUSTRIA
NET WORTH: \$20 BIL

RED BULL
FIRST *FORBES* APPEARANCE, 2005:
"WHEN WE FIRST STARTED, WE SAID THERE IS NO EXISTING MARKET FOR RED BULL. BUT RED BULL WILL CREATE IT. AND THIS IS WHAT FINALLY BECAME TRUE."

BERT BEVERIDGE
57, U.S.
NET WORTH: \$20 BIL

TITO'S VODKA
FIRST *FORBES* APPEARANCE, 2013:
"IF SOMEONE TELLS ME MY BRAND ISN'T A CRAFT-DISTILLED SPIRIT BECAUSE IT'S TOO BIG, I JUST SAY, 'I MAKE IT THE SAME WAY I'VE ALWAYS MADE IT. I JUST HAVE A LOT MORE STILLS.'"

MATESCHITZ: MARK THOMPSON/GETTY IMAGES; BEVERIDGE: MICHAEL THAD CARTER ally special and something that very much had aspects of me in it, and I wanted to protect it."

His mother became his first employee. They had grown closer after the surprise death of Dave's older brother from kidney and liver failure and her divorce. She helped Dave get GT's into a few shops in Los Angeles, often appearing as an in-store pitchwoman, regaling potential buyers with her story of kombucha's health benefits. He printed a summary of her tale on his labels, but even with that tearjerker marketing, he still struggled: "I got a lot of noes. But I was persistent. That creates humility."

The turning point came when word of mouth reached Whole Foods, which started carrying his tea in 1999. It caught on, becoming a cult-favorite wellness drink in health-conscious southern California and then across America. Soon Gwyneth Paltrow, Madonna and Tom Cruise were spotted sipping GT's.

IN A DECADE, GT's reached about $35 million in sales, while competitors like Coke-backed Honest Tea followed behind with their own kombuchas. Then disaster struck in 2010. A few bottles of kombuchas were found bubbling and leaking at a Whole Foods in Portland, Maine. Test results from the Department of Agriculture found alcohol levels in the teas close to 2.5%, higher than they should've been. While none of the offending teas were GT's, Dave suffered the same fate as everyone. Overnight, Whole Foods removed kombucha from its stores. More chains followed.

Class actions came next. Two came in September 2010, one alleging GT's falsely claimed alcohol levels were below 0.5%. The other called out GT's for "deceptive, misleading, unfair and unlawful labeling" for marketing its products as "wonder drinks that possess amazing health benefits." A third filed in November combined both allegations, accusing GT's of making unsubstantiated health claims such as "weight control," "anti-aging" and "healthy skin." He denied the allegations but settled all three for $40,000 combined and paid lawyers' fees of $350,000. ("Corporate extortion at its finest," he sniffs.) And Dave removed Laraine's cancer story from labels.

At first, Whole Foods hesitated to return to kombucha. Honest Tea threw up its hands completely and stopped making it. Many more of GT's competitors began pasteurizing to control alcohol levels and quickly won back spots at Whole Foods. But the grocer was still reluctant to restock GT's. Dave was adamant that he wouldn't pasteurize, believing it would zap away some of the alleged health benefits. He spent months tinkering with his recipe and came up with a new line called Enlightened. It is less fermented, lowering its alcohol content, and has become GT's most popular item. The original recipe is still available in some stores (including Whole Foods) but is treated like alcohol and sold only to customers 21 and older.

"When 2010 hit, it occurred to me that the fact that I've remained independent was a blessing. It allowed me to get out of it on my own terms," Dave says.

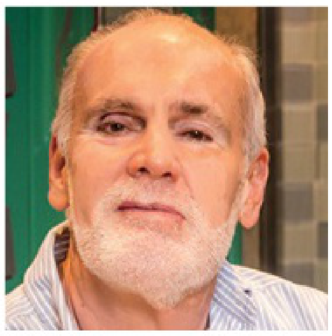
Around this time, he decided to entertain acquisition offers from "two big food companies"—he won't say which ones, but Coke, Nestlé and Unilever are reasonable guesses—even though he had steadfastly rejected any overtures in the past. The pair of suitors used every ploy possible to win him over. Roses, champagne, limos to meetings. They promised far-reaching distribution and help in landing a TED Talk so he could spread the gospel of kombucha. It sounded good, but both deals required him to give up control over his formula. He passed.

"I'm not for sale," he says. "If you're just looking to wine and dine me the rest of my life, I'm going to be incredibly unhappy."

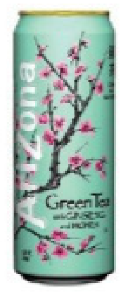
FOR THE NATURAL-products industry, an almost implausibly large group of businesses encompassing everything from mango-flavored sparkling coconut water to hair conditioner made from seaweed, Christmas comes in March, when Expo West begins. The five-day trade show has occurred annually since 1981, and it attracts thousands of vendors, all jockeying for the attention of buyers from the nation's biggest retailers at the glassy Anaheim Convention Center, across from Disneyland, stationed in their respective booths.

That's not how George Thomas Dave rolls. He's a floor above the zooish fray, holding court in his private room, surrounded by a small group of his sales team and executives from retailers like H-E-B grocery and Sprouts Farmers Market. He has never exhibited. People come up to see him.

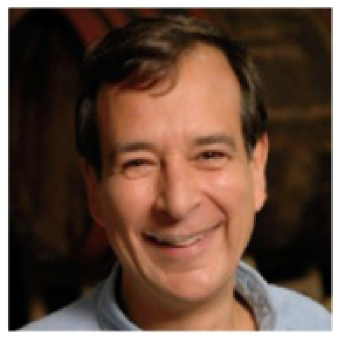
He's pouring out small tastes of his latest product, Dream-



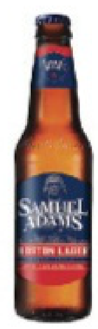
DON VULTAGGIO
67, U.S.
NET WORTH: $3.1 BIL



ARIZONA BEVERAGES
FIRST *FORBES* APPEARANCE, 1996:
"IN THE BEVERAGE BUSINESS YOU'VE GOT THESE BIG GIANTS. THEY'VE SAID, 'WE'VE BEEN HEARING ABOUT THESE TWO EX-TRUCK DRIVERS FROM BROOKLYN, THESE TWO COCKROACHES FROM BROOKLYN,' AND THEY'RE A LITTLE FRUSTRATED NOW... BECAUSE WE'RE TWO GUYS THEY CAN'T EXTERMINATE."



JIM KOCH
70, U.S.
NET WORTH: $1.1 BIL



SAMUEL ADAMS
FIRST *FORBES* APPEARANCE, 1987:
"MY FAMILY WAS BREWING BEER WHEN EBERHARD ANHEUSER WAS SELLING SOAP.... I LOVE BEING A BREWERY. IT REMINDS ME OF WHEN I WAS A KID AND USED TO VISIT MY FATHER AT WORK."

VULTAGGIO: FRANCO VOGT; JIM KOCH: NEAL HAMBERG/BLOOMBERG catcher, a sparkling water infused with cannabidioil, or CBD. He spent months perfecting the four flavors: cucumber-basil, ginger-lemongrass, orange-elderflower and blood rose. "CBD is very controversial right now," Dave says. "A lot of companies our size shy away from risk. I think that's what kills the entrepreneurial spirit."

Dave doesn't walk the show floor anymore. It depresses him too much, he says, to see his rivals' ill-conceived kombuchas and how they're damaging customers' appreciation for more authentic ones like his. ("I refuse to let someone else who just joined the party change the narrative.") But the competition below him is hungry to take a piece of his long-established position in the industry. "Kombucha is growing at 40% a year. It will be a $2 billion category by 2020," says John Hackett of Coca-Cola, who's here hawking something called Smoobucha from Odwalla, which Coke now owns. "We took a smoothie, put it together with pasteurized kombucha and blended it in a way that we think makes kombucha more drinkable, because 68% of the people who try kombucha don't like it," he says, citing an industry survey.

HOWARD SCHULTZ
66, U.S.
NET WORTH: $3.7 BIL

STARBUCKS
FIRST *FORBES* APPEARANCE, 1990:
"FOR 95 CENTS YOU CAN HAVE THE BEST CUP OF COFFEE IN THE WORLD. ALMOST EVERYONE CAN AFFORD LUXURY FOR A DOLLAR."

Dave's two biggest rivals are here, too: Kevita, owned by Pepsi, and Health-Ade, which is backed by Coke. Dave is quick to complain that Kevita shouldn't be allowed to call its popular Master Brew line kombucha, saying it doesn't follow an appropriate recipe. Dave uses a cumbersome, small-batch manufacturing process that took years to fine-tune. It requires careful logistics to keep the kombucha fresh as it winds through multiple facilities and warehouses in southern California before getting to stores. Kevita does something totally different. It uses lab-created probiotic strains, adds a tea flavoring and pumps it full of artificial carbonation.

As a result, Kevita doesn't contain the same stringy threads of bacteria and yeast that GT's does, and its teas are more mellow tasting, leaving Dave to snipe: "If you want [a drink that's] clear and consistently sparkling with no vinegar flavor, that's called carbonated flavored water. You can get it for 99 cents at the thrift store." Customers don't seem to share Dave's concerns. Kevita sales are up an estimated 100% since Pepsi bought it in 2016, and it beat Dave to Europe, a market he plans to reach later in 2019, a year behind.

As for Health-Ade, Dave is stewing about the price war it has ignited with him. Health-Ade has raised $30 million from Coke and other investors, according to PitchBook, and it has used that money to build a factory, allowing it to keep its manufacturing costs and pricing low. "Right now, you can go and buy a Health-Ade for 99 cents because they offer a coupon here and a coupon there, and you can stack the coupons. That's killing the category."

His complaints go on. "This category—that I feel that I was instrumental in allowing it to be what it is—is slowly being killed by all the noise and all the success," Dave says. "I say that with almost tears in my eyes. The future for kombucha may not be as bright."

A few years back, Mark Rampolla experienced something similar as one of the originators of the coconut-water craze. "I do think [Dave] may have some challenges in the future if he wants to continue to grow and maintain relevance," says Rampolla, now a cofounder of Powerplant Ventures, a Los Angeles venture capital firm. "I'd say any beverage entrepreneur would love to be in that situation and take on the challenge of trying to figure it out."

Rather than go mainstream, Dave is pushing hard in the other direction. He convinced people to love a weird, funky drink once, and he aims to do it again. In 2016, he made his first acquisition, buying a family-owned Minnesota business called Tula's CocoKefir, a maker of fermented coconut water. The story of how CocoKefir started resonated with Dave: parents creating a drink they hoped would help their autistic daughter.

"We needed something to give us permission to play in other spaces," Dave says. For CocoKefir, Dave imports Thai coconuts that employees scoop out by hand. "We're doing absurd things"—like manually processing coconuts—"that from a financial and business standpoint, you look at and think is never gonna work. But we're fine with that. We like to challenge ourselves. We think that's what makes us special."

RICHARD YUENGLING JR.
76, U.S.
NET WORTH: $1.3 BIL

YUENGLING BEER
FIRST *FORBES* APPEARANCE, 1996:
"TAKE ON A PARTNER? I COULDN'T EVEN GET ALONG WITH MY OWN FATHER."

In addition to sparkling CBD water, GT's also debuted a line of hard kombucha at the end of last year. It has an ABV of 3%, less than the 4% or so in a light beer. There's also CocoYo, a non-dairy coconut-based yogurt, and Alive, launched by GT's in 2017 as a probiotic apple-cider vinegar drink but recently rebranded as tea filled with traditional Chinese herbs like reishi and chaga.

"Kombucha is special, but it's not the only thing in this world," Dave says. "I'm fearful that one day I wake up and kombucha doesn't mean anything. I'm going to fight it, but I may find myself outnumbered."

He extends his vision out decades. "Our kefir and yo is where kombucha was for me 22 years ago. . . . I'm not in a rush," he says. "I don't have to answer to anybody." F

SCHULTZ: STEVEN FERDMAN/GETTY IMAGES; YUENGLING: JAMEL TOPPIN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You might think ending extinction means going to the ends of the Earth. But sometimes, saving the world is as easy as showing up. Your support is vital to the San Diego Zoo's mission of protecting animals all over the world. Join us in making a difference—together, we can be heroes for wildlife.
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San Diego Zoo Global is involved in conservation projects in more than 70 countries, including for gelada monkeys, African penguins, and lemurs, species you can see in the San Diego Zoo's Conrad Prebys Africa Rocks.
SAN DIEGO ZOO

Conference Champions

Silicon Valley's sexiest IPO isn't a ride-hailing firm or a social network—it's Zoom, a humble video-chat app that wins by just working better. Throw in financials that are so pretty they belong in a coffee-table book, and you have Wall Street's hottest new stock.

BY ALEX KONRAD

ZOOM CEO Eric Yuan cut an unlikely figure as he addressed the cheering throng in the moments before ringing the opening bell at Nasdaq, his bashful grin giving way to a look of focus as he said, "A new game starts today." Sure, his startup wasn't as well-known as Lyft and Pinterest, two consumer companies that also just made their IPO debuts. But to anyone familiar with Yuan, the shock wasn't how he got there. It was that he was physically present at all.

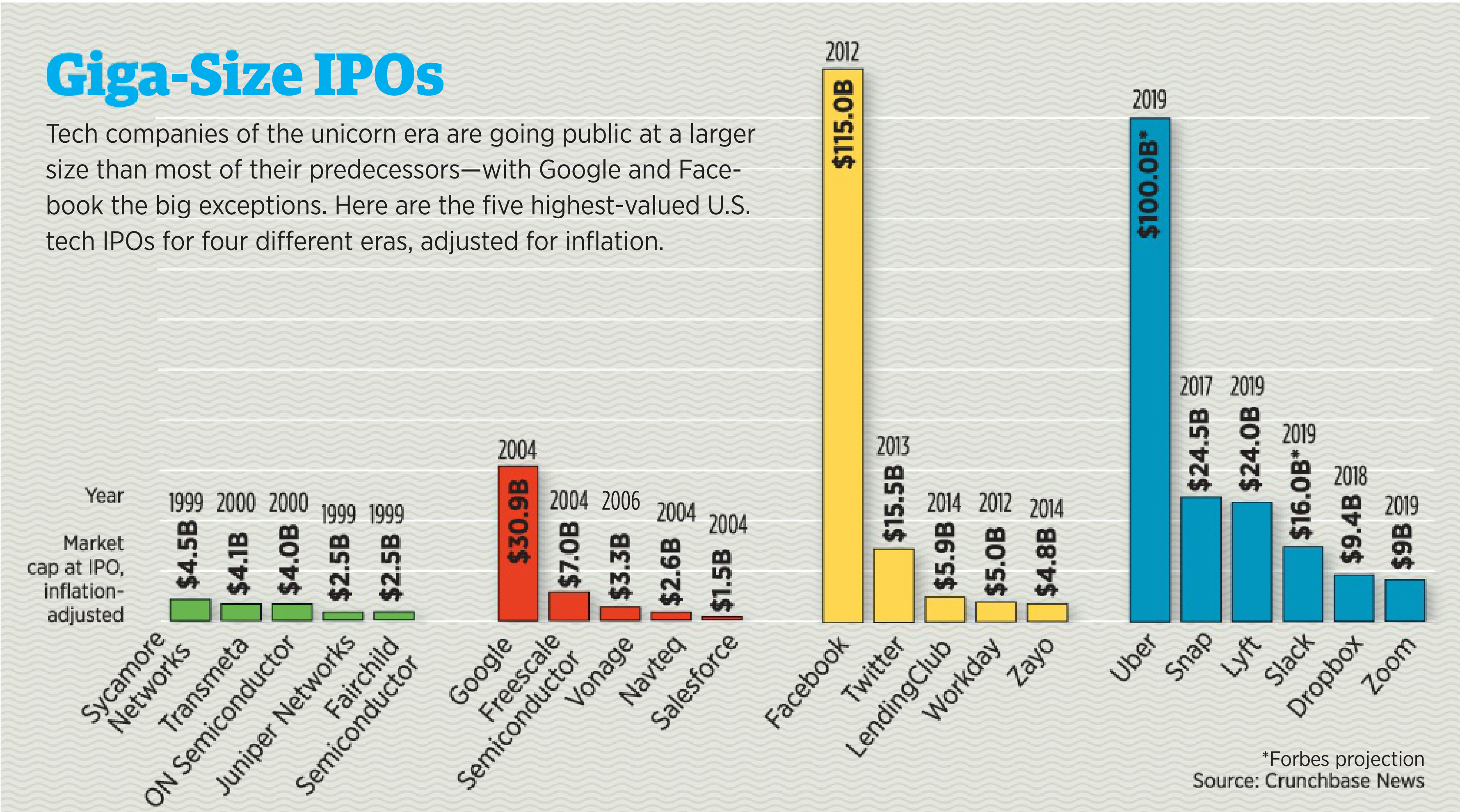
The founder of Zoom, which provides videoconferencing software over the internet, practices what he preaches. After Yuan hired hundreds of engineers in his native China, he went three years between in-per-

ETHAN PINES FOR FORBES

Founder Eric Yuan hopes that decades from now, employees will remember Zoom as a great place to work: "If they feel that way, I'll feel like my dream came true."

TARUN KAJEEPETA

Founder, Condor Detroit



son visits. When he raised money from top venture capital investors, he showed up just once, to make sure every investor in the room had downloaded the Zoom app. For his IPO road show, Yuan deigned to make the 50-mile trek from his San Jose, California, headquarters to San Francisco for a single investor lunch—and then bolted back to work. Everyone else, money manager big or small, met with him virtually, over Zoom. When Yuan flew to New York for the IPO, it was just his eighth work trip in five years.

"Customers have always said, 'Eric, we'll become your very important customer, you've got to visit us,'" says Yuan. "I say, 'Fine, I'm going to visit you, but let's have a Zoom call first.'" That's usually enough.

It worked with Wall Street, where demand for Zoom (formally known as Zoom Video Communications) prompted the company to raise its IPO price to $36 per share, valuing the company at $9.2 billion—and making Yuan a billionaire at age 49. The stock's 72% first-day pop boosted Zoom's market cap to $15.9 billion and the net worth of Yuan, who owns 20%, to $3.2 billion. All for videoconferencing tools that didn't reinvent the wheel but made it a lot less painful to turn. An engineer turned founder who once ran engineering for Cisco's Webex videoconferencing business, Yuan set out to make tools that work equally well in a boardroom in Manhattan and from a kitchen table in China. Built in the cloud and priced using a "freemium" model that let anyone host a meeting of 40 minutes or less for free, Zoom now posts numbers that had Aaron Levie, the CEO of Box (a customer), tweeting it could start a second business selling its "beautiful" financial numbers as a coffee-table book.

With annual revenue of $331 million, up 118%, and 50,000 corporate customers, including Samsung, Uber, Walmart and Capital One, Zoom was the ultra-rare tech unicorn that was profitable before it went public. Its sudden fame—emanating from its IPO—is a new feel for a company that takes its cues from a CEO who not only shuns the spotlight but is so frugal he insists on reimbursing the company when he gives a friend swag like a Zoom backpack. Beneath the belated buzz: a story of perseverance and better execution, proving that an unexpected challenger can sweep the field, even in a crowded market.

With hypergrowth comes risk, of course, and Zoom still must prove it can continue to best its competitors: massive companies like Google and Microsoft that had scared off most venture investors during Zoom's early days eight years ago. Cisco, Yuan's former employer, may privately rue letting him leave, but it's not shying away from a fight. And while Zoom has the goodwill of much of the tech community, with partners like Atlassian, LinkedIn and Slack, its inevitable move beyond video means its list of competitors is likely to grow. Ringing the Nasdaq bell checks off one dream for Yuan. There are plenty more to go. "It's like a marathon," Yuan says of his ambitions to connect the working world like Facebook did with consumers—which would make Zoom even bigger than Cisco. "You're only 5 miles ahead of me, that's okay. I'll run faster than you, and I'll still catch up."

For Yuan's first entrepreneurial act, he burned down his neighbor's cottage. The son of mining engineers in China's eastern Shandong Province, as a fourth grader Yuan started collecting construction scraps to recycle the copper for cash. When the young hustler discovered that the facility needed only the metal, he tried to burn away the extra material in a chicken shack behind his neighbor's house. To his horror, firefighters had to come put out the blaze. Yuan says with typical understatement, "My

PETER AND MARIE HOEY FOR FORBES

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parents were really upset."

At Shandong University of Science & Technology, Yuan studied applied mathematics and computer science and, at age 22, got married while pursuing his master's degree. Already convinced he'd start a company someday and fascinated by entrepreneurs like Bill Gates, he set his sights on the U.S. tech boom. It ws easier said than done: After U.S. Customs asked for an English-language version of his business card, it listed Yuan as a consultant, and he was misidentified as a part-time contractor. His visa was denied. For the next year and a half, the now-skeptical immigration services would deny him seven more times. But Yuan refused to give up. "I told myself, Okay, great. I'll do all I can until you tell me that I can never come here anymore. Otherwise, I'm not going to stop."

In the summer of 1997, Yuan joined two-year-old Webex in Milpitas, California. As a young employee, Yuan would routinely code all night on a Friday and then go play a pick-up soccer game on no sleep on Saturday afternoon. Riding the exuberance of the dot-com bubble and with videoconferencing tools taking advantage of faster internet speeds, Webex went public in July of 2000 and was acquired by Cisco for $3.2 billion in 2007. Not long after, Cisco chose Yuan to lead Webex's engineering group. But by 2010 he was unhappy. The problem, according to Yuan: The service simply wasn't very good. Every time users logged on to a Webex conference, the company's systems would have to identify which version of the product (iPhone, Android, PC or Mac) to run, which slowed things down. Too many people on the line would strain the connection, leading to choppy audio and video. And the service lacked modern features like screen-sharing for mobile.

"Someday someone is going to build something on the cloud, and it's going to kill me," Yuan told Bill Tai, a venture investor who became one of the first backers of Zoom. After a year of pestering his bosses to let him rebuild Webex, Yuan gave up and decided to leave Cisco in 2011. "Cisco was more focused on social networking, trying to make an enterprise Facebook," he says. "Cisco made a mistake. Three years after I left, they realized what I said was right."

The biggest hurdle was convincing his wife, who saw him throwing away a lucrative job managing 800 people: "I told her, 'I know it's a long journey and very hard, but if I don't try it, I'll regret it.'"

"One click, we were in," a rival said. "We were like, 'What is this voodoo? How are they doing it?'"

First Yuan asked friends, including fellow investors in a consumer video app called Tango, to write him $250,000 checks so he could pay 30 engineers (some in China) to work on a new idea: create better technology for video communications, then figure out what app to build on top. Mostly because of their faith in Yuan, the investors, including former Webex CEO Subrah Iyar, gave him $3 million for his startup, which was then called Saasbee. "Everyone in venture capital thought it was a terrible idea," says Jim Scheinman of Maven Ventures, who as one of the company's first backers came up with the name Zoom.

Within months, Yuan realized he wanted to target the videoconferencing business again. The VCs had reason to be skeptical. With Microsoft owning Skype, Google in the market via Hangouts and Cisco still leading in market share, videoconferencing had entrenched incumbents; there were also multiple startups, including the well-funded BlueJeans Network. "It would require flawless execution to win," says one investor who passed on Zoom. Even at Qualcomm Ventures, which led Zoom's $6 million Series A investment in 2013 alongside Yahoo cofounder Jerry Yang, there was "lots of internal debate," says partner Quinn Li.

From rundown offices in Santa Clara, with an oft-broken elevator and a mission-crucial video camera perched atop a cheap fridge, Yuan and the U.S. members of his team quietly worked on their product for nearly two years. When Zoom launched, it had several key differences from the crowd. Its lightweight Web client could figure out almost instantly what kind of device you were using, meaning Zoom didn't need different versions for Mac or PC. It also provided a software layer that shielded any bugs that might be introduced when a browser like Chrome, Firefox or Safari pushed an update. Zoom could operate even at 40% data loss, so it would still work on a spotty or slow internet connection. And at $9.99 per host per month (now $14.99), it undercut its rivals. Zoom's customer service chief, Jim Mercer, was working at competitor GoToMeeting when a colleague opened a Zoom account to see what the hype was about. "One click, we were in, and there were 25 feeds of participants at the same time," he says. "We were like, 'What is this voodoo? How are they doing it?'"

After raising another $6.5 million from Li Ka-shing's Horizons Ventures, Zoom raised a $30 million round from Emergence Capital in 2015 (Li, Hong Kong's richest person, remains a frequent user of the tool, a rep says). Soon after, Zoom began to target larger corporate clients. Yuan stunned partners at Emergence when he showed up for his pitch meeting and promptly insisted every investor download the Zoom app and join him for a live videoconference of the presentation, partner Santi Subotovsky says. Yuan shocked them again when, approached by large corporations that year, he warned these potential customers that Zoom's features might not be ready for their business. But after scooping up many of the fast-growing companies in its backyard in Silicon Valley, like Box, Slack and Uber, Zoom broke out of tech in 2016 and now manages accounts such as Gap Inc. and Williams-Sonoma.

At Phoenix Children's Hospital, staff attend meetings, host surgical case conferences and work with patients over Zoom. Annoyed with a more complicated predecessor, Phoenix Children's tested Zoom for nearly four years and now has 464 staffers registered on it. For kids who are facing long stays, the hospital has

Zoom's management waves at hundreds of their employees tuning into Times Square via the company's app on the morning of its April IPO.

provided them Zoom accounts and iPads to meet with each other in virtual support groups and help them attend school without immunological risk. "Being out of school for too long, it can lead to them not graduating," says Rachel Dunagan, an A/V tech at the hospital. "With Zoom, they can be live in the room, interacting with the lesson and their class. It keeps them able to participate. It's been fantastic so far."

By the time Sequoia backed Zoom in a $115 million Series D round in early 2017, valuing the company at $1 billion, the famed venture firm had been fighting to get a piece of it for more than two years. "We were going through all the due diligence, and I remember saying there have to be a thousand Eric Yuans in the world, because everyone we spoke to, they knew Eric, big or small," Sequoia partner Carl Eschenbach says.

Yuan's secret for being everywhere: Zoom, of course. His habit of taking the most important meetings virtually started because of basketball. A diehard NBA fan since moving to the U.S., first of the Lakers' Kobe Bryant for his work ethic and then of his local Golden State Warriors, Yuan made a point of attending all of his three kids' basketball games and gymnastics meets. One unique Zoom feature is a virtual background the user can change to show a logo or image, disguising where they really are. Last summer, his eldest son, now a graduating high school senior who set the local league record for three-point shots, had a tournament in Los Angeles. "I set the background as the Santa Barbara beach, and they all thought I'm there. After the meeting, I swipe," revealing a sweaty high school gym. "And they all say, 'What?'"

Yuan's love of basketball led him to make room for a celebrity investor from his beloved Warriors last year, but it was Andre Iguodala, a veteran role player, not a star like Steph Curry or Kevin Durant. "We had a great conversation on how my game relates to his business, doing the little things right," Iguodala says. The feeling, both say, is mutual: respect for a professional who wins by putting team before ego.

Two months before the IPO, Yuan walks through the sales and engineering departments of Zoom's newer San Jose headquarters. The elevators finally work in this one, but it's still somewhat dingy: Yuan decided he wanted a space close to the Caltrain and leased it pre-furnished to save on costs. It's the Chinese New Year, and Yuan hands out little red envelopes to any employee who looks up, calling out most by name. "Don't open this," he tells one group with the smirk of a dad teasing his kids. "After we leave, then you open them. It's a lot of money!" For Zoom's 1,700 staffers today, many of whom became multimillionaires in Zoom's IPO, the payoff is a gag: one crisp, "lucky" $2 bill.

Yuan's public-facing thriftiness serves a secondary message: What matters at Zoom is the product, not the perks. He shares his office with his product chief and old friend Oded Gal, a fellow Webex veteran he hired away from BlueJeans Network three years ago. But you'll seldom find Yuan there. A few times a year, the CEO takes sits at a temporary desk with a team he wants to focus on, marking his choice with two small family portraits and a stack of books to give out. Yuan's been with the engineers since Zoom announced a voice product in October, now called Zoom Phone. It's one of several major product lines Zoom has touted in recent months, alongside an update to its conference room bundle called Zoom Rooms.

LIBBY GREENE/ NASDAQ

Though an increasing number of Zoom's users log in via smartphone—one out of six today, Yuan says—many big firms still depend on hardwired conference rooms. Zoom provides the software; partners like Dell, Logitech and Polycom supply the TVs, cameras and speakers. It's a move Yuan thinks is strategic to winning over large customers whose CEOs spend lots of time in virtual meetings.

Though Zoom isn't making hardware, its bundle smacks of the stuff sold by Yuan's ex-employer, Cisco. There's some irony to that, as last year Cisco shook up its Webex unit—it now looks more like Zoom. It reorganized under a new leader, Microsoft veteran Sri Srinivasan. His mission is to revitalize Cisco's collaboration products, with videoconferencing one of several factors. And he's happy to throw some shade. "Zoom is apples and oranges," Srinivasan says, and offers "fledgling" solutions beyond its core desktop-to-desktop video tools. "They've done a pretty good job in their own right, with a bunch of borrowed resources from Webex."

A revitalized Cisco—as well as Google, Microsoft and even potentially Apple and Amazon—threatens Zoom just as it did in its early days. While Zoom has claimed to work with at least 90 of the Cloud 100—*Forbes*' exclusive ranking of the top private cloud companies—some corporations, like Sony, have resisted the move to Zoom as too complicated to set up at large scale. At GM and Verizon, for instance, teams use multiple solutions that don't include Zoom. Others, like Ford, use Zoom, but only for a handful of people. Even at Qualcomm, which owns a piece of the company, you'll find Cisco and Microsoft. "People just have a solution they already pay for," Qualcomm Ventures' Li says.

As Zoom adds features and larger accounts, with some companies simultaneously hosting thousands of people across multiple chats, the company will need to be careful not to cut corners and damage the product. In January, Zoom suffered a high-profile service outage, which it blamed on Amazon Web Services, but all people saw was that Zoom's app didn't work.

"It's like a restaurant," Yuan says about a similar glitch with a third-party vendor. "When a customer walks into a restaurant, until they leave, the entire experience needs to be great. You can't blame anything on anyone else."

But, of course, it can cut both ways. When Facebook went down in March, the New Zealand House of Representatives streamed its committee meetings over Zoom instead of Facebook Live. And in its regulatory filing with the SEC before going public, Zoom noted that more than half the 500 largest companies in America had at least one paid seat on Zoom but few had signed large contracts, suggesting an avenue for significant sales down the road.

Then there's the international market, where Zoom did just 18% of its business in its last fiscal year. Expansion into markets with the most demand for Zoom—the United Kingdom, Japan, France, Germany and Australia—presents a natural future angle of attack. Zoom is furthest along in Canada and is studying it for its next phase of growth. And after Yuan, ever thrifty, spurned the chance to buy the Zoom.com address in the company's early days, opting for the cheaper Zoom.us, Zoom quietly acquired it last year for $2 million, a domain that could prove valuable in disassociating the company from the U.S. in touchy overseas markets.

> *"It's like a restaurant. When a customer walks into a restaurant, until they leave, the entire experience needs to be great."*

China remains a wild card. Zoom has more than 500 engineers there, rare for a U.S. company. But China is an unproven market for the enterprise business, Yuan says. Still, Zoom's employee foothold in the country and Yuan's personal connections would suggest that if any company can make the jump, it would be Zoom—potential privacy concerns aside.

If Zoom hopes to become as big as Cisco someday—the San Jose company booked $49 billion in sales last fiscal year, and its stock is trading near a 20-year high, generating a market capitalization of about $250 billion—it will likely need to offer far more than video in the years to come. Voice-only calling was likely just the first in a range of features Zoom could add within communications in the future, such as stand-alone messaging and file-sharing products. One likely area for a bigger push is data. Zoom already connects customers to other services to record and transcribe its conference calls and help sales reps flag phrases or patterns of interaction that might suggest a deal is close, from an ideal time to chat or the duration of a call. Similar tools could help marketers, product developers and customer service reps learn from their Zoom meetings in the future, too. And Zoom has powerful friends for that push, so long as it doesn't compete too much. Atlassian and Salesforce are two enterprise software leaders that have invested directly, and others, like LinkedIn, have made Zoom a preferred partner.

In the meantime, don't expect Yuan to let his newfound billionaire status go to his head. He may drive a Tesla, but only because he sees the company as a lot like Zoom—it's designed differently and it's faster under the hood (plus Tesla is a customer, too). Back in his cubicle the Monday after the IPO, he'll keep trawling the Zoom Twitter account for customer testimonials to retweet. And he'll expect employees, who turned out around the world for the IPO ceremony to wave to their boss over a live feed in Times Square using—what else?—Zoom to follow his lead. A mentor once told Yuan the IPO would be like graduating from high school. "You go celebrate one day, and that's it," Yuan says. "You don't want high school to be the peak of your performance, right?" F

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SELLING YOU A BETTER YOU

How Rescue Agency is getting the most at-risk Americans to lead healthier lives.

BY SUSAN ADAMS

PHOTOGRAPHS BY AARON KOTOWSKI FOR FORBES

CREDIT TK

Jupiter Velvet, a transgender drag queen wearing a hot-pink catsuit and a frizzy blonde wig, is about to lip-sync the Britney Spears hit "Breathe on Me" before hundreds of revelers from Atlanta's LGBTQ community. But before she begins, she holds a gas mask in front of her face and tells the crowd why she doesn't smoke. "I am tobacco-free because, as a trans woman, it took me years to learn how to love my body," she says. "And I won't allow toxins to ruin the relationship I've built with my body."

The April 2019 event, at a hip Atlanta hotel called The Moxy, is part of a nationwide anti-smoking campaign produced for the FDA by Rescue Agency, a San Diego marketing firm that has found a unique way to get people to lead healthier lives. Its clients are federal, state

Jeffrey Jordan, Rescue Agency's founder: "Our entire mission is to make sure we are an insider. We need you to feel like we are your friend who is encouraging you to look at things differently."

and local health departments. Rescue's novel approach: Get to know all it can about the group it's targeting, then tap people in the group to convey a message that speaks to their most prized values and priorities.

Its initiative for young LGBTQ adults, whose smoking rate is more than twice that of the straight population, includes a video featuring four drag queens from the TV show *RuPaul's Drag Race* ("Yes, queen, every cigarette is doing you damage," says one of them). RuPaul tweeted the spot, and it has 1.5 million views. "The people who see our ads see themselves in them," says Jeffrey Jordan, Rescue's founder, president and executive creative director.

Jordan, 35, grew up gay in Las Vegas and developed a hypersensitivity about social groups. "You're hiding until you come out," he says. "You're trying to fit into one group or another." That insight led him to an approach to teen marketing that has landed Rescue's work in three marketing textbooks and 15 articles in health journals. Dressed in skinny gray jeans and a loose-fitting black shirt with a graphic of tiny green robots, he points to a wall of framed articles at Rescue's three-story headquarters on a quiet street 15 minutes north of downtown San Diego. Its 180 employees run campaigns for 32 federal, state and local customers, logging 2018 revenue of $68 million.

From his light-filled office overlooking Mission Bay, he describes how traditional health marketing targets broad demographic groups like African-Americans or teenagers with scolding, one-size-fits-all messages. In a file on his computer he stores what he calls "moralist" ads. A classic of the genre: "This Is Your Brain on Drugs." Released in 1987, it shows a stern white guy in a button-down shirt cracking an egg into a frying pan. "Any questions?" he says as the egg overcooks.

Demonstrating Rescue's approach, he plays a spot called "Let Love In." It shows a montage of LGBTQ people in eye-catching outfits, including a man with bright red lipstick wearing a kilt. The animated voice-over: "Confidence

25 FORBES SMALL GIANTS

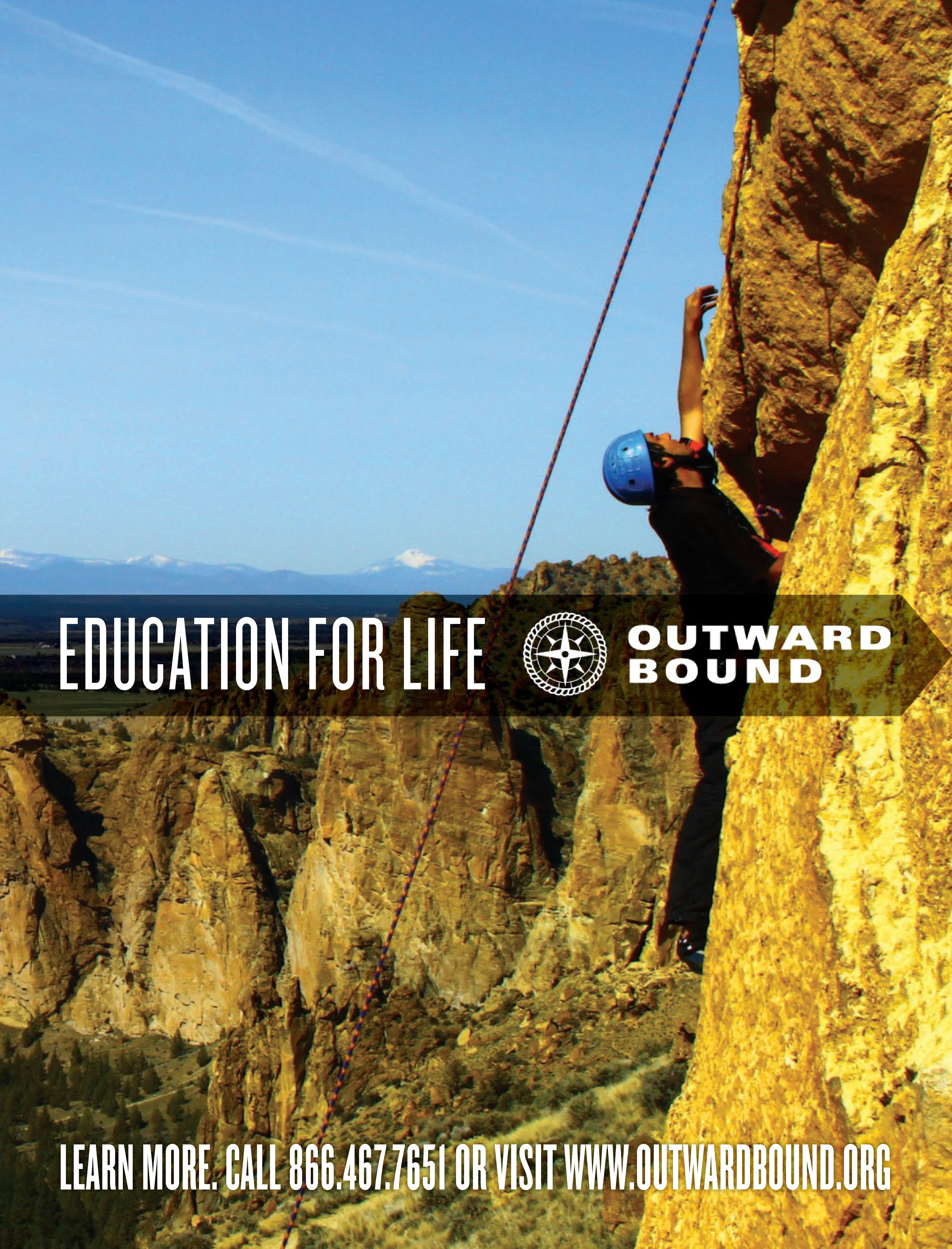
When is bigger not better? When you value greatness over fast growth. These 25 companies are all privately owned and closely held, and they share a commitment to being the best at what they do, providing stellar service to customers, offering employees fulfilling, rewarding work and being vital members of their communities. They include a leading website for how-to advice, a Texas remanufacturer of oil drilling rigs, a burgeoning chain of "hyperlocal" newspapers, and a game company that has spawned an international community of more than 200 million players. Read and be inspired.

SPIKEBALL

CHICAGO

FOUNDER: CHRIS RUDER (CEO) // **2018 REVENUE:** $19 MILLION // **EMPLOYEES:** 23

Chris Ruder fell in love with roundnet, an obscure volleyball-inspired sport with a trampoline-like net. Then in 2008 he raised $100,000 from family and friends to launch a company making equipment for it. At first he sent a personal note to every customer. In response, parents wrote back about their children's passion for the game. Soldiers in Afghanistan sent him photos from the war zone. Before long he was watching tournaments spring up around the world and setting up an international Spikeball association. All that had big business benefits. "We don't have to ask anybody to promote Spikeball," he says. "They just do it on their own." And now the sport has millions of enthusiasts around the globe.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ARKADIUM

NEW YORK CITY
FOUNDERS: JESSICA ROVELLO (CEO) AND KENNY ROSENBLATT
2018 REVENUE: $15 MILLION
EMPLOYEES: 89

In 2001 husband-and-wife team Jessica Rovello and Kenny Rosenblatt founded Arkadium, a creator of interactive content for digital publishers, and soon acquired a gaming studio in Crimea, where costs were low. When Russia invaded in 2014, the studio and everyone in it relocated to a nearby Russian city. "It's not that often that companies have to move their entire staff from one country to another," Rovello says, but "our employees are not cogs in a wheel."

ADVOCO

GREENVILLE, SOUTH CAROLINA
FOUNDERS: STEVE BRINDLE AND PAUL COWLEY
2018 REVENUE: $13 MILLION
EMPLOYEES: 67

Advoco, which keeps track of equipment for the likes of PepsiCo and Starbucks, has every new employee sign a promise to be courageous, driven, innovative, honest, confident and knowledgeable. "If we don't challenge our people to live those values, then we become just another consulting firm," president Marty Osborn says. They also enjoy fitness challenges that raise funds for charity, annual wine-making sojourns in Sonoma and paid trips for the whole company to vacation together.

CHIEF OUTSIDERS

HOUSTON
FOUNDER: ART SAXBY (CEO)
2018 REVENUE: $13.1 MILLION
EMPLOYEES: 70

Chief Outsiders' network of 65 CMOs-for-hire take on as many projects as they want and keep 50% to 85% of what their clients pay, guaranteeing them flexibility and control over their jobs. They also get a long-term incentive plan that can earn them equity. The company could grow further by offering CFO, CIO or CTO services, but CEO Art Saxby has refused: "We have decided to stay focused on what we know best and where we think we can offer the highest value."

CHOICE ONE ENGINEERING

SIDNEY, OHIO
FOUNDER: TONY SCHROEDER
2018 REVENUE: $7.7 MILLION
EMPLOYEES: 45

Company president Matt Hoying turned down a million-dollar contract with a city in Ohio at his civil engineering firm partly because his employees would have lost control over their work. He allows all of them, even part-time ones, to own shares. "We could go backward and be a $5 million company and still be successful, as long as we were true to our purpose, vision and mission," he says.

required. We block the hate. Poison stays out and love shines in."

"We are behaviorists," he says. "We talk about what people care about and why smoking goes against their values."

Jordan stumbled into public health. He had immigrated to the U.S. from Lima, Peru, when he was 3. His father still works in room service at the Bellagio Hotel in Las Vegas. Driven to rise above his family's financial circumstances, by age 10 he was mowing lawns and selling tchotchkes door-to-door from a catalog. At his magnet high school, he headed a chapter of the Future Business Leaders of America, becoming national president his senior year.

When he was 15, a friend brought him to a meeting hosted by the Southern Nevada Health District, which was starting a youth anti-smoking drive. According to Maria Azzarelli, who was managing the program, he stood out as a natural leader. Within a year, still a volunteer, he was shaping the campaign's approach. Instead of emphasizing the health dangers of cigarettes, which teenagers already understood and disregarded, he drove home the idea that the industry had been manipu-

FILTRINE MANUFACTURING

KEENE, NEW HAMPSHIRE
FOUNDER: GEORGE KNEUPER
2018 REVENUE: $17.7 MILLION
EMPLOYEES: 95

Filtrine was born in 1901, in the garage of a Brooklyn inventor. President Peter Hansel's family has run it since 1918. It makes custom water systems such as a chiller to cool a Boeing rocket and parts of Varian medical radiation devices. The company's commitment to building its products in the U.S. and avoiding mass production has driven up its prices and cost it major clients like Coca-Cola and GE. "Maybe we're foolish in that respect," Hansel says, "but my family and I have never been willing to sacrifice quality to go after business."

INSPIRA MARKETING

NORWALK, CONNECTICUT
FOUNDER: JEFF SNYDER // **2018 REVENUE:** $71 MILLION // **EMPLOYEES:** 300

Jeff Snyder's agency creates marketing stunts like a recent virtual Jeep ride at the Aspen Winter X Games that he calls "an immersive 4-D experience." He makes the company culture immersive too, kicking off each year with a team-building retreat at a resort like Mohonk Mountain House and taking the staff to Mexico or Jamaica as a reward for reaching its revenue goals. "If we can make people happy and passionate about work, that will translate into the product," he says. Every year the company conducts a competition in which employees pitch nonprofit causes to management. "The grand-prize winner gets full agency attention, complete with a series of events and fundraisers."

COMMUNITY IMPACT NEWSPAPER

PFLUGERVILLE, TEXAS
FOUNDERS: JOHN (CEO) AND JENNIFER GARRETT
2018 REVENUE: $27 MILLION
EMPLOYEES: 220

In 2005, John and Jennifer Garrett started a newspaper in their home in Texas. Today they publish 30 editions in 50 small communities from Arizona to Tennessee. The papers feature hyperlocal articles, and advertisers find them better for reaching customers than online alternatives. The company has done so well that the Garretts have opened their own plant, which not only prints newspapers but also keeps busy handling all kinds of jobs for other customers. Out front a sign says: "Print Ain't Dead."

EVERGREEN

PHOENIX
FOUNDERS: BRUCE POMEROY AND ANDREW SKIPPER (CEO)
2018 REVENUE: $100 MILLION
EMPLOYEES: 54

Whenever real estate developer Evergreen invests in a new project, every employee can invest, too. Some staffers may retire as millionaires thanks to that policy. It's no surprise, then, that almost a third of the workforce has been there for over a decade. They also enjoy profit sharing and annual trips abroad to support struggling communities. "We want to reap the benefits of being in business long-term, and not take short-term profit," Andrew Skipper says.

FBS DATA SYSTEMS

FARGO, NORTH DAKOTA
FOUNDER: PAUL WURZER
2018 REVENUE: $20 MILLION
EMPLOYEES: 110

Paul Wurzer started his business, which provides technology to support real estate transactions, in 1978. When it moved to the Web, he handed the reins to his son, Michael, to oversee the transition. Michael decided to emulate the partnership setup at the law firm where he had worked, and in 2005 he launched an employee stock ownership program. "We've grown much faster and better than if the employees hadn't been invested," he says.

lating young people for years with characters like Joe Camel. Azzarelli gave Jordan a $75,000 contract while he was a freshman marketing major at Johnson & Wales University in Providence. From his dorm room, he designed a nighttime event called the Kick Ash Party that was part information session and part DJ dance party, hosted by local entertainers who talked about the importance of taking a stand against tobacco companies.

Through Azzarelli, he landed another job, in Casper, Wyoming, this one focused on teen drinking. During the fall of his sophomore year, he made a half-dozen trips to Casper, where he figured out who the cool kids were at its two public high schools. Though most were drinkers, he invited them to host a series of no-alcohol parties with a hot DJ from Las Vegas. He told them he didn't care what they did elsewhere, but they had to stay sober at the dry event, whose purpose was to show teens they

LIFE'S ABUNDANCE

JUPITER, FLORIDA
FOUNDERS: DENNIS AND CAROL BERARDI
2018 REVENUE: $38 MILLION // EMPLOYEES: 51

Life's Abundance has been making and selling healthy pet food since 1999, and it's never had a product recalled, a record that makes CEO Lester Thornhill, a native Trinidadian, proud. It relies on customers to market its products, as in multilevel marketing, but with a crucial difference: There are no quotas, and no one is required to buy or sell anything. That not only means a lot of repeat customers but also lets the company keep its goods out of big-box stores and Amazon, which is a matter of principle, Thornhill says, enabling Life's Abundance to manufacture in small batches and guarantee freshness and quality.

could have a blast without drinking. "We didn't judge," he says.

By this time, he had named the growing enterprise Rescue. In 2005, he moved his operations to San Diego, hoping to do graduate work at the University of California campus. He kept working on campaigns with a staff of nine and earned his master's in experimental psychology in 2008.

Rescue's first big break came in 2007, when Jordan met Pam Ling at a conference. A medical professor at University of California, San Francisco, she studied tobacco-industry marketing strategies. "His stuff was really cool," she says. "He was tapping into feelings and environments in a way that was different from typical public health campaigns." She had landed a $100,000 grant to work on a smoking-cessation drive for young adults and asked Jordan to collaborate with her.

GREAT LAKES BREWING COMPANY

CLEVELAND
FOUNDERS: PAT AND DAN CONWAY
2018 REVENUE: $45 MILLION
EMPLOYEES: 233

Last year at Great Lakes' annual off-site summit, its two founders told all the employees, "Everyone's a winner. So get in line to pick up your prize." The prize: a new employee stock ownership program. "What a moment it was," then-CEO Bill Boor said. "There were hugs and tears and high fives." Great Lakes was the first craft brewer in Ohio and is known for its environmental initiatives, recycling more than 70% of its waste.

HARVEST GROUP

ROGERS, ARKANSAS
FOUNDERS: ROSS CULLY (CEO), WILLIAM WAITSMAN AND DAN ARNSBERGER
2018 REVENUE: $15 MILLION
EMPLOYEES: 85

CEO Ross Cully worked for Procter & Gamble's Walmart team before he and two colleagues left to start their own business managing small brands' relationships with big retailers. "It's more fun to know the people," he says, and his emphasis on customer care is mirrored by in-house benefits. Employees get four weeks of paid vacation on starting, matching of charitable giving and profit sharing. "I hear from people, 'My life is different, the benefits, the opportunities for my family,'" Cully says.

HENDERSON

HOUSTON
FOUNDER: DAN HENDERSON (CEO)
2018 REVENUE: $45 MILLION
EMPLOYEES: 175

Early on, some of his fellow oilmen found Dan Henderson pretty far out when he talked about running a "values-driven" company with a culture based on "integrity, truth and transparency," but his 13-year-old business has thrived. In 2017 it acquired a drilling company and became a full-fledged rig remanufacturer and service outfit. "We're changing the definition of what is a great service provider's customer relationship," says company president Jim Lank.

INTERWORKS

STILLWATER, OKLAHOMA
FOUNDER: BEHFAR JAHANSHAHI (CEO)
2018 REVENUE: $57 MILLION
EMPLOYEES: 171

Last year this IT and data consultancy's revenue jumped 39%, but Behfar Jahanshahi keeps a close grip on growth. He gave up a large social media account that was too hard on his people and has let go of clients who were tough to deal with. He also has turned away many would-be investors since launching in 1996. "I want to be surrounded by people I can think of as friends," he says.

THE INDIGO ROAD

CHARLESTON, SOUTH CAROLINA
FOUNDERS: **MICKEY BASKT AND STEVE PALMER** // **2018 REVENUE:** **$50 MILLION**
EMPLOYEES: **960**

Steve Palmer began his group of 20 restaurants in the Southeast ten years ago, and after his fifth successful opening he started worrying about how to ensure growth in a high-failure industry. "I wanted my management team to drill down on how to better identify people," he says. The company now looks for new hires with drive, a work ethic, curiosity and a collaborative spirit. He finds it crucial that he disrupt the traditional work-hard-party-hard restaurant culture, so in 2017 he helped launch Ben's Friends, which hosts addiction support groups for restaurant workers: "We spend every night taking care of customers," he says. "We are just now figuring out how to take care of each other."

LIVEDATA

CAMBRIDGE, MASSACHUSETTS
FOUNDER: **JEFF ROBBINS (CEO)**
2018 REVENUE: **$4 MILLION**
EMPLOYEES: **27**

LiveData had been around for 22 years when Jeff Robbins' son died, in 2013, and he changed the company's focus to healthcare, because he wanted to make "something meaningful," he says. Now the business concentrates on operating-room software and has taken on a partnership with Salesforce and a deal to supply Australian hospitals. Robbins wants his employees, who all own company stock options, to share in LiveData's success, and he has avoided accepting any venture capital.

PFSBRANDS

HOLTS SUMMIT, MISSOURI
FOUNDERS: **SHAWN (CEO) AND JULIE BURCHAM**
2018 REVENUE: **$64 MILLION**
EMPLOYEES: **144**

Shawn Burcham, 48, regrets that he didn't start reading books until he was 40. Now he requires the senior leadership team at his food service company to read at least 12 a year. In 2011, inspired by *The Great Game of Business*, he switched to an open-management model. After reading *Good to Great* he restructured and made sure he had "the right people on the bus." He also gives his staff awards for "ownership thinking" and helping others succeed.

SOLUGENIX

BREA, CALIFORNIA
FOUNDER: **T. RUSSELL SHIELDS**
2018 REVENUE: **$30.5 MILLION**
EMPLOYEES: **454**

Solugenix designed technology for fast-food drive-throughs, cellphone billing and more, and it hews to a "no bureaucracy, no drama" model, says CEO Shashi Jasthi. Last year, the company was about to acquire an IT consulting outfit, but "we realized their company had a really dog-eat-dog and sales-at-all-costs type of culture," Jasthi recalls. "So we had to pull the plug."

VENTURITY FINANCIAL PARTNERS

ADDISON, TEXAS
FOUNDER: **CHRIS MCKEE (CEO)**
2018 REVENUE: **$5.4 MILLION**
EMPLOYEES: **41**

By 2016 Venturity was already larger than most accounting firms that serve small businesses, but it wasn't making enough to invest in the solid growth that Chris McKee considered essential. He found the answer in an open-book management system developed at SRC Holdings—a 2017 Forbes Small Giant. Since then Venturity has increased its margins and doubled its net pretax profit while reducing client attrition by 30%.

OUTDOOR PRIDE

MANCHESTER, NEW HAMPSHIRE
FOUNDERS: MICHAEL AND DALE AQUILINO (CEO)
2018 REVENUE: $10 MILLION
EMPLOYEES: 72 FULL-TIME, 250 SEASONAL

The Aquilinos founded their landscaping and snow-removal business in 1988 and passed it on to their son Mark in 2015. Mark decided to focus on improving his people's connections to one another and to their work, and as a result, annual employee retention has risen from 45% to 85%. "We really like to use Outdoor Pride as a vehicle to motivate others to give back," he says, and he launched the Aquilino Foundation this year to support projects like a local literacy program. The company has also been investing in going green, turning to electric mowers and blowers and adopting a brine solution for snow removal to reduce salt consumption. "At the end of the day, we're stewards of the Earth," Mark Aquilino says.

The two learned from focus groups that the most at-risk group for smoking among young adults in San Diego was made up of people they termed "hipsters," who congregated at several bars around town. They also found that the anti-tobacco messages that resonated most focused not on health but on the effects of tobacco company practices like animal testing and paying developing-world farmers to grow tobacco instead of food. Rescue staged a series of events in hipster bars, bringing in DJs, musicians, artists and fashion designers to deliver the message. "We made it a cool thing not to smoke," Jordan says.

Rescue's work with Ling produced the first concrete evidence of the company's success. A 2014 article in the prestigious *American Journal of Public Health* showed that among those who attended Rescue's San Diego events, smoking fell from 57% to 48%.

The experience was exciting for Jordan, but it also prompted him to take a serious look at how he was running the business. "Early on, we weren't well known, so we thought the way to win work would be to be cheap," he says. After the Ling study put the company on the map, he realized the government was looking for competitive pricing. "Once you go below a certain level they don't care if you are 5% or 20% cheaper," he says. "What matters is you're a little cheaper." Rescue had been too lean: "It wasn't allowing us to grow."

Still, Rescue's rates remain lower than those at many agencies, at $100 to $200 an hour, while competitors with commercial clients can charge $500. "We're profitable and competitive and we want to create an impact," he says. Rescue's biggest break came in 2012, when it won the first of two multi-year contracts with the FDA, altogether worth more than $400 million over ten years. Revenue shot up.

The company has run more than 100 campaigns targeted at teens. For the FDA, it found that the biggest smokers among multicultural teens tend to listen to rappers like Meek Mill, value authenticity and respect, and are motivated to succeed at a goal even though they feel the odds are stacked against them. For that initiative, Rescue has produced 100 video spots that air on BET, MTV2, and VH1, as well as on social and digital media.

In one of these spots, Mississippi rapper Big K.R.I.T. describes his struggles with homelessness and how hard he worked to build his career. "A lot of people are using their vices to be creative and all you're doing is handicapping yourself," he says, wearing a gray hoodie and talking directly to the camera. "We all need to be healthy. We all need to be in our tip-top shape at 100%, to go out and do what we do every single day."

At Rescue, Jordan has built a creative team that tends to mirror its audience. Andrew Ermlick, 38, who heads the group that produces campaigns aimed at preventing opioid abuse, wears shorts, high-top sneakers and a pink plaid shirt and has tattoos covering his arms and legs. He says bluntly, "I'm a recovering addict." After back surgery, he was prescribed Vicodin and kept asking for more. He mixed pills with alcohol, overdosed and nearly died three times. A commercial he created shows a middle-aged man on a beach wading into the surf and then being pulled under. A voice narrates: "Taking opioids like Percocet and Oxy is like going into the ocean. At first, you're in control. But as you go deeper, their force takes over, overwhelming your ability to decide for yourself . . . addicted."

Rescue is financing the production of this ad itself and planning to charge licensing fees to clients who want to run it. Since the government bureaucracies that are Rescue's clients move slowly, it can take a year to get an ad approved. "We can cut 90% of the time out of the process and 80% of the cost," Jordan says.

He's also eyeing work beyond the government. Foundations like Bloomberg Philanthropies and the Conrad N. Hilton Foundation support the health goals that Rescue's campaigns promote. But these organizations don't know how to run sophisticated marketing campaigns. "You're going to get better results through capitalistic competition than working with do-gooder nonprofits," he says. Down the line, a company like Nike could also be a customer. It could vastly expand its products' reach if it could persuade sedentary people to become physically active, he believes.

What does Jordan think of the path he's taken in public health, given his early ambition simply to pursue a career in marketing? "It felt accidental at first," he says. "But now I think I embody this thing that Millennials do today. We care about who we impact and the imprint we leave on the world." Ⓕ

Reporting by Elisabeth Brier, Bo Burlingham, Tanya Klich, Christian Kreznar, Monica Melton, Karsten Strauss and Samantha Todd.

WALDRON PRIVATE WEALTH

BRIDGEVILLE, PENNSYLVANIA
FOUNDER: JOHN WALDRON (CEO)
2018 REVENUE: $16 MILLION
EMPLOYEES: 50

John Waldron opened his business in 1995 with the idea that comprehensive wealth management should provide more than just investment strategy, so it advises on trusts and estates, business assets and other concerns. It now has 175 clients and $2 billion in assets under management—and turns down clients who Waldron feels aren't "a good fit." He says he never wants the business to be acquired: "As an independent company, we only have to serve our clients."

WEBIT SERVICES

NAPERVILLE, ILLINOIS
FOUNDER: ERIC RIEGER (CEO)
2018 REVENUE: $2.65 MILLION
EMPLOYEES: 17

Eric Rieger says he gets five or six approaches a week from would-be acquirers of or investors in his IT services provider, but the company isn't for sale and is already growing as fast as he wants. He does have a future buyer in mind, though: his employees, provided the company reaches certain targets by 2021. In 2016 he opened the books to them. "It has changed the culture and produced a much more engaged team," he says.

WIKIHOW

PALO ALTO, CALIFORNIA
FOUNDER: JACK HERRICK
2018 REVENUE: $5 MILLION
EMPLOYEES: 25

Men may dominate the upper echelons at most companies in Silicon Valley, but wikiHow's CEO is an engineer named Elizabeth Douglas, and 55% of the staff is female. The shared goal of building the world's best and largest how-to website—it now has 180,000 articles—has guided every major decision at the company, from turning down venture capital investments to walking away from tempting acquisition offers from larger businesses.

PHOTOGRAPHS BY JAMEL TOPPIN FOR FORBES

THE GOLDEN GOOSE

Canada Goose's Dani Reiss wanted nothing to do with his family's sleepy coat business. Then he noticed it had a cult following among airline workers and realized he could build a billion-dollar brand.

BY LAUREN DEBTER

On a snowy, blustery day in Toronto, Dani Reiss is safe and warm inside one of his Canada Goose factories, demonstrating how to get piles of ultra-lightweight Hutterite goose down into a jacket without making a mess. He steps on a worn pedal and braces for impact. With a jolt and a loud whir, five grams of white fluff shoot out of a metal pipe and into an unfinished sleeve, like a bullet exiting a gun. "I used to do this for fun as a kid," he shouts over the hum of the machine.

A lot has changed since he was a child helping out at the factory. Back then, his family owned a small manufacturer of high-quality outerwear. They didn't advertise because they didn't need to. Metro Sportswear, started by his grandfather, mostly made coats for retailers like L.L. Bean and Eddie Bauer. It had also started its own brand of parkas, Snow Goose, which had developed a small but loyal following among people who worked in the planet's least hospitable climates: Canadian arctic rangers, Ontario's police, a few notables like Laurie Skreslet, who was the first Canadian to summit Everest, and scientists at McMurdo Station in Antarctica.

"We had gathered a cult following in the coldest places on Earth," Reiss says,

CEO Dani Reiss at Canada Goose's Toronto headquarters. The company's official-looking "Arctic Program" logo depicts an "inverted" map of the North Pole.

A-Listers, Goosed

Early on, Reiss got celebrities like Dennis Quaid (in *The Day After Tomorrow*), Angelina Jolie and Hugh Jackman to wear his coats.

plucking bits of down from his blue-and-black-checkered sports coat. "But we were selling to a really small population."

At first, he had no intention of running the business. "It was the last thing I ever wanted to do," says Reiss, 45, who dreamed about becoming a writer. As a kid, he was more comfortable in fictional worlds, particularly the expansively drawn one in *The Lord of the Rings,* than he was in the world of dollars and down that his parents occupied.

But when he did take over the company nearly 20 years ago, he revealed a talent for implementing Tolkien-size marketing ambitions and pushed the business, which he renamed Canada Goose, out of its comfortable niche. He took the brand upmarket, boosting the price of his down coats to $1,000 and targeting wealthy city dwellers in cold climates with a heavy dose of influencer marketing—before the concept even existed. The company took wing. Canada Goose did $460 million in sales in 2018, more than triple the number from four years earlier. Its clothes have become fashion items, and celebrities like Angelina Jolie, Daniel Radcliffe and Ben Affleck are regularly seen wearing the coats.

Canada Goose's customer base may have changed drastically, but its core line of coats, which now sell out at stores like Nordstrom, remains largely the same. This has helped the company maintain envious operating margins of 23%, nearly double Columbia Sportswear's and higher even than those of luxury giants like LVMH, Burberry and Prada. Two years ago, Reiss and investor Bain Capital raised $250 million in an IPO. Canada Goose's stock, listed on the New York and Toronto stock exchanges, has soared to stratospheric levels despite a series of stock sales by Bain and Reiss, who has become a billionaire.

Now that Canada Goose has entered the pantheon of global luxury brands, Reiss must deftly navigate an unforgiving retail marketplace. Fashion's bargain bin of brands—from True Religion to Uggs to Aéropostale—is brimming with once-hot has-beens. In an era of fast fashion, rampant counterfeiting and hypersensitive Millennials who are already looking askance at Reiss' fur-lined coats, he must keep Canada Goose's premium cachet from flying south permanently.

The company that would become Canada Goose was founded by Reiss' maternal grandfather, Sam Tick, a Holocaust survivor who arrived in North America shortly after World War II and eventually got a job cutting fabric in a factory in Toronto. By 1957, Tick had saved enough money to start his own company making wool vests, raincoats and snowsuits. In the mid-1980s Tick sold the business to his son-in-law David Reiss, who put his penchant for tinkering to good use, inventing a machine that automated the messy, manual task of filling jackets with down.

Reiss must navigate an unforgiving retail marketplace or Canada Goose will end up in fashion's bargain bin.

With Dani's father at the helm, the company started selling gear under its own Snow Goose brand, but the bulk of its revenue came from making coats for catalog retailers like L.L. Bean, Eddie Bauer and Lands' End. The coats were warm but had a boxy, utilitarian appearance, and young Dani refused to wear them.

As an adolescent, Reiss had two passions: reading fantasy fiction and following sports. "Waking up every morning and looking at box scores was my life," Reiss says, recalling his ability to recite the stats for any baseball player on any given team.

In 1992, Reiss enrolled at the University of Toronto, intent on studying English literature and philosophy. During summers, his parents paid him to do odd jobs at the factory: mopping floors, filling coats with down, sewing labels on sleeves, packing shipments and loading trucks. Working the front desk, he fixed typos and poor grammar in company letters. After graduation in 1997, he planned to travel the world and write short stories, but a lack of funds forced him back to the family business in Toronto, where he worked in sales, cold-calling to drum up business. One group he found success with was airlines. Snow Goose down coats were already well known among pilots and ground crews working on the frigid tarmacs of Canadian airports.

Their devotion to his coats gave Reiss an idea. It was the late 1990s and there was a rapid rise of brands like Dr. Martens and Juicy Couture, whose otherwise-ordinary items had developed cult followings willing to pay premium prices. In 2000, when Reiss turned 27, he pitched his dad the idea of going upmarket—selling to well-heeled urban dwellers who were already paying extra for the North Face and Patagonia coats. He thought they might pay even more to walk around in the garment that Arctic explorers wore. He devised a plan to price the coats around $1,000, above the North Face but below Italy's chichi Moncler outerwear. And if Reiss was going to move forward with his idea, he didn't want to toil under his dad's thumb.

So at the same time he was telling his dad that he'd stick around, he asked him to step down as CEO. "I said to him, 'Look, I'm prepared to do this, but you're going to have to let me do things. This is the vision I have. It's different from the one you had,'" Reiss says. "To his credit . . . he let me take the reins."

As the new CEO, Reiss set out to ditch the private-label business and build his own brand. Revenue stood at just $2 million. There was only one problem: Canadian urbanites weren't interested. When he took his catalog to the shop owners on Queen Street in downtown Toronto, every single one turned him down.

He decided to try his luck abroad, bringing his wares to trade shows in Europe and Japan, where he persuaded several high-end retailers like Collette in Paris and 14 oz. in Germany to buy his coats, now renamed Canada Goose because Snow Goose was trademarked in Europe. Before long, the owner of Vice, a downtown Toronto boutique, had spotted the coats in Europe and called to put in an order. The store sold 300 coats one winter. "That was huge at the time," Reiss says. More important, it gave the brand credibility in Canada. Other retailers followed suit. "We, ironically, reimported it back to Canada," Reiss says.

By 2008, the company was doing better, with some $17 million in sales. But Reiss was just getting started. He couldn't afford a large marketing campaign, so he began handing out free coats to people who were easily visible working outside in frigid conditions—nightclub bouncers, hotel valets, sports-ticket scalpers. At Toronto Maple Leaf games, he gave parkas to the players to take home. The few sponsorship dollars he had would go to polar explorers, who he hoped would end up in the pages of, say, *National Geographic* wearing Canada Goose.

Canada Goose in the wild: (*clockwise from left*) Pilot Bente Larsen, Alaskan musher Lance Mackey and scientists at Antarctica's McMurdo Station.

"From my side, it played a key role in keeping me safe in Antarctica," says Ben Saunders, who is most famous for successfully completing a 105-day round-trip trek to the South Pole. "From their side, it was a chance to tell a story."

Even with all this effort, Reiss was having a tough time breaking into the Lower 48. Hollywood would be his way in. Film crews had been wearing Canada Goose since his dad's tenure, and the coats had appeared on camera in 2004, worn by Dennis Quaid in *The Day After Tomorrow* and Nicolas Cage in *National Treasure*. In 2012, Reiss began sponsoring film festivals like Sundance, the Berlin International Film Festival and the Toronto International Film Festival and gave out coats to hundreds of filmmakers and festival attendees.

Reiss' shrewd guerrilla marketing to influencers worked. The coats became a hit among entertainment's elite. The parkas, with their distinctive red-white-and-blue emblems of an "inverted" map of the North Pole, began appearing in paparazzo photographs of celebrities such as Meg Ryan, Nicole Kidman, Drake, Liv Tyler and Hugh Jackman. In 2012, department stores like Bloomingdale's began to carry Canada Goose. A year later, Kate Upton graced *Sports Illustrated*'s cover in a Canada Goose—and little else. Sales crossed $100 million in 2013.

With Canada Goose's momentum in full swing, Reiss sold 70% of the company to Boston's Bain Capital in December 2013, raising much-needed funds for expansion and ultimately fast-tracking the company for an IPO, which took place in March 2017. Ryan Cotton, the Bain managing director who led the private equity firm's investment in Canada Goose, says, "Even if we had invested when it went public, it [still] would've been a hell of a deal."

Reiss is holed up in Canada Goose's New York City showroom, on the 17th floor of an expansive converted freight warehouse overlooking the Hudson River, discussing the growth that has taken place over the past few years. Despite his resistance to chasing fashion trends, he is surrounded by an array of variations of his classic coats. There are parkas that nearly reach the ankles and short, closer-fitting bombers as well as coats in new colors like plum and camouflage.

Reiss is most excited to talk about a new line that has nothing to do with feathers or fur. Last year Canada Goose purchased the rugged Ontario bootmaker Baffin for $25 million. It's "a dream project," Reiss says, acknowledging he's years away from putting Canada Goose boots on shelves. In fact, it took ten years into his tenure as CEO for Canada Goose to release a lightweight collection that included vests (starting at $425) and rain jackets ($550). Six years later, in 2017, he introduced knitwear, including $525 cardigans and $625 hooded sweaters.

All the products check the same boxes. They have classic, understated designs, are incredibly warm and carry the distinctive Canada Goose logo.

"Reiss has figured out how to take a functional thing and make it beautiful," says Lululemon founder Chip Wilson, who transformed his Canadian brand of yoga-wear in much the same way and now has annual sales of more than $3 bil-

JAMEL TOPPIN FOR FORBES

Made in Canada: While most apparel manufacturing has moved to Asia, Reiss insists that his factories, like this one in Toronto, stay at home.

lion. "Why wouldn't you want something technical that looks good? You can double the price of a garment."

While Canada Goose attempts to follow in Lululemon's footsteps by expanding its product line with innovative new offerings, Reiss is also pursuing international growth in Europe and especially in brand-obsessed China, where the company launched in 2018. And as shopping malls languish under the weight of their bricks and mortar, Reiss is making a big direct-to-consumer push. E-commerce and the 11 company-owned stores in cities like Boston, London and Tokyo now account for 43% of revenue, up from 11% in 2016.

Reiss aims for 20 retail locations by 2020 but says the company will never have a huge physical footprint. "We see a lot of people closing a lot of stores, and we don't want to be that company one day," he says.

Like all entrepreneurs in the tastemaker business, Reiss will face his biggest challenge in preserving Canada Goose's exclusivity while greatly expanding revenues.

"There's a tuning fork deep inside Dani as to what is true and authentic to the brand and what is not," says Bain's Cotton.

Just in case the winds of fashion do change, Reiss and Bain have been taking advantage of Canada Goose's hot stock, which trades at a whopping 77 times earnings and has a near unanimous chorus of Wall Street analysts recommending it. Since the company's IPO, when Reiss and Bain offered 19% to public shareholders, the duo have sold stock in two secondary offerings. More are likely, according to Bain.

One nagging problem in Reiss' plan of world domination has been constant protests outside the company's stores and calls for boycotts from animal-rights advocates like PETA, which objects to the company's use of goose and duck down to fill the parkas and coyote fur in the hood linings.

"We disagree with them. They are a small and vocal minority," says Reiss, who insists the company adheres to all local and international standards in sourcing materials. Reiss knows that when it comes to the consumption habits of his status-conscious customers, the welfare of a small population of woodland creatures and farm critters will always play second fiddle to a glamorous selfie. F

In the driver's seat: CEO Lance Zhou, pictured at Karma Automotive headquarters in Irvine, California, followed his father into the car industry.

Karma Chameleon

Under a new CEO, the luxury electric-vehicle maker is reincarnating itself for the second time in a decade. Will three new models—and a robust customization program—finally put it on the road to success?

BY CHUCK TANNERT

For a company that produces electric vehicles, Karma has been awfully silent lately—and for good reason. The luxury automaker has been undergoing a top-to-bottom overhaul under the direction of its CEO, Lance Zhou.

"We've been focused on building our company and perfecting our craft," says Zhou, a 25-year industry veteran who took the wheel at Karma in December 2017. He was tasked with treating the then ten-year-old company like a startup and rebuilding it from the ground up. The struggle for Zhou is that this is Karma's third incarnation in just over a decade—and the second time it has been completely rebuilt.

What is now Karma Automotive began life in 2007 as Fisker Automotive, under the direction of Danish car designer Henrik Fisker, best known for his work on the BMW Z8 and Aston Martin V8 Vantage and DB9.

Backed by a federal loan from the U.S. Department of Energy, Fisker built a sleek, plug-in hybrid sports sedan called the Karma with a starting price of more than $100,000. It attracted notable investors (including the venture capital firm Kleiner Perkins) and celebrity clients such as Leonardo DiCaprio and Justin Bieber. But the car was plagued with mechanical and technical problems and quickly became a severe cash suck for the company.

Fisker built an estimated 2,450 Karmas in 2011 and 2012, losing at least $35,000 on each one. And despite raising more than $1 billion in private and public financing, Henrik Fisker resigned from the company in March 2013 due to major differences with its board. The automaker filed for bankruptcy eight months later.

In 2014, China's leading auto-component supplier, the Wanxiang Group, acquired Fisker's remaining assets and trademarks for $150 million. By 2015, the company had been rebranded Karma and its signature vehicle renamed the Revero. Though it featured numerous updates—including a better battery and a new interior—the exterior remained largely the same and was viewed as a carbon copy of the Fisker Karma.

By the time the 52-year-old Zhou assumed control of Karma, the company was desperately in need of an experienced automotive executive. Zhou had the résumé. He began his career as an engineer at one of China's largest automakers, Dongfeng Liuzhou Motor, in 1992, after earning a master's in engineering from the country's Northwestern Polytechnical University and a Ph.D. in engineering management from Nan-

TIM PANNELL FOR FORBES

jing University of Science and Technology. He quickly progressed into sales, marketing and then general management at different auto companies in China and Germany, including top-level positions at Fiat Chrysler, Mercedes and Foton-Daimler.

When Karma came calling, Zhou knew it was a place he could leave his mark on the future of transportation, but it would be a struggle. Not only would he have to move to a new country (America) and work in an unfamiliar automotive segment (he had always been on the pickup-truck side of the business), but he would also be dealing with a new type of power train (fueled by electricity).

He is off to a fast—albeit scattershot—start. Zhou has already transformed the brand from a company that designs and builds luxury hybrid-electric cars to one that strives to be purely electric and license the technology it develops. Among the areas Karma is focusing on are vehicle-to-vehicle communication, advanced infotainment systems and autonomous driving.

He is also emphasizing Karma's ability to customize its vehicles. "Nobody wants to buy a standard product," he insists. "They want to have something different, something to reflect their status." Buyers will work directly with Karma designers to co-create a car based on individual taste. That can range from changing the paint color and souping up the engine to creating a one-of-a-kind vehicle.

In April, Karma revealed three new models at the Shanghai Auto Show. One will replace the current Revero this summer. The 2020 Revero GT, nicknamed the Revero 2.0, will be the first vehicle that's Fisker-free except for the chassis. The GT has a curvier body with a longer, bulging hood; wider fenders front and back; and a stunning new interior, including a customizable dashboard and center console displays. It's also a hybrid, equipped with a higher-capacity battery pack that powers two electric motors mounted in the rear axle, as well as a more powerful BMW engine that acts as a generator to recharge the battery when needed. Karma expects to build around 500 Revero GT units in its first year of production, with a starting price around $130,000.

The second model is the Karma Pininfarina GT, a collaboration with the legendary Italian coach builder that shows just how much customization is possible. Pininfarina retained the underpinnings of the Revero GT and handcrafted the body style and interior, offering a sexy alternative to Karma's design.

The third vehicle Karma debuted in Shanghai was the SC1 Vision Concept, a sleek roadster that represents its electric future. Though details are scarce, the SC1 is a pure EV and will be equipped with a new 5G-ready infotainment system and "humanized" controls that integrate touch, voice, eye and graphical interfaces.

Like Elon Musk, Zhou has overly ambitious mass-market dreams. For this he expects the company to team with a partner in China, one suited to produce cars at a higher rate. Karma has the capacity to build as many as 10,000 vehicles a year at its facility in Moreno Valley, California, though he doesn't expect production to be near that anytime soon. Zhou plans to establish Karma in the U.S. first before expanding to Europe and the Middle East in 2020 and then Asia by 2021.

"We now have a vision and road map for the company that's building strong momentum," Zhou says. "I can confidently say our best days are ahead of us." Now he just needs some good karma. *

Showstoppers: Karma unveiled the 2020 Revero GT and the SC1 Vision Concept at the Shanghai Auto Show in April.

FINAL THOUGHT

* *"A business, like an automobile, has to be driven in order to get results."* —**B.C. FORBES**

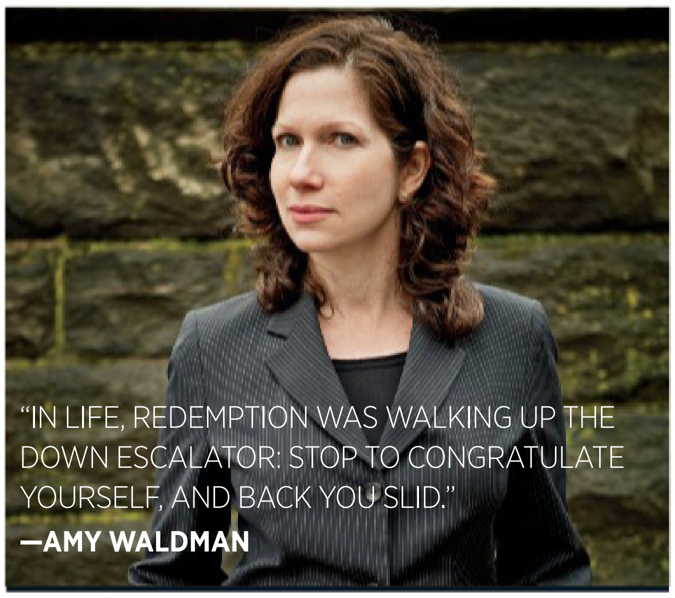
THE HAUTE LIST

TWO MASTERS, ONE BOURBON

Ever since Suntory purchased Jim Beam in 2014 for nearly $14 billion, whiskey (and whisky) lovers have been dreaming of a collaboration between the two spirits brands. This spring, East finally met West with the release of **Legent** (pronounced "lee-gent"), a bourbon created by two legends: Fred Noe, the seventh-generation master distiller at Jim Beam, and Shinji Fukuyo, the acclaimed chief blender at Suntory. The new spirit breaks the traditional rules of bourbon country by blending straight bourbon aged for at least four years with bourbon aged in red-wine and sherry casks. The result is a whiskey ($35) that's both fruity and spicy, with a long, mellow finish that does Kentucky and Kyoto proud.

THOUGHTS ON

Redemption



"IN LIFE, REDEMPTION WAS WALKING UP THE DOWN ESCALATOR: STOP TO CONGRATULATE YOURSELF, AND BACK YOU SLID."

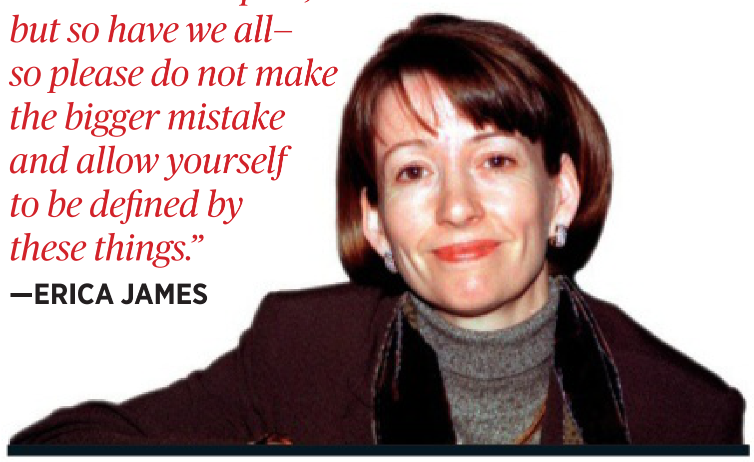
—AMY WALDMAN

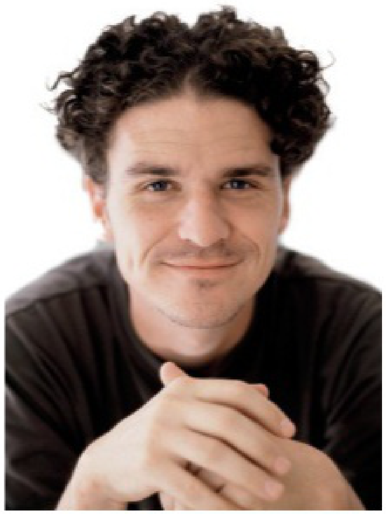
"God creates out of nothing. Wonderful, you say. Yes, to be sure, but he does what is still more wonderful: He makes saints out of sinners."

—SØREN KIERKEGAARD

"Yes, you have made mistakes in the past, but so have we all—so please do not make the bigger mistake and allow yourself to be defined by these things."

—ERICA JAMES





"There is enough light for those who desire only to see, and enough darkness for those of a contrary disposition."

—BLAISE PASCAL

"As for redemption? It's far too neat—a moviemaker's bromide."

—JULIAN BARNES

"The whole apparatus of absolution and forgiveness strikes me as deeply immoral."

—CHRISTOPHER HITCHENS

"We all long for Eden, and we are constantly glimpsing it. Our whole nature at its best and least corrupted . . . is still soaked with the sense of exile."

—J.R.R. TOLKIEN

"Yes, a dark time passed over this land, but now there is something like light."

—DAVE EGGERS

"A MAN WITHOUT REGRETS CANNOT BE CURED."

—ARISTOTLE

"Unnecessary and unchosen suffering wounds us but need not scar us for life. It does mark us. What we allow the mark of our suffering to become is in our own hands."

—bell hooks

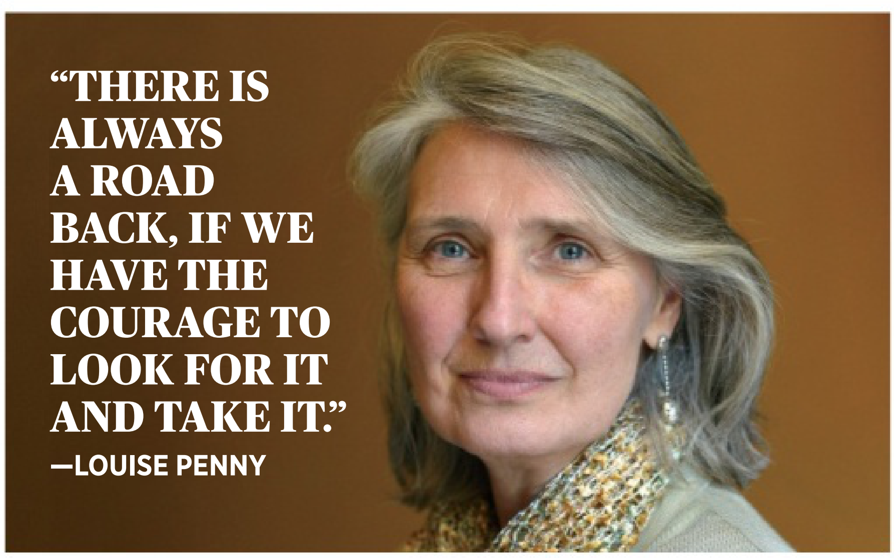
"Without the Fall, there would have been no human drama, and so no literature, no art, no suffering, no religion, no laughter, no joy, no sin and no redemption."

—MALCOLM MUGGERIDGE

FINAL THOUGHT

"Men lacking principle can yet reform and become accepted as examples fit to be held up to the youth of the land."

—B.C. FORBES



"THERE IS ALWAYS A ROAD BACK, IF WE HAVE THE COURAGE TO LOOK FOR IT AND TAKE IT."

—LOUISE PENNY

"I HAVE SWEPT AWAY YOUR OFFENSES LIKE A CLOUD, YOUR SINS LIKE THE MORNING MIST. RETURN TO ME, FOR I HAVE REDEEMED YOU."

—ISAIAH 44:22

SOURCES: THE JOURNALS OF KIERKEGAARD; ALL ABOUT LOVE: NEW VISIONS, BY BELL HOOKS; THE LETTERS OF J.R.R. TOLKIEN; LETTERS TO A YOUNG CONTRARIAN, BY CHRISTOPHER HITCHENS; ZEITOUN, BY DAVE EGGERS; THE SUBMISSION, BY AMY WALDMAN; PENSÉES, BY BLAISE PASCAL; SONG OF THE SKYLARK, BY ERICA JAMES; CHRONICLES OF WASTED TIME, BY MALCOLM MUGGERIDGE; THE ONLY STORY, BY JULIAN BARNES; A GREAT RECKONING, BY LOUISE PENNY; THE NICOMACHEAN ETHICS, BY ARISTOTLE.

CLOCKWISE FROM TOP RIGHT: PA IMAGES-GETTY IMAGES; JOHN DONEGAN-GETTY IMAGES; ULF ANDERSEN-GETTY IMAGES; REG INNELL-TORONTO STAR-GETTY IMAGES; BETTMANN-GETTY IMAGES; ROBERTO RICCIUTI-GETTY IMAGES; JAMES LEYNSE-CORBIS-GETTY IMAGES; PIETER M. VAN HATTEM-CONTOUR-GETTY IMAGES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