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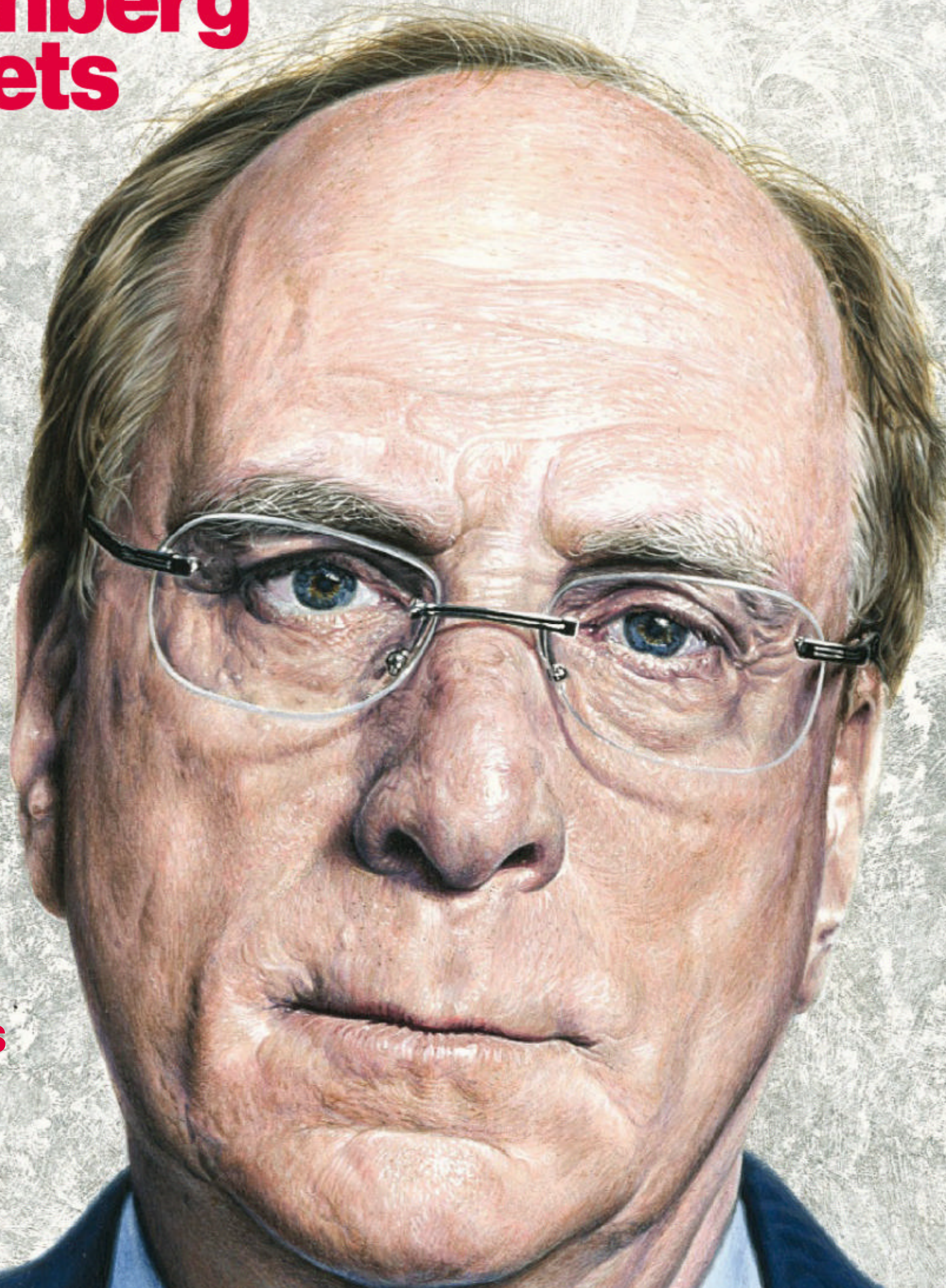
Bloomberg Markets



"I don't identify as powerful"

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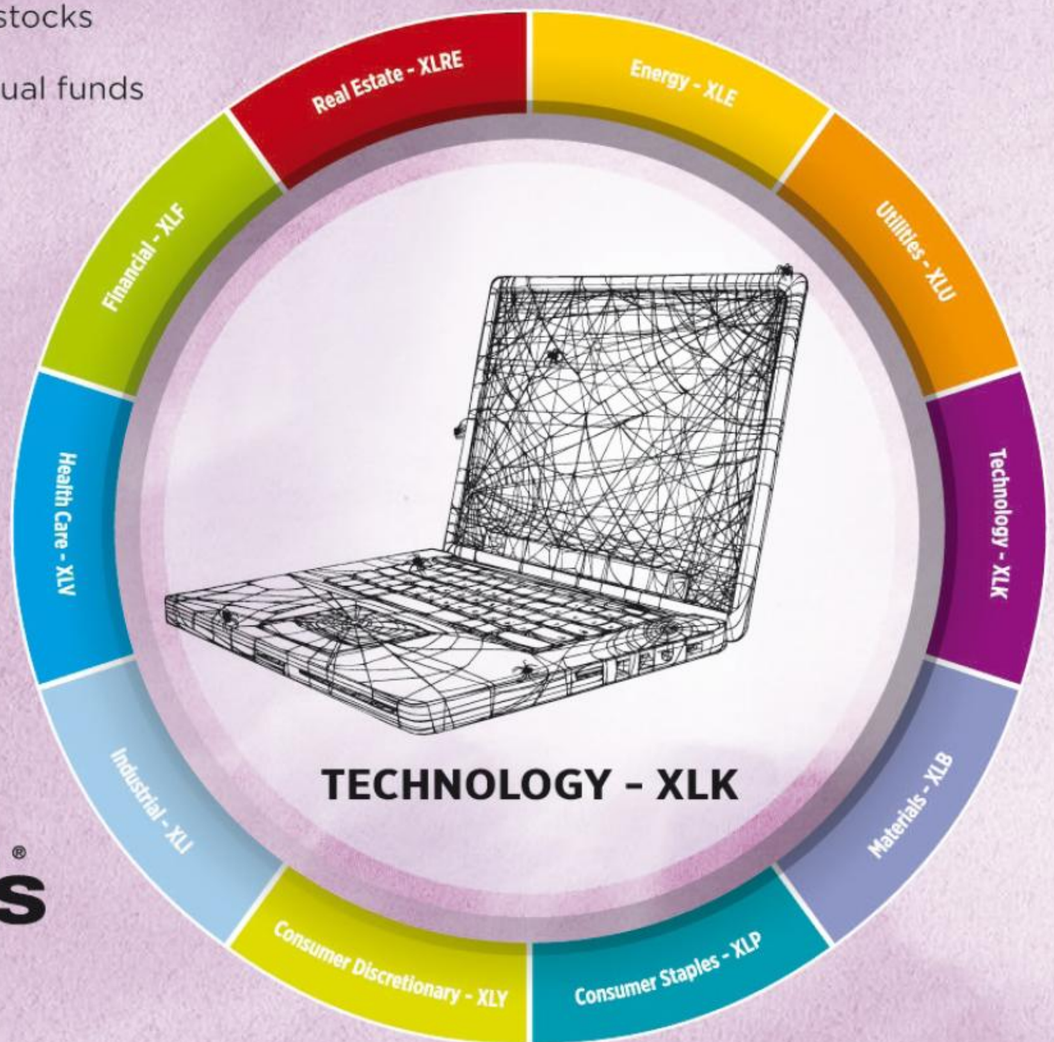

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7	Cisco Systems	CSCO	3.53%
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9	Verizon	VZ	3.43%
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PHOTOGRAPH BY LARRY FINK (NO RELATION) / COVER ARTWORK BY STEVE CALDWELL

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Contributors

The balance of power on Wall Street has shifted since the financial crisis, turning asset managers into the new titans of global finance. Nobody dominates quite like BlackRock Inc., with its $5.1 trillion in investments. **Erik Schatzker** was with BlackRock CEO Larry Fink the day in 2009 he bought Barclays Global Investors, transforming the company into the juggernaut it remains today. They've since done almost two dozen interviews—including their latest, for our cover story ("I Don't Identify as Powerful," page 64)—and discovered a shared passion for fly-fishing. "Whether he's talking about his management team or his favorite river," says the Bloomberg TV editor-at-large, "if Larry is one thing, it's passionate." (And who photographed the BlackRock CEO? **Larry Fink**—same name, different person.)

Oil hedges aren't uncommon. But no deal comes close to matching Mexico's annual bet. In "The Hacienda Hedge" (page 80), **Javier Blas** lifts the lid on the world's largest and most secretive oil trade. Blas, Bloomberg's London-based chief energy correspondent, pieced the story together through dozens of interviews with key players, as well as a review of thousands of pages of previously unreported documents, some obtained through freedom-of-information requests in the U.S. and Mexico. Blas's last magazine story, "Vitology" (July/August 2016), co-written with Andy Hoffman, about Vitol Group, the world's largest oil trader, won a Best in Business award from the Society of American Business Editors and Writers.

Thomas Labbe is a fixed-income market specialist in Singapore. After working in London for 15 years for Morgan Stanley and Jefferies LLC, he moved to Asia and joined Bloomberg last year. In "Is India Rated Too Low? Use This Model to Find Out" (page 30), he writes about using independent models such as {DRSK <GO>} and {SRSK <GO>} to investigate potential opportunities in credit quality. "Given market valuations that are expensive by historical standards, a solid credit analysis is crucial for investors to identify opportunities and avoid pitfalls," Labbe says.

Laura Colby, the author of *Road to Power: How GM's Mary Barra Shattered the Glass Ceiling*, covers diversity for Bloomberg News. In "Activist Investors Shift Their Focus to Mid-Caps Like Skechers" (page 42), she reports on how the fund arm of union-owned Amalgamated Bank of New York has filed proposals at seven midsize companies this proxy season. "Small shareholders like Amalgamated are able to have a large impact on companies by shining a light on their records for diversity," Colby says. "The companies often make concessions rather than have the issues aired at their annual meetings."

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What I like most about the aircraft as a passenger is the low cabin noise and the low-altitude pressurization. Both of those are key for me. They really make a difference while traveling. The cabin welcomes you as you get on the aircraft. You feel at home. It's very comfortable. The design is very sleek.

My father and my brother are both pilots, so the Legacy 500 took on special meaning for them in terms of the avionics, fly-by-wire and HUD system. Safety is first for us and the Legacy 500 avionics help in that regard. We have a relatively short runway and we usually fly a full payload. The Legacy 500 performs well in both aspects.

The sales team at Embraer was outstanding. They did a tremendous job for us. Really, they made us feel special. And with that, they helped us to own a very special airplane. We can't be more grateful for that."

- Nathan Grindstaff, Board Member, Mastercorp

Watch Nathan's story and request more information at
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SETTING THE SCENE FOR SUCCESS

TO BE PERSUASIVE, FINANCIAL ADVISORS NEED TO UNDERSTAND THE SUBTLE ways in which they can shape a positive meeting environment and change a client's negative moods, counsels Tim Sanders. An author and expert on motivation, emotional talent and sales innovation, Tim is a Hartford Funds Human-Centric Insights panelist, and the author of the New York Times Best Seller *Love Is the Killer App: How to Win Business and Influence Friends.*

HOW CAN FINANCIAL ADVISORS SET THE SCENE TO PERSUADE THEIR CLIENTS TO TAKE A COURSE OF ACTION?

You have to prepare for the meeting, beyond what you're actually going to say. There's a body of research that suggests that the best salespeople in the world spend more time crafting the conditions of their meetings, and the key framing questions they will ask, than they do making their presentation's points.

If you think in advance about where the customer or prospect will be, how they might be feeling that day and what you can do to make them predisposed to change and acceptance of new ideas, that increases your performance dramatically.

Research says that when a person is in a negative mood, it has a huge impact on their brain's working memory. It's going to create enormous lapses in critical thinking. You will say things to them that they will either not understand or reject, even if it's good advice.

WHAT FACTORS DOES A FINANCIAL ADVISOR CONTROL THAT CAN LEAD TO NEGATIVE MOODS?

A bad mood can be created by how we hold meetings. If your client is going to drive across town in heavy traffic to meet with you, you have dramatically increased the odds that they will be in a negative mood when they reach you.

If you have a meeting the day after some dramatic event in the client's life, chances are they will have a negative mood hangover. For the same reason, I recommend rescheduling sales meetings that happen to be scheduled to take place after a national tragedy.

You can also influence their mood by where and when you have the meeting. Lots of financial advisors like to have meetings during a meal. No problem with that. But there's no value going to one of those loud restaurants where your entire conversation is punctuated by interruptions. It happens all the time; we want to take them where the best burger is. I'd rather take them to a place where there is an edible burger, but we're not going to be interrupted.

HOW CAN A FINANCIAL ADVISOR IMPROVE A CLIENT'S MOOD WHILE THEY ARE IN THE FA'S OFFICE?

I love to have meetings where there is sunshine. Sunshine changes mood states. There is also another very good body of research that says when your office has fresh flowers, you've created a better environment for people to be predisposed to listen to you.

You want to sit across from your client with no obstructions in the way. When you sit behind that big desk, you're invoking the assistant vice principal meetings of our childhoods. In my office, I have a sitting area with two red leather chairs. Sit in those, and now we're having an Oprah moment rather than an assistant vice principal moment.

It's easy to ask someone, "So, how are things going?" That's an open-ended question that could lead to a negative conversation. I prefer to start conversations by asking clients, "What's your 'wow' project? What are you working on that you're excited about?" If you start off a discussion with someone's passion project, even if it's something very personal to them like a hobby, you're going to help improve their mood.

Steve Jobs was famous for taking long walks around the Apple campus with employees and business partners, and he did it for a very strategic reason. He put them in sunshine with zero interruptions. That's why he was the master of persuasion.

All investments are subject to risk, including the possible loss of principal.

"If you start off a discussion with someone's passion project, you're going to help improve their mood."

TIM SANDERS

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Dr. Barbara Nusbaum

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

She has appeared as an expert for *CBS News, Forbes, The Wall Street Journal, Bloomberg, Money Magazine*, *Daily Worth* and *The New York Times.*

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

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

Tim Sanders

Author and expert on motivation, emotional talent and sales innovation

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

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Celebrated motivational speaker, renowned personal life and executive coach and best selling author, whose vision is to empower women worldwide to lead exceptional lives.

She has appeared on *The Today Show*, *Oprah*, *CBS* and *CNN*.

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"Part of being an investor is separating the signal from the noise and the feelings from the facts."

David Lebovitz

GLOBAL MARKET STRATEGIST,
J.P. MORGAN ASSET MANAGEMENT

“We’re major overweight in airlines. It takes a long time for markets to be convinced a heretofore terrible industry is not terrible anymore.”

Bill Miller

FOUNDER, CHAIRMAN, AND CHIEF INVESTMENT OFFICER, LMM INVESTMENTS LLC

“We’ve had a very good run in the markets since the elections. There is a general perception that this is about potential policy changes. It is not. It’s really been about a recovery and a rebound in U.S. growth.”

Binky Chadha

CHIEF GLOBAL STRATEGIST, DEUTSCHE BANK SECURITIES INC.

“It’s hard to judge what sentiment really is. You have a lot of very bullish beliefs out there, but I’m not sure how strongly they’re held. My guess is that the bullishness is real but not as durable.”

John Manley

CHIEF EQUITY STRATEGIST, WELLS FARGO FUNDS MANAGEMENT LLC

“You really had a free lunch for a while in the fixed-income and credit markets. We’re now starting to feel the volatility as rates normalize, and that’s going to change behavior.”

Ryan Caldwell

CHIEF INVESTMENT OFFICER, CHIRON INVESTMENT MANAGEMENT LLC

“Health care has come under pressure from both sides of the aisle for the past couple of years, and yet all the demographics favor it. Once the air is clear, it has a chance to outperform.”

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Another Reason For Active's Decline

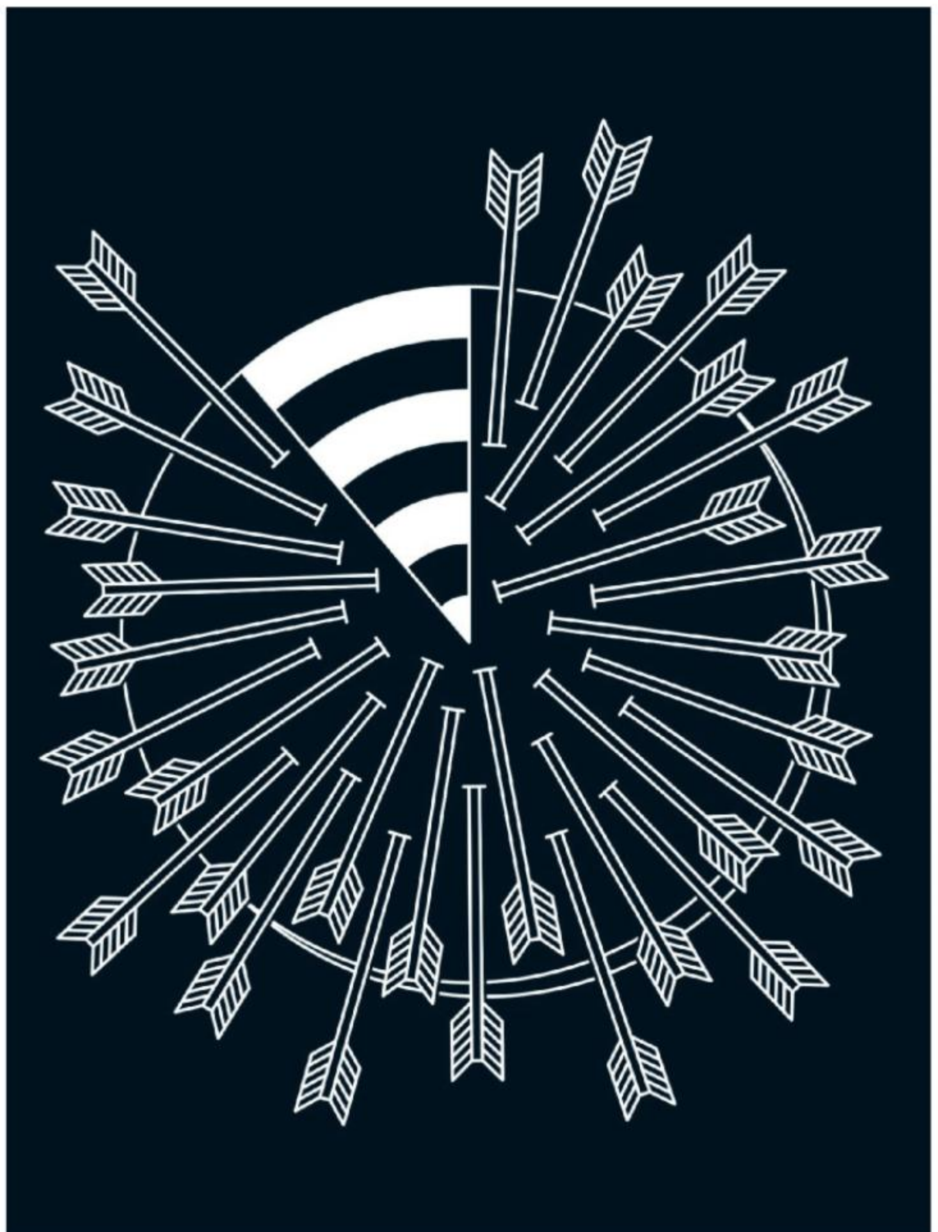
By OLIVER RENICK

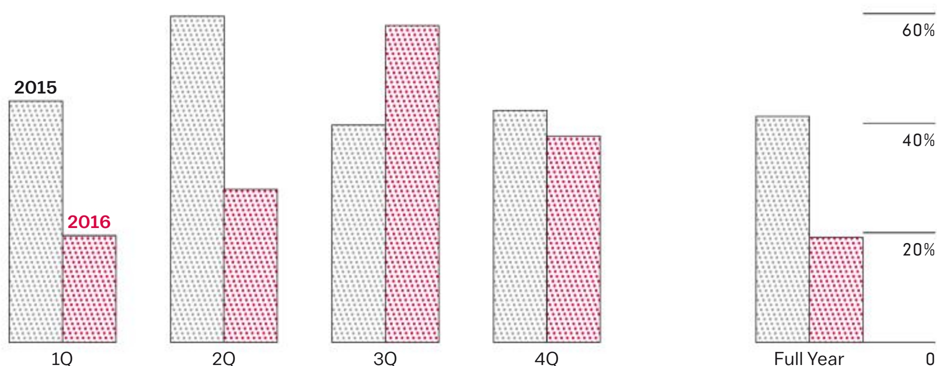
ILLUSTRATION BY MATT CHASE

J.B. HEATON IS an unlikely stock market revolutionary. He doesn't work in investing, his academic research focuses on legal aspects of insolvency, and most of his holdings are index funds. Yet thanks to his intellectual wanderings, Heaton today finds himself championing a slightly different take on active management's decline—and, as it turns out, one that three professors advanced almost 20 years ago to scant recognition. Not only can't humans outdo benchmarks, they all say, we can't even fight them to a draw.

Let's begin with the simple coin flip. You'll call it correctly about half the time, right? Well, the collective efforts of active fund managers around the world come nowhere near even that, with the proportion besting benchmarks lately hovering around 19 percent, according to Bank of America. "How are so many smart people bad at their job?" asks Heaton, a lawyer with dual doctorates from the University of Chicago. "We've always known in our gut that active managers aren't losing to the S&P because they're monkeys. What we haven't understood is just how hard it is to beat passive investing because of this effect."

The effect Heaton is referring to is the subject of a five-page paper he published in 2015 with colleagues Nicholas Polson and Jan Hendrik Witte; Hendrik Bessembinder of Arizona State University recently expanded their findings. In short: The distribution of returns in the stock market is bizarrely ►





lopsided. Often, equity benchmarks are so reliant on gigantic gains in just a handful of stocks that missing them—as most managers do—consigns the majority to futility. "Your intuition is that you can randomly pick stocks and start at zero," Heaton says. "But the empirical fact is if you randomly pick, you are starting behind zero."

What Heaton and his colleagues didn't realize when trying to solve the riddle of chronic underperformance is that someone already had done it, for the most part, in a 1998 study, "Why Active Managers Underperform the S&P 500: The Impact of Size and Skewness," published in the inaugural issue of the *Journal of Private Portfolio Management*. One of the original authors of the study is Richard Shockley, an associate professor of finance at Indiana University. At the time of publication, Shockley and his colleagues were investigating their observation that the drag from manager fees and the cost of managing a portfolio didn't explain the degree of consistent underperformance by mutual funds to their benchmarks. The culprit as they saw it: the concept known as positive skew.

The implication, like it or not, is that a concentration of outsize gains in a minority of index members is tantamount to a death sentence for anyone who gets paid for beating a benchmark. It's a pattern of returns that virtually ensures everyone outside of an indexer owns mostly deadbeat stocks. "It gets very little attention," says Rob Arnott, the Research Affiliates co-founder and smart-beta pioneer who's no stranger to pontificating in the academic realm. "The focus is often on the random walk and the coin toss analogy, and the impact of skewness is overlooked."

The findings have implications for everything from how active funds are judged to whether the explosion in passive investing will ever subside. It also offers insight into the number of stocks a manager can own before becoming a "closet indexer"—a term used to refer to stockpickers who choose enough stocks to essentially replicate an index. Seldom is the concept trotted out in the debate over investing styles, and you hardly hear "skewness" as a reason for a money manager's bad year.

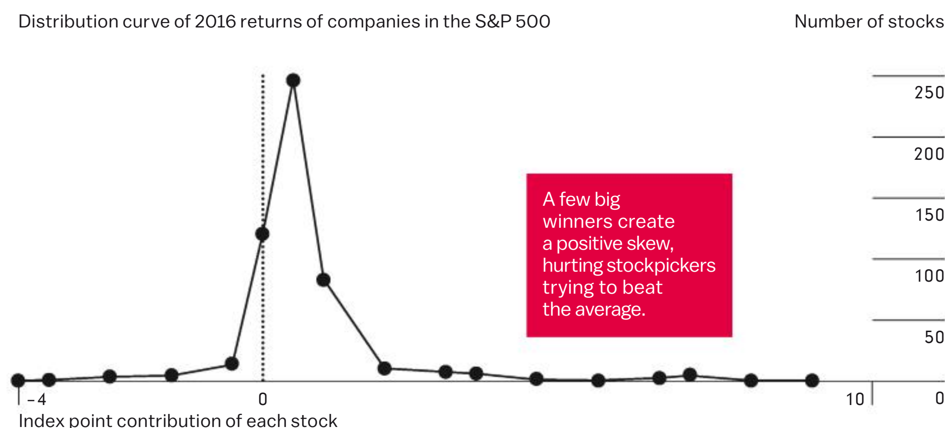
Dozens of interviews with fund managers showed that few were familiar with the equity market's degree of skewness and its impact on performance relative to a benchmark. "The paper didn't get read," Shockley concedes. "We undersold it. We thought it was going to be a bang-up journal, and they didn't market it very well." Part of the problem, he says, is that the math isn't terribly easy to understand. And that's where Heaton comes in.

Heaton, Polson, and Witte distill the statistical argument into a straightforward five-page paper that uses a simple illustration, adapted here to a bag of poker chips: Say you have five poker chips, four worth $10 and one worth $100. The five chips have an average value of $28, but what if you reach into the bag and pull out two chips over and over? That's roughly how mutual funds approach stocks, with managers picking portfolios that are subsets of the broader group. The problem is, the majority of selections will fail to snag the $100 chip. Mathematically, there is an average value of $56 across the 10 two-chip combinations—the problem is, 6 of 10 times you'll grab a pair with a sum of $20. The same thing happens with stocks chosen from a benchmark. Only a few managers will own the biggies, relegating the rest of the industry to mediocrity—or worse.

The ratios in the above example are a generous illustration of what happens in the market. In reality, there

AN UPHILL BATTLE AGAINST SKEWNESS

Distribution curve of 2016 returns of companies in the S&P 500



Source: {SPX Index HMOV <GO>}

are thousands more combinations, and the number of outcomes that will trail the average far outnumber those that will beat it. As a result, waiting to catch the winners over time becomes an impractical strategy. Sure, a couple of funds will own the flavor of the week (or month, or quarter) and rise above the benchmark, but for most the result will be far less than the average. And the poker chip illustration leaves out a key fact—that some stocks will fall in a given quarter, offsetting the influence of the gainers. While that's true, Bessembinder's study, expanding on Polson and Witte's work, found that over time, instances of outsize declines in most indexes are much lower than instances of eye-popping gains.

Of course, part of the reason is there's a limit to how far stocks can drop: 100 percent. But beyond that, what stood out to Bessembinder is how lopsided returns really are. Indeed, according to his work, so precious is the performance of the tiny cohort of gainers that it masks that your average stock historically has been a worse investment choice than a one-month Treasury bill.

"At a practical level, skewness matters," Bessembinder says by phone. "The underlying statistical issue is underappreciated. Even if there weren't fees and expenses, the odds are you'll underperform." According to his findings, roughly 70 percent of stocks will do worse than the Treasury bill, with the rate of performance improving directly with company size. Yet even in the top decile of market capitalization, 30 percent still offer smaller gains than the T-bill.

By itself, the observation that you need to pick winners to beat the benchmark isn't news. What else are fund managers paid for? The point of this vein of research is that the contours of the market itself make the odds against picking winners prohibitively long. Active managers may be doomed, but that doesn't make them idiots. With investor cash pouring out of actively managed strategies and into passive ones, the stakes for stockpickers have rarely been higher. Even as individual stock returns show more variation since last year's U.S. presidential election—a characteristic active managers often hail as crucial to selecting stocks—investors have taken money out of mutual funds and piled into exchange-traded funds this year. On a personal level, fund managers might find some solace in the research. The degree of skewness changes in any given year, and 2016 was an unfavorable one for stockpickers, according to Heaton. Put one way, the average stock in the S&P 500 returned 1.5 percentage points more than the median one, creating a scenario akin to the poker chip narrative.

Despite all the academic evidence, some on Wall Street expect the tide to turn back to active management. A December note from David Kostin, Goldman Sachs Group Inc.'s chief U.S. equity strategist, hailed the return of a stockpicker's market as imminent. "I think they're flat-out wrong in saying it's a stockpicker's market," says Research Affiliates' Arnott, referring to Goldman. "Wider dispersion increases the opportunity set, yes. But it also increases the opportunity to get it wrong, and the active manager will get it wrong as often as they get it right."

While the notion of a stockpicker's market can surely be debated, Heaton, Shockley, and Bessembinder would probably take a bigger issue with the wording of the latter part of Arnott's statement: "as often as they get it right."

After all, skewness says otherwise. ●

—*With Chris Nagi*

Renick is a stock markets reporter for Bloomberg News in New York.

Pulp Affliction

NEGLECTED ORANGE GROVES such as this one aren't exactly a pretty picture.

A citrus-greening bacterium—transmitted by a tiny winged insect called the Asian psyllid—has wiped out vast swaths of Florida's signature crop since the disease's discovery in 2005. The scourge, which is present in every county that produces the fruit, as well as in Brazil, the world's largest grower, makes oranges shrivel and drop prematurely, and it often renders juice unfit for consumption. Therapies can only slow the disease's progression; there is no cure.

Already facing lower demand for juice, Florida growers have been abandoning more and more groves. Last year the state had 130,000 such acres, an area almost nine times bigger than Manhattan. Once neglected, the land invites insect proliferation and possible further devastation, according to the U.S. Department of Agriculture. The disease has cost Florida's economy about $7.8 billion over a decade, say University of Florida researchers.

This year's harvest is poised to be Florida's smallest in five decades, causing prices to climb 65 percent in the four years ended Dec. 31. For fundamental drivers related to orange juice futures, run **{CPLY AGS <GO>}** and click on Orange Juice. —*Marvin G. Perez*

PHOTOGRAPH BY GREGORY HALPERN

Part of a balanced strategy.

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Uncover Trade Ideas Hiding in Your Benchmark

By ATISH KAKODKAR

For an overview of the Bloomberg Barclays Indices, run **{IN <GO>}**.

91) Publications | 12) Export | Bloomberg Index Browser

1) Bloomberg Barclays | 2) Commodity | 3) Currency | 4) AusBond | 5) Legacy Fixed Income | 6) My Indices

11) Key Indices | 12) Global | 13) US | 14) Pan-Euro | 15) Asia-Pac | 16) High Yield | 17) Inflation | 18) EM | 19) Muni

View: Returns | Projected | Latest | As of 03/21/17

Index Name	Ticker	Last Update	1D Rtn	MTD Rtn	YTD Rtn	Members
21) Global Aggregate	LEGATRUU	03/21/2017	0.40%	-0.02%	1.59%	18,015
22) Global Treasury	LGTRTRUU	03/21/2017	0.49%	-0.01%	1.86%	1,359
23) Global Aggregate Credit	LGDRTRUU	03/21/2017	0.30%	-0.08%	1.50%	12,564
24) US Aggregate	LBUSTRUU	03/21/2017	0.22%	-0.33%	0.54%	10,170
25) US Treasury	LUATTRUU	03/21/2017	0.22%	-0.31%	0.40%	258
26) US Government-Related	LD08TRUU	03/21/2017	0.16%	-0.13%	1.07%	1,316
27) US Corporate	LUACTRUU	03/21/2017	0.25%	-0.55%	0.90%	[illegible]
28) US MBS	LUMSTRUU	03/21/2017	0.20%	-0.24%	0.20%	339
29) US Government/Credit	LUGCTRUU	03/21/2017	0.22%	-0.38%	0.66%	7,545
30) US Universal	LC07TRUU	03/21/2017	0.19%	-0.34%	0.78%	[illegible]
31) Pan-European Aggregate	LP06TREU	03/21/2017	0.04%	-1.34%	-1.39%	[illegible]
32) Euro Aggregate	LBEATREU	03/21/2017	0.03%	-1.17%	-1.61%	[illegible]
33) Asian Pacific Aggregate	LAPCTRJU	03/21/2017	-0.06%	-0.03%	0.06%	[illegible]
34) China Aggregate	LACHTRUU	03/21/2017	0.09%	-0.53%	0.28%	[illegible]
35) Global High Yield	LG30TRUU	03/21/2017	0.04%	-0.35%	2.76%	[illegible]
36) US High Yield	LF98TRUU	03/21/2017	-0.17%	-1.08%	1.82%	[illegible]
37) Pan-European High Yield	LP01TREU	03/21/2017	0.06%	-0.27%	1.60%	635
38) Global Infl-Linked (Series-L)	LF94TRUU	03/21/2017	0.50%	-0.81%	0.38%	134
39) EM USD Aggregate	EMUSTRUU	03/21/2017	0.15%	-0.07%	2.88%	1,607

WHAT'S DRIVING the returns of your bond benchmark?

For indexes that include thousands of securities, getting your arms around that question can be a bit of a challenge. For instance, which of the 5,971 securities in the Bloomberg Barclays US Corporate Bond Index contribute the most to its return?

You can find out by loading the index into Bloomberg's Portfolio & Risk Analytics function at **{PORT <GO>}**. To segment the index for this particular analysis, let's use the most granular level of the Bloomberg Barclays classification system. From the drop-down menu to the right of "by," select Bloomberg Barclays Level 4 and press <GO>. To track returns, click on the Performance tab and the Main View subtab, then sort the list by total return year-to-date.

You'll immediately notice that metals and mining bonds generated the best return this year. To see the individual bonds in the Metals & Mining category, click on the plus sign next to the classification. Among the best performers as of March 21: a Barrick Gold Corp. 5.25 percent note that matures in 2042. Rated BBB–, the bond returned 9.66 percent this year.

The other end of the list reveals the worst performer: Wirelines. Expand the list and you can see a number of Verizon Communications Corp. bonds, including a similarly long-dated 3.85 percent Verizon note due in 2042. Rated BBB+, the note returned –2.4 percent this year.

OK, SO GIVEN the Barrick Gold notes' run this year—an almost 10 percent gain—let's say you're looking to swap into another bond that offers better relative value, perhaps even from a sector that has lagged, such as Wirelines. How can you dig into that? Run the Fixed Income ►

Run **{PORT <GO>}** to slice and dice a fixed-income index.

Click here to sort the list: Metals & Mining was the best-performing industry, generating a return of 4.22 percent.

This Barrick Gold note due in 2042 has had a strong run this year, returning 9.66 percent through March 21.

To see the individual bonds, expand the Wirelines menu.

A similarly long-dated Verizon bond returned −2.4 percent.

Worksheet function at **{FIW <GO>}** and load the index to get more insight. Select Ticker as the Primary Grouping. Use the Facets panel to filter for the bonds that interest you, and drill into the long-dated bonds issued by Barrick Gold and Verizon—the best and worst performers we've identified. Use the check boxes to select "20 to 30 yrs" for years to maturity. Under Ticker, select ABXCN and VZ. That trims the list to 15 bonds—10 Verizon and 5 Barrick Gold instruments.

For a visualization of the spreads and maturities of these securities, click on the Bond Chart tab. For the Y-Axis, select G-Spread to chart the spread between each bond and the matching point on the government curve. For X-Axis, select Maturity. Consider two bonds with similar maturities. You can quickly see that the Barrick Gold '42s are trading at a narrower spread than the Verizon '42s.

Right-click on the chart and, in the menu that appears, select

Load the index into FIW and use the Facets panel to drill down to long-dated Barrick Gold and Verizon bonds.

Export Selection to Chart. This historical chart of the two bonds' spreads shows something interesting: Over the course of 2016, the spread on the Barrick Gold note narrowed significantly; in the beginning of this year, it traded through the spread of the Verizon note. Based on ratings alone, that doesn't make sense: The Barrick Gold note is rated two notches below the Verizon bond, yet it's trading tighter to the Verizon bond.

Either the market is pricing in a different take than the ratings—or the bonds are mispriced relative to each other. If it's the latter, that could be a trading opportunity. What's more, if you traded out of the Barrick Gold note at $1.08 and bought the Verizon note at 85¢, you could retain the difference in cash! ●

Kakodkar is a credit market specialist at Bloomberg in New York.

Is India Rated Too Low? Use This Model to Find Out

By THOMAS LABBE

Run {YAS <GO>} to analyze a selected bond.

MANY INVESTORS HAVE explored alternatives to ratings since the global financial crisis. Because raters tend to focus on long-term trends, their verdicts on creditworthiness may lag behind developments. Markets, meanwhile, are typically sensitive to short-term data. To bridge those two perspectives, an independent risk model can help you fill in the picture on an issuer's creditworthiness.

Independent models can be especially useful when market-priced credit risk differs from ratings. The market, of course, prices risk in two main forms: bond spreads and credit default swap spreads. To see sovereign CDS spreads alongside ratings, run **{WCDM <GO>}** for the World Countries Debt Monitor.

CONSIDER INDIA, for example. It turns out that there isn't much of a market for Indian CDS, so let's take a look at bond spreads instead. A 10-year Indian government bond that matures in 2027 yielded 7.45 percent as of March 10. To analyze it with the Yield and Spread function, go to **{IGB 8.28 09/21/27 Corp YAS XCCY <GO>}**. The XCCY tail displays the cross-currency widget, which enables you to convert the yield into a U.S.-dollar-denominated equivalent bond, for example. As of March 10, the Indian bond traded at a 69-basis-point spread over the U.S. Treasury bond.

Now compare that with Malaysia. A similar Malaysian bond maturing in 2027 yielded 4.29 percent. Converted to a USD yield, it returned a spread of 64 basis points over the Treasury bond—basically in line with the Indian bond. The ratings agencies have a different view, however. India is rated Baa3, BBB-, and BBB- by the three main rating companies. Malaysia is rated A3, A-, and A-. That's three notches

Go to **{SRSK <GO>}** for the Sovereign Credit Risk function.

Asia/Pacific | 96) Info | Sovereign Credit Risk
United States of America | Browse

N	Country	1-Yr Default Probability (%) Current	Low	Range	High	Avg	Chg	5 Year CDS (bps) Model	Market	Diff
11)	Reserve Currency			10 Years						
12)	Singapore	0.68	0.12		1.91	0.60	+0.55	22	--	--
13)	Australia	0.10	--		--	--	--	23	--	--
14)	New Zealand	0.07	--		--	--	--	20	--	--
15)	Japan	0.06	0.04		0.23	0.09	+0.03	22	23	-1
16)	Hong Kong	0.06	0.02		0.09	0.05	+0.04	32	--	
17)	Non-Reserve Currency			20 Years						
18)	Mongolia	4.45	0.19		7.55	2.16	+3.55	389	--	
19)	Papua New Guinea	3.47	0.04		5.62	1.77	-2.16	399	--	
20)	Kazakhstan	2.98	0.49		5.02	2.29	+2.48	353	151	
21)	Sri Lanka	2.36	0.48		8.09	2.43	+1.77	180	--	
22)	Pakistan	1.34	0.61		12.17	4.47	-10.83	420	[illegible]	[illegible]
23)	Indonesia	0.49	0.30		55.25	4.89	-2.72	146	131	+15
24)	Malaysia	0.48	0.04		1.18	0.25	+0.03	113	111	+2
25)	Vietnam	0.29	0.04		2.87	0.74	-1.83	202	--	--
26)	India	0.06	0.02		1.22	0.19	-1.16	73	95	-22
27)	Bangladesh	0.06	0.06		12.11	3.50	-2.03	146	--	--
28)	Thailand	0.05	0.04		21.11	1.48	-3.21	157	56	+101
29)	Cambodia	0.05	0.04		1.67	0.34	-1.61	218	--	--
30)	South Korea	0.05	0.03		2.54	0.35	-2.43	113	--	--
31)	China	0.04	0.02		0.11	0.04	+0.01	122	88	+33
32)	Taiwan	0.03	--		--	--	--	77	--	--

9) Risk Scale: Low / Medium / High • Avg • Now

The model estimates a lower theoretical CDS spread for India than for Malaysia.

For details of the model and inputs for India, run **{SRSK IN <GO>}**.

A key factor in India's low model-estimated risk is short-term debt, which was only 3.89 percent of GDP, vs. 25.81 percent for Malaysia.

higher! What can you conclude, then? Either the market is too optimistic about India, or the country is due for a ratings upgrade.

To explore that question, use Bloomberg's sovereign credit risk model, which calculates the probability of an issuer's default over a one-year horizon and estimates a theoretical CDS spread implied by fundamental and market data.

Run **{SRSK <GO>}** and select Asia/Pacific. SRSK lets you compare the model-estimated CDS spread with how the market is pricing credit risk. For India, the model CDS spread was 73 basis points, tighter than Malaysia's implied spread of 112 basis points. Click on India for more detail. The model inputs can help explain the divergence. One of the key factors is short-term debt. India's stood at only 3.89 percent of gross domestic product, while Malaysia's was 25.81 percent of GDP.

To go even deeper, you can now look at a company and compare it with a peer: India's Reliance Industries Ltd. vs. Malaysia's Petroliam Nasional Bhd. CDS on Reliance traded at 140 basis points on March 8. That was in line with the company's Baa2, BBB+, and BBB- ratings. Petroliam Nasional traded at 105 basis points with A1, A-, and A- ratings. Run **{RIL IN Equity DRSK <GO>}** to analyze Reliance with the Bloomberg Default Risk function. According to DRSK, the model-estimated CDS for Reliance was 129 basis points. For Petroliam Nasional, it was 126 basis points.

This suggests that, like India itself, the Indian company may have some upside in its credit quality. ●

Labbe is a fixed-income market specialist at Bloomberg in Singapore.

Optimize Your Key Rate Risk Away Using Your Liquidity

By TIMOTHY JESTER, EVERETT PERRY, and JOSHUA LITWACK

To examine the key rate exposures of your portfolio, run **{PORT <GO>}**, click on the Characteristics tab, and then on the Key Rates subtab.

HERE'S A NOT-SO-SIMPLE problem: You're managing a bond portfolio, and you want to match the key rate exposures of your benchmark, so you don't get caught off guard by a rate rise. Meanwhile, you've got quotes on a bunch of bonds. Which of the bonds could you trade to shift the duration of your portfolio the way you want?

There are a lot of moving parts to that problem, yet solving it can be surprisingly easy. Let's break it down into a couple of parts. First, compare the key rate exposures of your portfolio with those of your benchmark using the Portfolio & Risk Analytics (PORT) function. Second, for the sake of simplicity, create a cash portfolio in the Portfolio Administration (PRTU) function and use it to run an optimization that draws from a universe of bonds on your Inventory & Pricing (IMGR) tool. (You can, of course, use your actual bond portfolio to run a similar optimization.)

Examine Key Rates

Run **{PORT <GO>}** and select your portfolio. Next, click on the arrow to the right of "vs" and pick your benchmark.

If you're benchmarked to the Bloomberg Barclays U.S. Aggregate Bond Index, for example, you'd select that. In addition, you can use the Bloomberg Barclays classifications to segment your portfolio. Click on the arrow to the right of "by" and select Bloomberg Barclays Level 4, for example. (The Bloomberg Barclays Classification System lets you segment bonds by security type, at Level 1, down to industry, at Level 4.)

To see which maturities are contributing the most to your interest rate risk, click on the Characteristics tab and then on the Key Rates subtab. (Key rate duration is an interest rate risk measure developed in the 1990s by Thomas Ho, founder of New York-based

Here's the setup for an optimization that will match key rate exposures using bonds quoted to you via the IMGR tool.

financial engineering firm Thomas Ho Co. It measures the sensitivity of a bond or portfolio to a small change in yield at given key maturities on the curve—the one-year point, for example—while holding other tenors constant.)

Let's say you discover that your portfolio is diverging from the index at a couple of key rates. To figure out how to remedy that, you'd go on to run an optimization.

Get Your Money for Nothin'

To make sure we get a clear window into what's going on here, let's first create an all-cash portfolio. Go to **{PRTU <GO>}** and click on the Create button. Give the portfolio a name, such as "Cash Based," and select FI as the asset class. Click on the Create button. Let's infuse the portfolio with $100 million. Enter "USD Curncy" in the field under Cash and click on the matching item. Enter "100000" in the Position field. (In PRTU, currency is multiplied by 1,000, as are bond positions.) Click on Save and run **{PORT <GO>}**.

Optimize!

To optimize your portfolio, you need a list of investable securities. One way to create this list is to use prices from IMGR. IMGR consolidates indications of pricing and liquidity, providing transparency to your trading opportunities. It can be fed by sources including quotes mined from Message (MSG), Instant Bloomberg (IB), the Runs Manager (RUNZ), and single-dealer offering pages. IMGR can also be filtered by the constituents of a Bloomberg Barclays index to see liquidity on the bonds in the benchmark.

You can also use IMGR as a source for real-time pricing as ►

The optimization creates a hypothetical portfolio of bonds matching the key rate exposures of the benchmark.

Name	Source	OAD	6M	1Y	2Y	3Y	5Y	7Y	10Y	20Y	30Y
Totals	Portfolio	5.91	-0.10	0.21	0.22	0.49	0.71	1.02	0.88	1.09	1.26
	Benchmark	6.02	0.00	0.11	0.28	0.55	0.81	0.92	0.98	1.18	1.16
	Difference	-0.11	-0.10	0.10	-0.06	-0.06	-0.10	0.10	-0.10	-0.09	0.10
suries	Portfolio	12.37	0.00	0.00	0.00	0.79	1.21	-0.20	-0.11	0.04	10.55
	Benchmark	6.16	0.00	0.10	0.33	0.66	0.95	0.91	0.56	0.93	1.72
	Difference	6.22	0.00	-0.10	-0.32	0.13	0.25	-0.93	-0.67	-0.89	8.83
porates	Portfolio	7.57	0.00	0.00	0.00	0.81	2.68	0.01	0.01	-0.02	4.07
	Benchmark	7.37	0.00	0.07	0.21	0.49	0.80	1.01	1.26	1.79	1.65
	Difference	0.20	0.01	-0.07	-0.21	0.32	1.87	-1.01	-1.24	-1.81	2.42
rnment-Related	Portfolio	15.18	-1.03	-0.01	-0.02	0.16	0.25	-0.38	2.18	10.30	2.09
	Benchmark	5.38	-0.02	0.13	0.40	0.64	0.73	0.66	0.95	1.09	0.72
	Difference	9.80	-1.01	-0.14	-0.42	-0.48	-0.49	-1.04	1.23	9.21	1.37

The portfolio's difference in key rates is in line with the constraints in the optimization.

well as profit and loss within PORT. That lets you see live P&L using up-to-date runs from liquidity providers. To enable MSG1 pricing in PORT, click on the View Button on the red tool bar and then on Edit Current View. Click on Pricing Source, and then toggle MSG1 into the Fixed Income Intraday Data pricing waterfall. Click on Save, and then press Menu to return to the PORT Intraday tab.

With the Cash Based portfolio loaded in PORT, let's pick a benchmark. For the purposes of this example, use the Bloomberg Barclays US Aggregate Statistics Index, which is essentially a projection of the bonds that will be included in the Bloomberg Barclays Agg when it rebalances at the end of the month. (For more on the index methodology, go to **{NSN OCDC8K3PWT1G <GO>}**.) Click on the arrow to the right of "vs" and select [More Sources…]. Next, click on Indices, enter "LBUSSTAT," and click on the matching index. Click on the Select button.

After the benchmark is set, go to the Actions drop-down and select Launch Optimizer. To start with a precanned optimization task, click on Tasks on the red toolbar and select Load Task. In the window that appears, click on Fixed Income Tasks, select Fixed Income: Minimize Turnover and match Key Rates, and hit select.

The PORT optimizer has four sections that enable you to set up an optimization: Tasks, Trade Universes, Constraints, and Securities Properties.

The Trade Universes section is where you can specify an IMGR search as your source of securities. Click on the red x to delete the precanned universe. Then click on the Add button. Under Source, select IMGR Search (IMGR). Select the search you want, and click on Select.

In the Constraints section, you'll see a series of constraints that seek to make the partial durations of the portfolio closely match those of the benchmark at a series of key maturities.

Let's adjust a few constraints, specifying the number of bonds in the portfolio first. Click on the Add button. Enter "Number of Holdings" in the Search field. Press <GO>. Enter "50" in the Min field and "100" in the Max field. Click on Select.

Next, let's go down to the Security Properties section. Set the max USD to 0 so that we're using all of our cash to buy bonds, Last, set the Relative drop-downs to None. Click the Run button.

Now Have Your Piece of Cake

The optimization suggests 50 to 100 bonds for which you're currently receiving tradable quotes. Put together, they'll match the interest rate and spread risk of your benchmark. You can alter the individual duration constraints to execute your trading strategy based on interest rates, spreads, and the shape of the curve.

To dig into the suggested portfolio, click on Analyze in PORT, and you can navigate back to the Key Rate subtab. An optimization run in early March created a portfolio that was within 11 basis points of the effective duration of the benchmark. The largest difference in any key rate was 10 basis points. You can click into any sector to see more transparency of the bonds that contribute to that sector's duration. You can also save this portfolio using the Save/Trade button found in the top right corner of PORT.

When it comes to matching key rates to a benchmark, optimization has clear advantages. In addition, using this tool with pricing sent to your firm through IMGR allows you to ensure you have executable quotes on the securities you receive as output. To get actionable results, liquidity is a pretty good place to start. ●

Jester and Litwack are portfolio analytics product specialists in San Francisco. Perry is a portfolio client services specialist in San Francisco.

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You Need to Get a Handle on The Research You Receive. Really!

By USHMA PARMAR

MIFID II IS less than a year away.

The new Markets in Financial Instruments Directive and its sidekick, MiFIR (the "R" stands for regulation), will come into force in Europe in January. Based on principles that aim to make markets fairer, safer, and more efficient, MiFID II is arguably the broadest piece of financial legislation ... ever. It has the potential to significantly upend a number of market practices and structures.

Research is one of them.

Under MiFID II's so-called inducements rules, asset managers are barred from accepting inducements from third parties—free research from brokers, for example—that could potentially interfere with their obligation to serve clients' interests. Buy-side firms will thus be required to pay for any FICC research products—and ensure they aren't being induced. In effect, the legislation unbundles fixed-income, currencies, and commodities research in a manner similar to the unbundling of equity analysis from execution services.

What's more, investors will need to identify and essentially stop unsolicited research that's provided free of charge. Buy-side firms will thus need to monitor and determine whether material can be accepted and used.

In December, the European Securities and Markets Authority issued new guidance on investor protection topics. (The guidance is available at http://bit.ly/MiFIDQA.) One section focused on inducements through research. A key question there is:

How should an investment firm deal with unrequested research that is provided free of charge?

The answer includes this passage:

Where a firm does not want to accept research material, they should take reasonable steps to cease receiving it or avoid benefiting from its content, for example by automatically blocking or filtering certain senders/materials where practicable, and/or requesting a provider to stop providing research, and/or using the compliance function of the firm to monitor, assess and determine whether the material can be accepted before it reaches those parts of the firm that would make use of it.

ANALYZING THE VAST quantity of email traffic entering an organization is challenging in itself. To then identify and monitor "research" content emails and filter them for permitted counterparties or email domains only raises the level of difficulty. It means your firm will have to consolidate all of your email traffic and have a means of filtering it to find specific research documents.

In addition, you'll need to assess which research articles are permitted under your counterparty agreements. Research that falls outside that remit will need to be identified and those research counterparties notified so they can unsubscribe users from these emails.

In Bloomberg's front office surveillance platform, you can easily specify a policy indicating which research counterparties are permitted and identify communications that contain research content. The system will send alerts about messages that fall outside that remit. You can then contact the research provider to ask it to stop sending the communications. For more information on the surveillance platform, go to **{FOSS <GO>}**. Run **{MIFI <GO>}** for background, news, updates, and more relating to MiFID II.

MiFID II calls for an unprecedented degree of transparency—particularly for buy-side firms. Whereas MiFID applied solely to equity markets, MiFID II extends the core principles into nonequity products, such as cash and derivative products in fixed income, foreign exchange, and commodities. For the first time, products such as bonds and derivatives that trade over the counter will be subject to certain reporting requirements to create price transparency and supervisory oversight.

The time to start getting ready is now. ●

Parmar is a front office surveillance market specialist at Bloomberg in London.

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Past performance is no guarantee of future results.

Investing involves risk, including the possible loss of principal and fluctuation of value.

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Concentrated portfolios have the ability to take larger positions in a smaller number of issuers and therefore may experience greater price volatility.

As of 12/31/16, Janus Forty Fund Class I Shares Morningstar Ratings™ in the Large Growth category: 4 stars out of 1,315 funds, 5 stars out of 1,154 funds and 3 stars out of 809 funds, for the 3-,5-, and 10-year periods, respectively.

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

Ratings and/or rankings may be based, in part, on the performance of a predecessor fund or share class and are calculated by Morningstar using a methodology that differs from that used by Janus. Methodology differences may have a material effect on the return and therefore the rating/ranking.

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Here's a Way to Hedge the Trump Rally—On the Cheap

By STEVEN AHN

To regress S&P 500 levels against the 10-year U.S. swap rate, run **{HRA <GO>}**.

Note the regime change: Since Trump's election, stocks and rates have been positively correlated.

THE TRUMP RALLY started to show a little shakiness in March.

The S&P 500, after climbing 12 percent from Election Day to a peak on March 1, turned a bit sideways. For the month through March 27, the index was down 2.4 percent.

Let's assume you've been mostly on the right side of the rally so far. Maybe you're beginning to think about ... protection.

Probably the cleanest way to hedge the equity market would be to simply buy a put outright. The low implied volatility makes that trade compelling. But if you wish to cheapen even further, a contingency option with a discrete barrier could help.

The recent rates move vs. the equity market provides an interesting opportunity. Regress the S&P 500 against the U.S. 10-year swap rate, and you can see that something fundamental changed with the election. Last year through Nov. 8, the relationship was negative: Stocks dropped when rates rose. Since the election, however, equity markets and rates have moved in tandem.

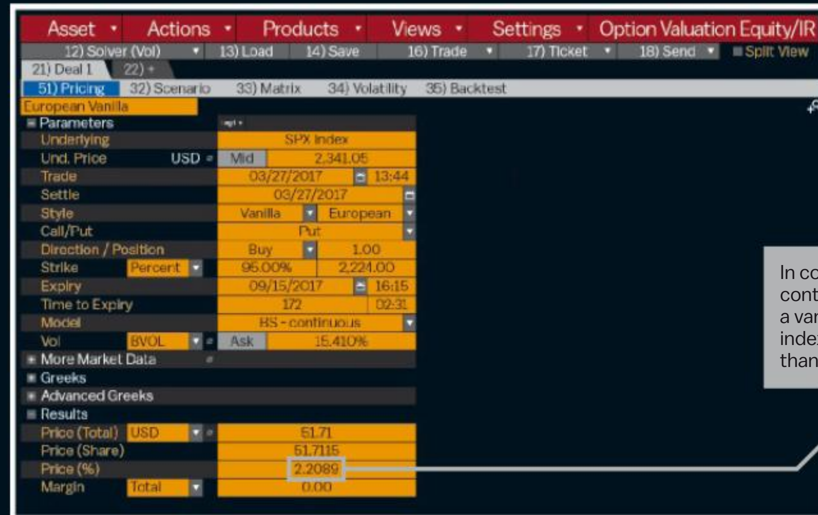
I believe this correlation regime change is here to stay. In Trump's plan, failure would mean falling stock prices and lower rates, while success would be higher equities and rising rates. That was the norm from 2000 to 2007, before the Federal Reserve started to rule our corner of the world. You can take advantage of this new regime to cheapen an SPX put. The secret: Tie the payoff to the outcome of the 10-year rate.

Bloomberg's Derivative Library lets you price and analyze payoff scenarios for that kind of contingency option. Here's how.

First, run **{DLIB <GO>}** for the Derivatives Library. For the template we're going to base this deal on, click on the {DLIP} link. Click on Product Templates and on the link for example Exotic

For a contingency option, go to **{DLIB <GO>}** and follow the {DLIP} link. Click on Product Templates and then on the link for example Exotic Options Templates. Select Equity Option with CMS/LIBOR Barrier.

Here's a price for protection contingent on rates being at or below 2.25 percent.



In contrast to the contingent deal, a vanilla put on the index would cost more than twice as much.

Options Templates. In the window that appears, scroll down to the Equity Option with CMS/LIBOR Barrier item and click on the link.

On March 27, I priced a September S&P 500 95 percent put contingent on the 10-year swap rate. The rate was then at 2.34 percent, so I made the deal contingent on its being at or below a slightly lower level: 2.25 percent. Since the observation will be done at maturity, make the Observation Start and End the same.

At the bottom of the screen, for Model, select HW1F-LV for the Hull-White 1-Factor Local Volatility model. The model provides correlation between the equity spot level and the interest rate. The spot price calculations follow a local volatility process, and interest rate calculations follow a Hull-White process.

Next, click on the Correlation tab and change the correlation level—shown in the field to the right of HW factor (USD)—to 0.35 to be more aligned with how banks would price such products.

Priced on March 27, the option cost 1.01 percent.

Now let's compare this to a vanilla option to see how much saving there is. A vanilla S&P 500 6-month 95 percent put was about 2.2 percent. The contingency option came at a 54 percent discount!

OK, the price is good, but you may be concerned about liquidity with such structured products. Many banks have recently stepped up cross-asset trading resources to provide a relatively tight market. I'd recommend contacting four or five different banks to get the best pricing before executing, because the implied correlation each bank uses may vary considerably. ●

Ahn is an equity derivatives market specialist at Bloomberg in New York.

This Pairs Trade Almost Doubled Returns

By KANNAN SINGARAVELU

Run **{CIXN <GO>}** to set up a custom index of the two stocks.

INDIA'S FIRST SPECIALIZED mortgage company, Housing Development Finance Corp. Ltd., was started in 1977. Known as HDFC Ltd., it's evolved over the years into a financial conglomerate. Among other things, it owns 21 percent of the country's biggest bank by market cap, Mumbai-based HDFC Bank. Both lenders are publicly traded and have performed well over the past couple of years.

On Feb. 17, after the Reserve Bank of India lifted restrictions that prevented foreign investors from buying more shares, HDFC Bank stock surged 3.7 percent to a record. HDFC Ltd. stock, meanwhile, rose only about 0.6 percent.

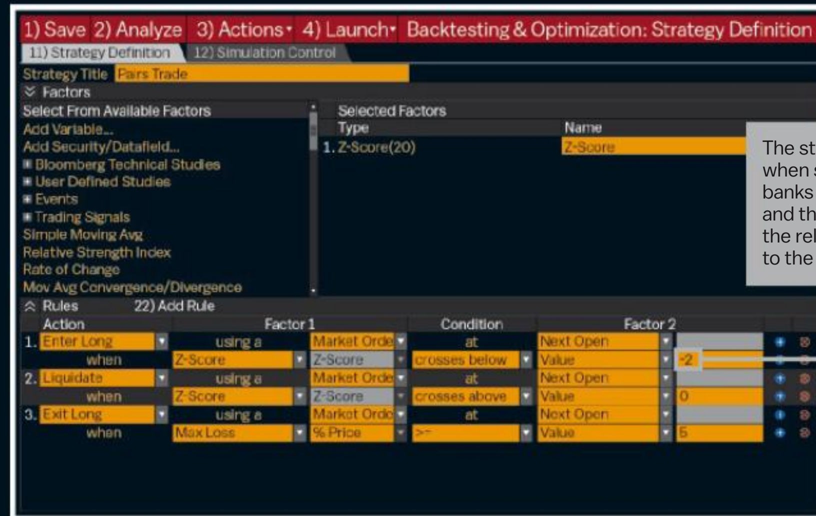
The disconnect between the related companies may be a market mistake—but it's also an opportunity. In fact, a simple pairs strategy could have almost doubled the return of a buy-and-hold approach that acquired equal amounts of the two stocks.

The basic idea of such a pairs trade is simple: Buy the parent and sell the bank when their relative values get out of whack; cover when the shares move back into line. Here's how it works.

FIRST, LET'S CREATE a custom index. Go to **{CIXN <GO>}** for the Custom Expression Editor. Enter a ticker such as "HDFCS" and a name such as "HDFC Ratio." To create a ratio of shares of HDFC Ltd. to those of HDFC Bank, type this expression—"HDFC IS Equity / HDFCB IS Equity"—in the main field. Click on the Create button and then on the Generate button.

Next, run **{BT <GO>}** for the Backtesting & Optimization function. Click on the Create button and scroll down to select New Trading Strategy. In the Factors section of the screen, scroll down and select Z-Score. Z-Score is a measure of how many standard

To set up a backtest of a pairs-trading strategy, run **{BT <GO>}**, click on the Create button, and select New Trading Strategy.



The strategy buys when shares of the two banks get out of whack, and then sells when the relationship reverts to the mean.

Click on the Analyze button in BT to run a backtest.

The strategy racked up a 46 percent return over two years.

deviations an observation is from the mean. Let's use 20 periods for that calculation. If the number in parentheses next to Z-Score is something other than 20, click on the pencil icon, enter 20 in the Period field, and click on Update.

The strategy is based on three rules: one that goes long the ratio of the parent to the bank when it gets far below its usual relationship; a second that covers when the relationship reverts to the mean; and a third that exits if the position starts to lose too much money.

First, let's create the rule that buys the ratio when the Z-Score crosses below −2 standard deviations. In the Rules section, choose Enter Long as the Action. Select Z-Score under Factor 1 and Crosses Below as the Condition. Now choose Value as the Factor 2 and set it as −2. Next, click on the Add Rule button twice. To set up the second and third rules, replicate the screen shown on this page. When you're done, click on Save.

To see the results of the strategy, click on the Analyze button. On the Strategy Analysis screen, the top graphic shows the price ratio history and trade activity. The middle chart tracks profit and loss. The lower chart graphs the Z-Score.

The strategy generated a return of 46 percent over the two years ended on Feb. 17.

The HDFC Twins, as the companies are popularly called, are blue chip companies that have rewarded shareholders over the years. Sometimes, though, it can pay to explore trading strategies that involve such groups of star performers. ●

Singaravelu is an equity market specialist at Bloomberg in Mumbai.

Activist Investors Shift Their Focus to Mid-Caps Like Skechers

By LAURA COLBY

KIM KARDASHIAN, Sugar Ray Leonard, Britney Spears, Ringo Starr. When it comes to choosing spokespeople to endorse its brightly colored footwear, Skechers U.S.A. Inc. has gone for a diverse lineup of celebrities.

But when it comes to picking who sits on the board of the Manhattan Beach, Calif.-based company, things look decidedly more monochrome: nine white men, the youngest of whom is 48 years old.

That homogeneity rankles an increasing number of investors, who are demanding that boards become more diverse. In fact, shareholders have been so successful in pressing the largest U.S. companies to add women to their boards, they're now drilling down into the next tier of businesses and shining a spotlight on diversity—or rather the lack of it—at mid-cap and smaller members of the Russell 3000 Index such as Skechers.

Amalgamated Bank of New York's LongView Funds unit, which controls $42 billion, including $13 billion in actively managed assets, is making the sneakers company into the poster child for its diversity lobbying this year. The bank has filed a proxy proposal asking Skechers to diversify its board and prepare a report on the steps it's taking.

Amalgamated made similar proposals at six other mid-cap companies this year. The bank, which is majority-owned by Workers United, an affiliate of the Service Employees International Union, has in the past teamed with big institutional investors such as the California Public Employees' Retirement System and the New York State Common Retirement Fund to prod companies in the S&P 500 to add women to their boards.

Amalgamated Chief Executive Officer Keith Mestrich says the bank aims to expand its advocacy push. "Now the effort is to try to deepen this into a broader set of companies," he says at his office in New York's Chelsea neighborhood. Mestrich adds that Amalgamated, which has a socially responsible B Corporation status, has been advocating for diversity not only because it's the right thing, but also because it improves a company's operations. "Having a commitment to diversity makes sure you don't get groupthink," he says. "You get better decisions."

LONGVIEW'S CAMPAIGN aimed at midsize companies began with the 2014-15 proxy season, when it filed proposals at five of them, only one of which was in the S&P 500. Today all five have at least one woman director. In the 2015-16 proxy season, the bank filed proposals at five more companies: Qorvo, XPO Logistics, Stifel Financial, Linear Technology, and Joy Global. Those initiatives were withdrawn at all but one—Joy Global Inc., a Milwaukee-based maker of mining equipment, where it went to a vote and failed by a narrow margin. (Last year, Japan's Komatsu Ltd. agreed to acquire the company.)

Smaller companies lag far behind their larger peers regarding diversity. Only 1 percent of S&P 500 companies have all-male boards, and just 21 percent of them have boards that are less than 15 percent female, according to Peter Kimball, executive director at ISS Corporate

To see how governance data at a selected company stacks up against peers, run **{MGMT <GO>}** and click on the Summary tab.

Solutions Inc. But when you look at the broader index, the gender imbalance is stark: Among Russell 3000 companies that aren't in the S&P 500, 28 percent have no women on their boards, and 62 percent have boards that are less than 15 percent female, the ISS data show.

Mestrich declined to name the other companies where LongView has filed this year, because they've entered into talks with the bank about acceding to its request. Four of the proposals have been withdrawn so far. "It's better to be in negotiations and have them take steps," he says, adding that none were as well-known as the footwear company. "Usually, they do it to avoid public embarrassment."

Each year about 20 such proposals are filed at U.S. companies, ISS says. This year as of the end of March, ISS has already logged about 33 board diversity proposals, not counting those filed by LongView. Twenty were at companies that aren't part of the S&P 500.

WHILE GIANT government pension funds such as the NYS Common Retirement Fund and CalPERS have long pressured companies on diversity and other governance issues, some private-sector behemoths are now raising their voices as well.

State Street Global Advisers Inc., which manages $2.5 trillion, drew a line in the sand on March 8, International Women's Day. It promised to hold companies it invests in accountable, threatening to vote its shares against those that don't embrace diversity. To underline that new stance, State Street placed a bronze statue called *Fearless Girl*, her hands on her hips as she stares directly at the iconic bull sculpture, on Bowling Green in Lower Manhattan.

BlackRock Inc., which manages $5.1 trillion, said a week later that it too would begin to make board diversity a focus.

Both BlackRock, which owns about 8 percent of Skechers, and T. Rowe Price Group Inc., which holds a 2.5 percent stake, declined to comment on whether they would vote in favor of the LongView proposal. Skechers didn't respond to emails and phone calls seeking comment.

This isn't the first time the shoe company, whose founders control a majority of votes through two classes of stock, has faced such a move. Last year the NYS Common Retirement Fund filed a similar motion. Skechers' board argued against the move, calling it "unnecessarily restrictive" and adding that it "would not maintain the necessary flexibility in the nominating process to ensure that the most qualified candidates are selected." Shareholders rejected the pension fund's proposal.

Cornish Hitchcock, a Washington attorney who represents the LongView funds in shareholder actions, questions the view of the Skechers board. "It seems fair to ask why a footwear company can't find a qualified female candidate," he says. "If the current board can't find a qualified female or minority candidate, what does that tell us about the competence of the board?" ●

Colby is a senior reporter at Bloomberg News in New York.

Should You Be Worried About Political Risk? (Hint: Insurers Are)

By BRANDON KOCHKODIN and SONALI BASAK

For aggregated news, data, and charts relating to European Union countries, run **{EU <GO>}**.

EVAN FREELY HAS BEEN insuring global risks for years—through the 2008 market meltdown, the 2002 crisis in Argentina, and the 1993 downturn in Venezuela.

Yet turmoil now seems to be coming at a more rapid pace than he's seen before. "I'm more concerned today about political risk than ever," says Freely, the global head of political risk and trade credit at Marsh & McLennan Cos., the world's largest insurance broker.

Rising populism in France, Germany, Denmark, and Greece has turned up the dial on his company's barometer of turmoil in the region. That and other developments are pushing the market for political risk insurance toward $10 billion in 2018, up from $8.1 billion in 2015, according to a KPMG LLP report published last year. The consulting firm says demand has been spurred by companies looking for coverage against cyberattacks and terrorist events. KPMG reckons that cybersecurity insurance will be the fastest-growing segment of the market, increasing 20 percent a year from 2015 through 2018.

Terrorist and hacking threats are compounded by changes in attitudes. Many Europeans have become averse to free trade, to immigration, and to losing national identities, according to Freely's group at Marsh & McLennan.

GEOPOLITICAL RISKS, meanwhile, could have a negative impact on investment returns, according to a majority of respondents to a February CFA Institute survey of almost 1,500 investment professionals. Among the risks they identify: the election of Donald Trump, Brexit, and the possible further fracture of the European Union.

This year many investors have thus been closely following the French presidential campaign of Marine Le Pen, a far-right candidate who's threatened to exit the euro zone and opposed EU sanctions against Russia over the Ukraine conflict as "counterproductive." In polling for the first round of elections on April 23, Le Pen has led for stretches, with support of roughly 26 percent

Four Tools for Tracking Political Risk

Calculating political risk is a qualitative exercise with a quantitative backdrop. Here's how your terminal can help provide a better picture of the risk of doing business in countries such as France and the U.K. You can also get insight into European politics and markets at **{EU <GO>}**.

1
For a financial, economic, and risk snapshot of France, go to **{COUN FR <GO>}**. Click on the Risk tab for ratings and data on the CAC 40's historical and implied volatility, both of which were running below their 52-week averages as of March 27.

2
Go to **{PRDTGVFR Index GP <GO>}** for a chart of Predata's Geopolitical Volatility index for France. Predata, a New York-based analytics startup that predicted Brexit, bases its indexes on analyses of social media postings and metadata. For more Predata benchmarks, run **{SECF PREDATA <GO>}**.

3
Immigration has been a divisive issue in the French election. In 2015 the EU's Eurostat reported that the foreign population in France was 7.9 million, or 11.9 percent of the total. The Fear Migration Index, a quantitative metric created by economists Scott Baker, Nicholas Bloom, and Steven Davis, is based on the frequency of keywords in news reports. Go to **{ALLX FEPU <GO>}** for a list of the indexes, including one for France, which has jumped 180 percent since 2014.

4
The Bank of England surveys market participants twice a year about systemic risk. In the survey covering the second half of 2016, the two risks cited as the most challenging to manage were U.K. political risk and cyberattacks. To chart the cyber risk data, run **{UKRKCYB Index GP <GO>}**. For other BOE risk series, go to **{SECF UKRK <GO>}**. —*B.K.*

of French voters. Yet when it comes to the second round of voting, a runoff scheduled for May 7, she's trailed rivals Emmanuel Macron and François Fillon in polling and betting markets.

EVEN IF LE PEN loses her bid, populism in Europe and elsewhere is here to stay, observers say. How durable is the phenomenon? "Our view is that it's structural," says Alexander Kazan, managing director for emerging markets strategy and comparative analytics at Eurasia Group, a political risk consultant. He points to a falling trust in governments and institutions, especially among younger people, as well as decreasing support for political parties. That's a view echoed by top hedge fund managers including Appaloosa Management's David Tepper and Bridgewater Associates' Ray Dalio, who, in a 61-page paper published in March, said populism could be a greater force in shaping markets over the next year than monetary or fiscal policies. By tracking the share of votes going to anti-establishment candidates in the developed world, Dalio determined that populism is at its highest levels since the 1930s.

Populist movements also seem to invite cyber support from foreign hackers, especially those based in Russia, says Raf Sanchez, an international breach response manager at Beazley Group, one of the world's largest cyber insurers. Sustained attacks in France, Italy, and the U.S. all point back to Russia. "From an anecdotal level, populism is impacting the level of cyber risk," he says. "It's almost a win-win for criminals."

A more fragmented world may increase the potential to inflict damages across borders, Sanchez adds. In effect, populism could eventually feed back on itself, setting the stage for even more shake-ups. ●

Kochkodin is a managing editor at Bloomberg News in New York. Basak covers insurers in New York.

Get Ready, Here Comes The Fundamental Review of the Trading Book

By KEVIN SINCLAIR

NOTHING IN LIFE IS certain except death and taxes ... and financial regulation, one might add in the wake of the global financial crisis.

Thousands of pages of new rules governing markets have piled up since 2008. The Dodd-Frank Act arrived in 2010. The European Market Infrastructure Regulation followed in 2012. MiFID II, the European Union's new Markets in Financial Instruments Directive, is scheduled to take effect next year. Accountants, meanwhile, have been busy preparing for the International Accounting Standards Board's IFRS 9, which covers how various instruments are reported on financial statements.

Now comes the daddy of them all, the Fundamental Review of the Trading Book (FRTB).

This global regulation is the latest iteration of the Basel Committee on Banking Supervision rules, which specify the amount of capital banks have to hold against the market risk in their trading book. It's called a review because the basic principles underlying the current rules remain. But it's fundamental because every part of the calculation is changing.

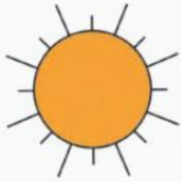
So is it a big deal? You better believe it. Consulting firm Oliver Wyman estimates that banks globally will spend a total of $5 billion getting ready for FRTB.

Not only will its implementation cost a lot, but the one certain thing about the process is that capital requirements will rise. This is going to be life-threatening for some trading desks, as heads of divisions assess whether it's economical to be in certain businesses. To have systems in place and fully tested in time, decisions need to be made now. Regulators expect banks to be ready by the end of 2018.

The current set of rules, known as Basel 2.5, allows a different capital treatment of assets in the banking book than in the trading book. That's enabled smart bankers to arbitrage the system by moving assets back and forth between the two.

There are two approaches for calculating capital requirements: the Standard Approach (SA) and the Internal Models Approach (IMA). In current practice, SA is so punitive that if a regulator failed to approve a bank's internal model, the bank would be unable to operate—and so the sanction can't be applied.

These issues are addressed under FRTB, but at a considerable cost in complexity. The new SA is carefully prescribed, using delta, gamma, and vega risk for seven risk types. For example, the list of maturity buckets required for your interest rate risk is exactly specified. If your risk system outputs a delta ladder using a different list of instruments, bad luck: You'll need to transpose your risk onto the specified set. And there are classifications. For equity risk, advanced economies are grouped together—so your system has to know that Poland isn't an advanced economy but Mexico is, for example. There are some offsets allowed within each risk type, but your delta risk-capital charge is strictly added onto your gamma risk-capital charge, which is why using the standard approach is estimated to double the capital required to be held. Interestingly, even those banks that use IMA to calculate their capital requirement will need to report what the numbers would have been if they were applying SA, so comparisons of results across banks will be much easier. ►



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{BRM <GO>} calculates both total expected shortfall and partial expected shortfall (moving variables for one risk class at a time), as required under the Fundamental Review of the Trading Book.

2) Action · 1) Proxy Table · 7) Permission · Bloomberg Risk Management

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Asset Class Exp... · Business Unit · Investment Bank ← Sell Side ← M

Stat As Noted · Breakdown By DEMOTREE · View in USD · Thousands

	Expected Shortfall		Rates ES		Credit ES		Equity ES		FX ES		Commodity ES	
	ES	1D Chg	ES	1D Chg	ES	1D Chg	ES	1D Chg	ES	1D Chg	ES	1D Chg
↑Sell Side	225,991	(19,666)	64,054	4,627	563	(11)	229,013	(20,065)	10,524	(1,017)	3,547	47
• Investment Bank	226,085	(19,667)	64,065	4,628	564	(10)	226,045	(20,056)	10,581	(1,018)	3,547	47
→ Structured Notes	381	26	119	4	0	0	77	55	314	(0)	0	0
→ Commodity	3,547	47	0	0	0	0	0	0	0	0	3,547	47
→ Currency	16	0	5	0	0	0	0	0	17	(0)	0	0
→ Equity	226,000	(19,703)	1,800	(159)	567	(10)	229,017	(20,082)	10,633	(1,017)	0	0
→ Fixed Income	64,191	4,583	64,337	4,624	23	(0)	0	0	1,219	13	0	0

Earlier this year, Bloomberg began incorporating FRTB analytics into its tools and enterprise products. So, for example, the MARS Market Risk enterprise system includes a complete SA solution for FRTB at no additional cost. For more on this, go to **{FRTB <GO>}**.

LARGER BANKS WILL BE looking to implement IMA. This approach is based on so-called expected shortfall instead of Value-at-Risk. Expected shortfall looks at all the states beyond the confidence limit to give a sense of how bad is bad. But the expected shortfall has to be computed in three different scenarios across multiple liquidity horizons and risk factor groupings by risk class, resulting in perhaps 15 or more times as many calculations as under the old rules. This is challenging in terms of "big data" questions and calculation time—can your front-office model run enough times overnight to calculate all the scenarios required? The IMA module for Bloomberg's MARS platform combines all the required analytics with the scalability needed to handle the increased volume of FRTB simulations.

Using the front-office model instead of an approximate risk department model is going to become much more common. The reason: The results have to pass both profit-and-loss attribution tests (the theoretical P&L implied by your risk system has to match the actual P&L you report) and backtesting. Fail either, and you're automatically back on the SA, without any appeal or adjudication. IMA is now done on a desk-level basis, so the first order of business for senior managers will be to group their trades into a desk structure that optimizes the capital charge across the firm. That will lead to some interesting discussions among heads of desks.

Two other wrinkles are coming. First, some pricing models for exotic trades use inputs that aren't directly observable in the market, such as correlations. These so-called non-modellable risk factors incur a punishing extra charge. And the definition of non-modellable? It's anything that doesn't trade 24 times in a year, with not more than a month between each trade. So suddenly it becomes very important to collect a record of every trade of long-dated, deep-out-of-the-money equity skew, for example.

Second, there's an additional extra charge for times of stress. Banks must go back to at least 2007 to find the most stressful 12-month period and run their model through that to calculate the extra charge.

How can you address these problems? First, you can draw on Bloomberg's historical data in your calculations. In addition, Bloomberg has created an FRTB data service in which participating banks submit the trades they've seen. Bloomberg then anonymizes and aggregates the data and makes the complete collection available to each member, so everyone benefits. The first trial of the service has just been successfully completed, and banks can sign up now, before the product launch next year.

FRTB is coming. Now's the time to get ready. ●

Sinclair is a fixed-income market specialist at Bloomberg in London.

Principle 3

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How ETFs Are Transforming Fixed Income

By RACHEL EVANS

PHOTOGRAPH BY KRISTIN WRZESNIEWSKI

LEIGHTON SHANTZ HAD barely begun managing part of the $26 billion pension fund for Texas state employees when he got a crazy idea.

The fund's floundering investment-grade bond portfolio was occupying his undivided attention, its strategy clearly broken. No matter what he tried, the securities couldn't deliver sufficient yield or liquidity. He knew he had to get rid of them; he just wasn't sure how. The time-tested rules for fixed income, which Shantz had honed for years as a managing director at Lockheed Martin Investment Management Co. and as a money manager for Tennessee's retirement system for teachers and state employees, no longer seemed to apply.

As he analyzed the broader portfolio over the summer of 2012, it dawned on him that exchange-traded funds, which were becoming increasingly popular investing tools, might prove useful. These funds needed thousands of securities just to exist. Perhaps they could take the bonds off his hands? Yet whenever ETFs came up in conversation with asset managers, they responded how a Texan might react to finding beans in his chili. "Every one of them commented on how stupid bond ETFs are," says Shantz, 51. That response didn't sit especially well with the contrarian. "I decided that either fixed-income ETFs were truly sensationally stupid—which didn't explain why their assets were growing so fast—or there was much more to it."

Shantz and his team of six began studying the funds. What they found intrigued them—so much so that in May 2013 Shantz forked over $1.35 billion of debt, or almost 20 percent of the fixed-income book, in exchange for shares in two of BlackRock's investment-grade bond ETFs. It was a bold move for the Employees Retirement System of Texas, an institution that had only one small trade in bond ETFs under its belt when Shantz joined. When he later explained the maneuver at an industry event, peers and competitors told him that he was risking his reputation and that he'd gone mad. "They were absolutely convinced that I was a fool," he says. "In a market dislocation, [they said,] these things would blow up, leaving me in a smoking heap in the ditch."

That wasn't just fear of the unknown. When the U.S. housing bubble burst in the mid-2000s, the price of some ETFs diverged sharply from the value of their underlying bonds. Given that these funds had since become more sophisticated and complex, some wondered whether they could walk through the fire of a global financial crisis. But Shantz and his portfolio have yet to find said ditch. Indeed, they're both alive and well, with the credit book ►

returning an annualized 5.3 percent over the last three years, beating its benchmark by 60 basis points. "It wasn't until it was all done that you could breathe in and go, 'Well, that was awesome,'" he says.

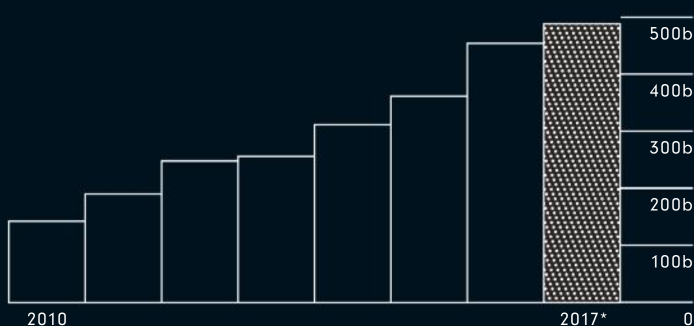
And the once-esoteric debt ETFs he used? They're colonizing swaths of investor money that bonds used to rule alone. In pension plans, endowments, and mutual funds, they've grown as liquid alternatives to cash and temporary holding pens for capital, and as trading tools. Bond ETFs around the world are swimming in more than $700 billion of cash, with about $480 billion of that in the U.S. Although those sums are a drop in the bucket compared with equity ETFs, which account for about 80 percent of the $2.8 trillion U.S. market, debt funds are growing at a faster clip than all asset classes other than commodities.

Every bond powerhouse from Pacific Investment Management Co. to DoubleLine Capital has started funds to get in on the action. More shares in a BlackRock high-yield debt ETF were traded on its busiest day last year than shares in Wal-Mart Stores, Exxon Mobil, or American International Group during the same session. By contrast, similar bonds typically trade fewer than 100 times a day.

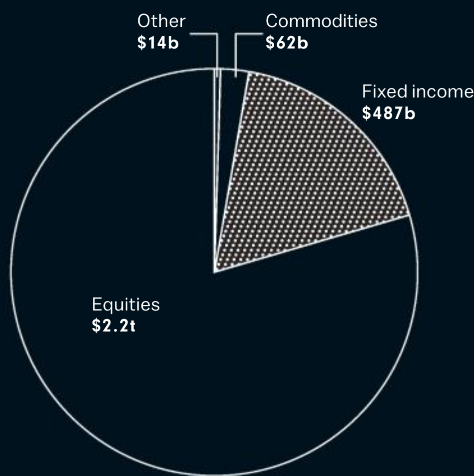
This rapid explosion of "Debt 2.0" has spurred dislocations and mutations in the market. Regulators worry that ETF brokers can't keep pace with investor appetite for the funds. Some ETFs flirt with allowing cheaper assets into their portfolios so they grow faster than their competitors. And the products are getting more and more complex. But none of this has slowed their acceptance by the financial community. "It's gone viral," Shantz says.

THE NEW BOND KINGS

Assets of U.S. fixed-income exchange-traded funds



Assets of all U.S. ETFs*



*Through March 21; Source: {ETF <GO>}

TURNING BOND ETFs into the next Grumpy Cat was far from Stephen Laipply's mind when he got the call from Texas in early 2013. Laipply had welcomed Shantz to BlackRock's San Francisco office a few weeks before and was impressed by the fund manager's thoughtful questions about ETFs. Now Shantz was back with a proposal.

A flood of easy money spilling out from the Federal Reserve had lifted company debt almost 10 percent in 2012, according to the Bloomberg Barclays US Corporate Bond Index. Investors had two ways to join the party via ETFs: They could either buy shares from existing owners on the stock market, the way they would with Apple Inc. or General Electric Co., or they could ask the ETF manager to create new shares for them. To create shares, an investor could pay in cash or "in kind," acquiring and delivering an agreed-upon smorgasbord of securities to the fund, which the fund would then absorb and use to support the issuance. A middleman, usually a bank or broker, facilitated the switch.

Shantz wanted to explore an innovative version of the second route: using his book of investment-grade debt to buy the shares. Laipply had seen this type of portfolio trade only once before, nine months earlier, when he'd swapped 4,000 bonds from a large pension fund for shares in BlackRock's flagship ETFs. He started picking through Shantz's selection of securities to determine which bonds might fit into their ETFs. "There were hundreds of bonds," Laipply says. "We went through a process of just looking at the potential candidates and seeing how they could map onto our ETFs."

Those names were then sent to BlackRock fund managers, who made the final call on whether to accept or reject the offerings. A little more than half the bonds were a match. Elated, Shantz handed over the debt in exchange for shares in two investment-grade ETFs. Just like that, step one was complete.

But for Shantz, that wasn't the end. The pension plan needed bonds, not these ETFs, and he'd settled on a mix of junk debt and Treasuries. So after lying low for three months, Shantz quietly arranged step two: selling the ETFs in the secondary market to exit his position and free up capital. By October he'd halved his exposure. By December the shares were gone. Shantz had his cash—and all without roiling the price of the ETFs. "We didn't want to show up every day looking for bids," he says. "You can go into ETFs and buy or sell exposure in size and never tip your hand to anybody."

That versatility is part of what makes ETFs an attractive proposition for money managers frustrated with the clubby world of traditional debt trading. Rules implemented after the financial crisis have crushed the banks and brokers that previously oversaw bond trades, curbing their inventories and manpower and making large trades a laborious process that nimbler competitors can exploit.

ETFs offer a speedier, cheaper alternative. The difference between the price at which traders are willing to buy or sell a mainstream junk-bond ETF is about 1 basis point, considerably less than

Fixed-income portfolio managers can use **{BSKT <GO>}** to find liquidity by exchanging bonds for ETF shares.

1) Send to SPDRs | 2) Edit Securities | 3) Export to Excel | 4) Actions

Ticker	Curr	NAV	Unit Size	MV of Unit	# Total	# Eligible	# Ineligible	MV of eligible	Max Possible	MV of Max
Fund Details						List Summary			Units	
	USD	30.68	100,000	3,068,000	1,795	1,775	20	18,865,645	6	18,408,000
	USD	57.20	100,000	5,720,000	1,795	1,639	156	17,460,082	3	17,160,000
	USD	34.10	100,000	3,410,480	1,795	1,091	704	11,417,994	3	10,231,440
	[illegible]	[illegible]	[illegible]	[illegible]	1,795	947	848	10,042,972	3	7,812,000
	USD	30.54	100,000	3,058,000	1,795	386	1,409	4,065,746	1	3,058,040

The function identifies bonds within a portfolio eligible for consideration.

11) Eligible | 13) Ineligible

21) Bonds

Group By None

Security	Security ID	Curr	Amount	BVAL Bid	Best Bid	Exp MV	Exp MV (USD)	
1. A 3 7/8 07/15/21	EJ725590 Corp	USD	10,000	103.70	103.39	10,449	10,449	
2. A 5 07/15/20	EI323266 Corp	USD	10,000	107.80	103.58	10,883	10,883	
3. AAL 3.95 11/15/25	EJ633009 Corp	USD	10,000	102.50	101.63	10,373	10,373	
4. AAL 5 1/4 01/31/21	EI546821 Corp	USD	10,000	106.75	105.00	10,722	10,722	8
5. AAL 5.9 10/01/24	EJ155768 Corp	USD	10,000	111.00	109.83	11,325	11,325	6
6. AAP 5 3/4 05/01/20	EI235442 Corp	USD	10,000	108.39	108.19	11,075	11,075	25
7. AAPL 2.45 08/04/26	QZ067731 Corp	USD	10,000	94.44	94.33	9,481	9,481	40
8. AAPL 4 1/2 02/23/36	JK138052 Corp	USD	10,000	108.00	108.86	10,845	10,845	30
9. AAPL 4 3/8 05/13/42	EK900686 Corp	USD	10,000	103.22	103.34	10,488	10,488	33
10. ABBNVX 4 3/8 05/08/42	EJ168980 Corp	USD	10,000	105.22	101.01	10,693	10,693	13
11. ABC 3 1/2 11/15/21	EI872006 Corp	USD	10,000	103.89	103.39	10,519	10,519	27
12. ABC 3.4 05/15/24	EK285647 Corp	USD	10,000	102.12	101.87	10,341	10,341	22
13. ABIBB 1 1/4 01/17/18	EJ514752 Corp	USD	10,000	99.80	99.70	10,005	10,005	30

Submit a basket of bonds to an ETF provider to negotiate the creation of ETF shares.

a spread of about 45 basis points to trade the underlying basket of bonds. The fee to create ETF shares is typically less than $1,000. In tumultuous markets, the funds are a safe house for investors, allowing them to remove baskets of bonds from their balance sheets in return for highly tradable equity instruments that they can switch back into debt when markets calm down. Others buy ETFs to earn income on capital they're waiting to allocate elsewhere. And still more follow Shantz's example and use ETFs as a tool to adjust their portfolios. "It's happening every day at some level and in some form," says Damon Walvoord, co-head of the ETF group at Susquehanna International Group LLP. "It still has a long way to go before it's an everyday tool for bond managers, but it's moving in that direction."

SUCH A DRAMATIC transformation of the debt market brings challenges as well as opportunities. Regulators fear that share creations could falter if even one or two middlemen who lead these trades quit. The Securities and Exchange Commission needs to review the role of these gatekeepers, Commissioner Kara Stein has said.

Difficulties sourcing debt to create ETF shares and managing that risk—particularly overnight—have already pushed some middlemen to stick to cash creations or hand over tricky requests to their competitors. The likes of Susquehanna have dedicated bond ETF traders, but debt and equity teams at some other shops remain divided. The creation process they administer—which is unique to ETFs as an asset class—is also fragmented. Although some bond ETFs demand a basket of securities already found in the fund, others require a portfolio of debt that's merely similar. The latter makes for a more liquid ETF that's easier to create, particularly for portfolio trades, but it also incentivizes submitting the cheapest qualifying securities to the fund. ETF managers wanting to increase their assets must walk a fine line between accepting them and diverging too far from their mandate. "We're evaluating them very closely, but the execution potentially is not as good as doing it yourself," says Gregory Peters, who runs the Prudential Total Return Bond Fund. "I'm not an ETF hater by any stretch of the imagination, but those are some of the challenges we face as an active bond manager implementing ETFs into the strategy."

Many other money managers have made their peace with debt ETFs and are weaving them deeper into their books. BlackRock gained 64 institutional users of its bond ETFs last year, while almost 70 percent of the 100 pension funds, insurers, and investment advisers surveyed for a Greenwich Associates LLC report last September said they'd increased their use of the funds over the previous three years. Investors that have already embraced portfolio trades are now utilizing ETFs in lieu of options, swaps, and futures. Instead of entering total-return swaps, they're finding similar exposure in an ETF. And rather than using credit default swaps, investors are hedging their debt holdings with help from options on ETFs. Exchange-traded funds have also allowed investors to bet against entire markets rather than short individual securities. The funds are typically cheaper and require less balance sheet space or collateral than buying a derivative.

All of that seems a world away from the stakes Shantz faced using ETFs in 2013. Then, his reputation was on the line; now he uses them almost casually to respond to the needs of his portfolio—instantly boosting exposure to a hot sector or ditching a clutch of unattractive bonds. "There are some people who aren't that bright and would rather fail unconventionally than muddle along conventionally," he says. "I guess I'm one of those." ●

Evans covers ETFs for Bloomberg News in New York.

California's Ivanpah solar thermal power system uses mirrors to direct heat at three boilers that power a turbine to generate electricity. The plant serves more than 140,000 homes.

Industry Focus

Sustainable Energy

POWERED BY
BLOOMBERG NEW ENERGY FINANCE AND
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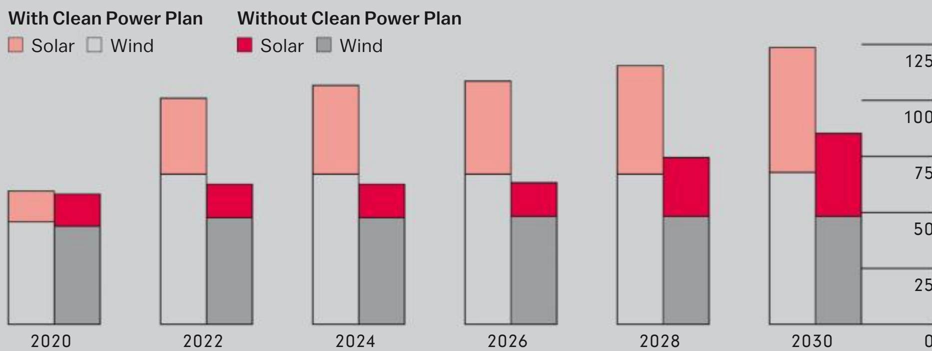
What's behind the world's slow but relentless shift toward sustainable energy? Put simply, money—and lots of it. Global spending on power generation capacity over the next 10 years may reach $4.4 trillion, with investment in new wind and solar capacity totaling as much as $1.9 trillion. In the pages ahead, Bloomberg New Energy Finance and Bloomberg Intelligence shine a light on where the smart money is headed in renewables.

1 Clean Energy Is Coming, And Washington Can't Really Stop It

■ President Trump has begun dismantling the Obama administration's plan to limit carbon emissions by power plants. He has also vowed to revive coal and roll back pollution limits on fossil fuel production and use. Those efforts—and new U.S. Environmental Protection Agency Administrator Scott Pruitt, a climate change skeptic—may slow the growth of sustainable energy, but they won't derail it. States have made lasting commitments to renewables, and clean energy is getting cheaper.

SUSTAINABLE GROWTH

Projected cumulative capacity added since 2016, in gigawatts



Source: U.S. Energy Information Administration projections

DEMAND TRUMPS POLICY: A March 28 executive order instructed the EPA to begin dismantling the Clean Power Plan, a policy that may have boosted wind and solar capacity in some regions. Yet such capacity is expected to grow even if the policy isn't implemented, according to the U.S. Energy Information Administration. (BNEF projects even higher growth without the plan than the EIA.) The Trump administration may have wide latitude to limit the policy if the courts overturn it; if not, new rule making may take years.

IT'S HARD TO FIGHT MARKET FORCES: Solar panel prices have dropped 50 percent since the end of 2013. In areas with high retail power rates, the payback time for a standard 5-kilowatt home solar system can range from 5 to 10 years after state rebates, credits, and lower equipment costs.

FIGHTING THE POWER: The existing solar investment tax credit should support new projects through the early 2020s. The Treasury Department may issue guidance this year on solar project construction milestones needed to qualify for the credit, including how long developers can take to build projects; broader tax reform, which Congress may pursue this year, could threaten the value of the credits.

THE CREDIT SCORE: Developers and equipment suppliers scored a victory in 2015 when Congress extended the wind energy production tax credit. Congress is likely to let the credit phase out through the end of 2019 on the existing schedule, but the credit may support project development beyond that.

GOING ONCE ... GOING TWICE ... Government auctions over the past few years have granted offshore wind energy leases for sites under federal jurisdiction. Nine companies qualified to bid for a lease off North Carolina recently, and more than half hadn't participated in past auctions. The auction also attracted developers with projects in other regions. New incentives to spur investment are most likely to come from the states. For more data and analysis, go to {BI <GO>}. —*Cheryl Wilson and James Evans, BI industry analysts*

2 The White House Watch

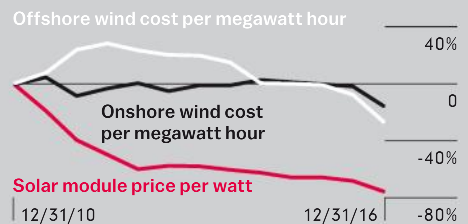
■ The Trump administration represents a stark reversal from its predecessor on energy policy, among other things. Trump's budget proposal, released in March, included a 31 percent cut in the EPA's budget, as well as reductions in spending on renewables research at the Department of Energy. Stay current with the administration's latest energy policy proposals and analyses of their impact at {BI TRMP <GO>}. —*C.W.*

3 Renewables Are *Still* Getting Cheaper

■ Solar panel costs fell to 37¢ per watt from 56¢ per watt in the last calendar year on rising supply and competition as well as technological advances. Wind energy costs are also falling and are expected to drop on consolidation, competition among turbine suppliers, and increasingly competitive auctions for new capacity. —*J.E.*

CHEAPER POWER

Change since Dec. 31, 2010, semiannually



PVinsights multimodule spot price; wind costs levelized
Sources: {BI SOLR <GO>}, Bloomberg New Energy Finance

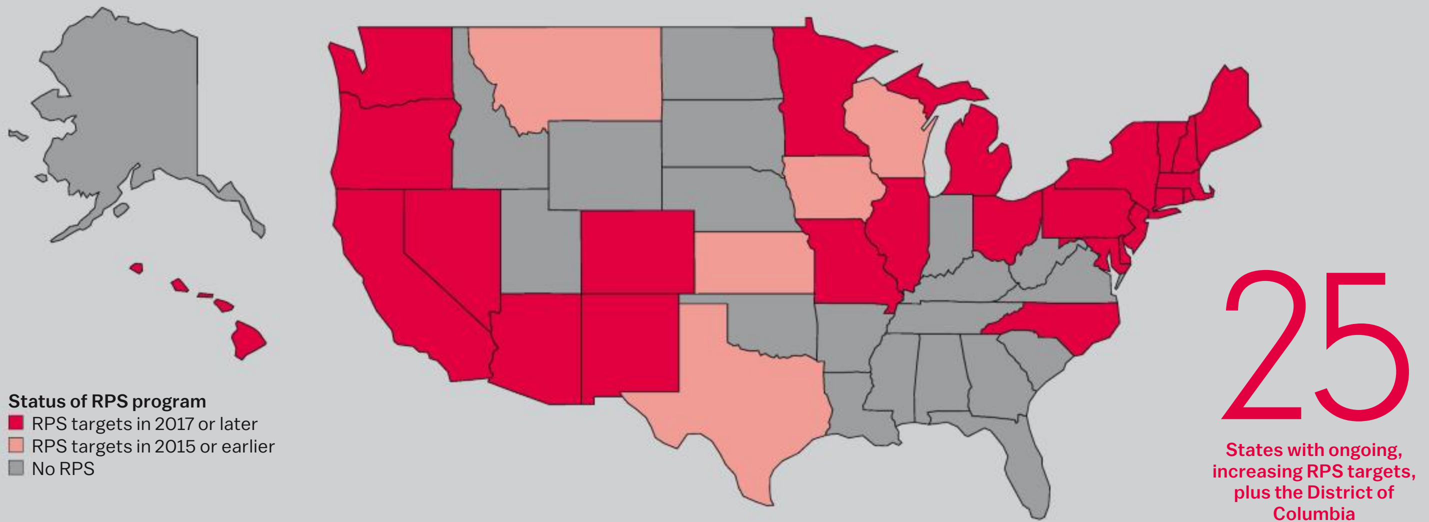
PREVIOUS SPREAD: PHOTOGRAPH BY MICHAEL FRIBERG; THIS SPREAD: ILLUSTRATION BY LA TIGRE FOR BLOOMBERG MARKETS

4 The Real Leaders of Policy Change

■ New clean energy policies are unlikely from the Trump administration or Congress—but it's a different matter at the state level, where renewable portfolio standards (RPS) and other policies will probably continue to support long-term growth, particularly for solar energy. Half the states already have such programs that mandate wind, solar, and other clean energy development. Few new RPS programs have been enacted in recent years, but some states with existing programs, including California, New York, Michigan, and Maryland, have increased and extended targets over the past two years. Other states may lag on promoting renewables with policy. —*C.W.*

A SPLIT ON ENVIRONMENTAL POLICY

Colored states have renewable portfolio standards, which mandate that utilities procure a certain share of their retail sales from clean energy sources by a given date.



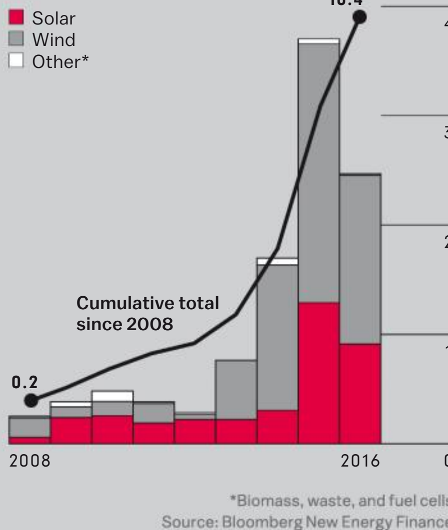
RPS rules, applicability, and compliance dates vary by state; Sources: U.S. Department of Energy, Bloomberg Intelligence

5 Companies Quicken Their Pace

■ Tax credits and volatile traditional energy prices have incentivized companies to invest in renewables. Since 2008, U.S. companies have signed agreements to purchase more than $11 billion in wind and solar power—about 11 gigawatts. That pace should increase over the next decade, with at least 50 U.S. companies signing long-term agreements to buy an additional 22GW of clean energy. The Trump administration's less ambitious stance on renewables could encourage corporations to invest more. —*Nathan Serota, clean energy analyst, Bloomberg New Energy Finance*

COMPANIES GOING GREEN

Renewable energy bought by U.S. companies, in gigawatts



*Biomass, waste, and fuel cells
Source: Bloomberg New Energy Finance

6 The Global Reach of Clean Energy

■ It's not just U.S. companies. In each of the last six years, the global clean energy industry has attracted at least a quarter of a trillion dollars in investments—including corporate outlays as well as government research and development programs, far more than fossil fuels and nuclear power. Overall investment fell 18 percent last year, to $287 billion, as China and Japan cooled, but offshore wind was a bright spot: Capital spending on those projects jumped 41 percent, to $30 billion. Learn more at **{BNEF <GO>}**. —*Ethan Zindler, head of Americas division, BNEF*

7 Market Leaders Wrestle With Some Headwinds

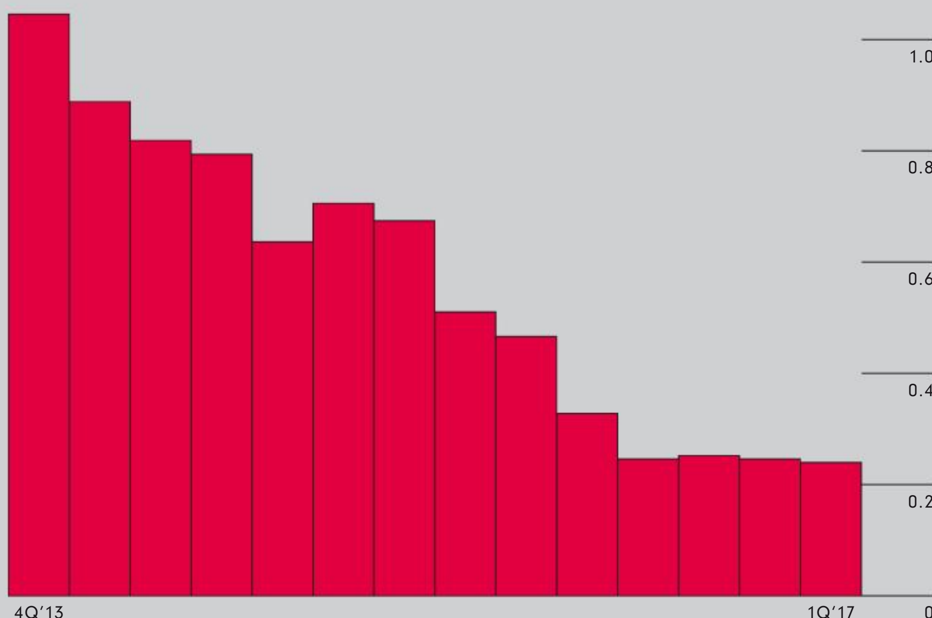
GROWTH FROM ELSEWHERE: Although demand for solar energy installations is expected to continue in 2017, growth is faltering in key markets such as China, Japan, and the U.S. Nonetheless, India, Latin America, and Southeast Asia may buoy worldwide demand. BNEF projects 78.6GW of global demand this year, up from 75GW in 2016.

A LITTLE TOO BREEZY: Wind turbine oversupply may worsen into 2017. Globally, a production capacity of about 122GW is expected for 2017, vs. estimated demand of about 59GW, according to BNEF data. This represents global capacity utilization of 48 percent in 2017, vs. 54 percent in 2015. (The North American market presents a more balanced supply-and-demand picture than Europe or China.) Requirements for locally produced equipment in markets such as Brazil may have exacerbated overcapacity.

PLENTY OF PANELS: The proliferation of solar technology is actually putting some downward pressure on solar companies themselves. Bloomberg Intelligence global solar peer group's median price-to-sales ratio has fallen to 0.2x from 0.5x since the fourth quarter of 2015, primarily because of a 52 percent drop in participant share prices. Company revenue was driven in the first half of 2016 by a looming decline in Chinese subsidies at the end of June, which helped absorb some equipment supplier oversupply. Expectations of slower global demand growth and a renewed surge in capacity additions have heightened pricing and producer margin concerns in 2017. —*J.E.*

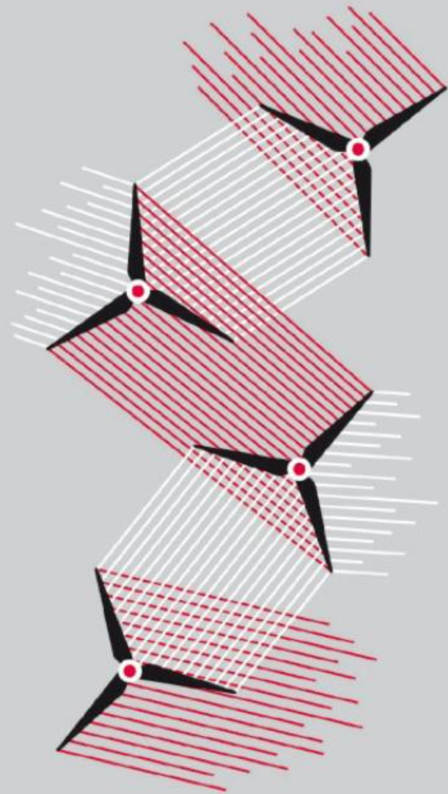
BLOOMBERG INTELLIGENCE GLOBAL LARGE SOLAR ENERGY VALUATION PEERS INDEX

Price-to-sales ratio



Sources: {BI SOLR <GO>}, company filings

8 Where to Watch For M&A



■ Wind energy equipment suppliers are consolidating horizontally among turbine manufacturers and vertically in the supply chain, including for blades. The expansion of the industry into diverse emerging markets and new product niches has added an incentive for producers to combine and add scale. These developments encourage producers with high exposure to developed markets to join suppliers that focus more on emerging markets; two examples are Siemens's merger with Gamesa and Nordex's combination with Acciona Wind. Rising competition and the need to fund expensive R&D of a new generation of offshore wind turbines, for example, have contributed to the industry's consolidation momentum. Looking ahead, the acquisition of key component suppliers may add product development and strategic positioning advantages. —*J.E.*

ILLUSTRATION BY LA TIGRE FOR BLOOMBERG MARKETS

Fixed Income spoken here.

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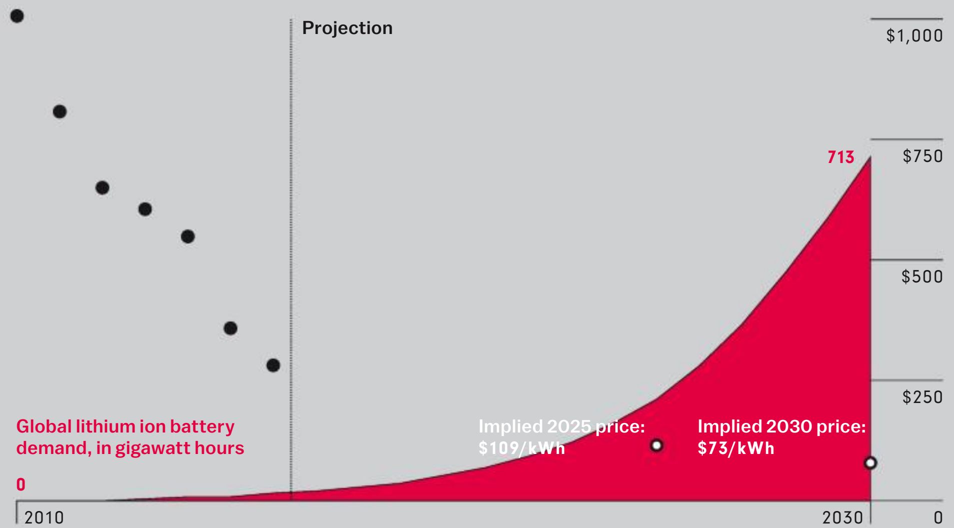
9 Autos Are Electrifying

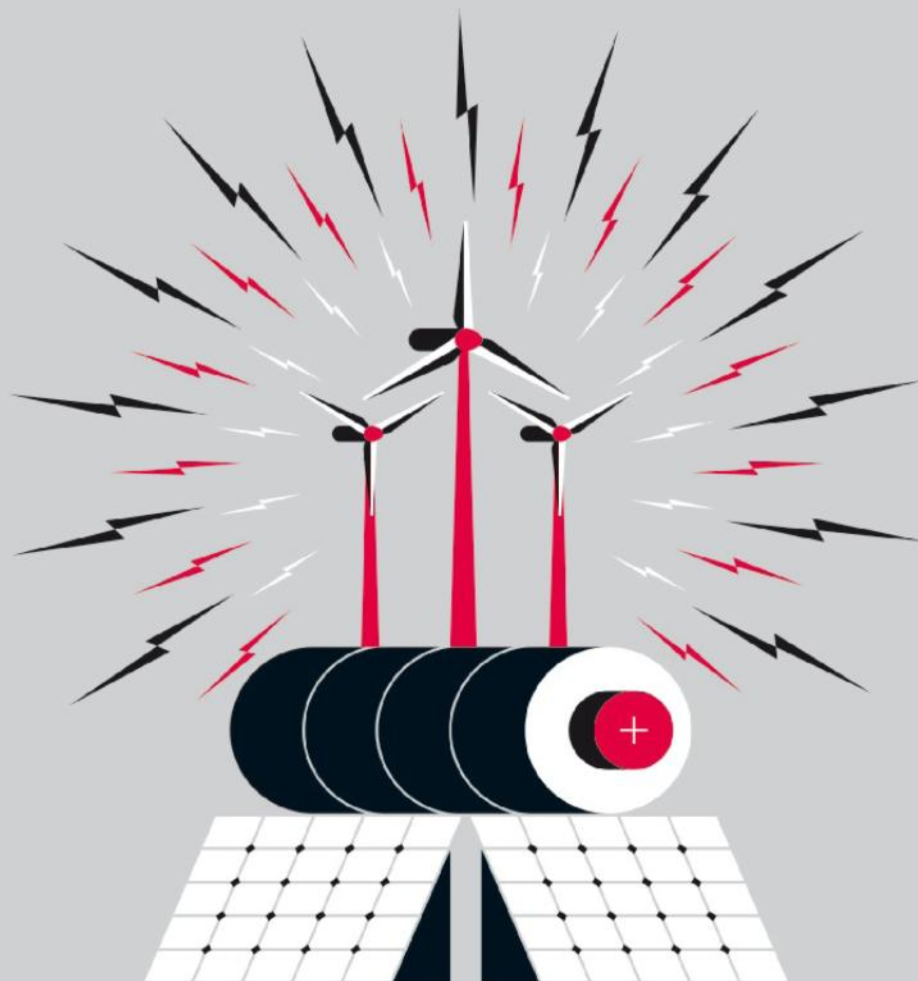
■ An increase in lithium ion battery demand is already lowering costs. By at least one measure, the price of the batteries has fallen more than 70 percent since 2010. Prices are expected to keep falling as the electric vehicle market expands. Chemistry advances, lower financing costs, better manufacturing processes, and improved supply chain management have the potential to bring more significant cost reductions by 2030. —*Claire Curry, emerging-technologies analyst, BNEF*

AN EV-FRIENDLY FORECAST

Lithium ion battery price per kilowatt hour



Price data based on surveys; prices are an average of BEV and PHEV batteries and include both cell and pack costs; lithium ion battery demand based on EV demand only. Source: Bloomberg New Energy Finance



10 The Battery Storage Revolution

■ Residential storage, in combination with solar power installations, is expected to accelerate the use of lithium ion batteries. By 2021, global lithium ion battery capacity for electric vehicles and energy-storage systems may rise 164 percent, to 273 gigawatt hours, according to BNEF data. —*J.E.*

11 Tech Wins Are Creating New Markets

■ Solar panel efficiencies are rising, reducing the sector's reliance on public subsidies. New subsidy-free plants are going online in several markets, including Chile and Southern Europe. At the same time, larger turbine sizes are boosting wind generation from new lower wind speed sites, with significant size increases in offshore wind turbines contributing to improved competitiveness. —*J.E.*

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Larry Fink: "I don't identify as powerful"

By ERIK SCHATZKER

PHOTOGRAPHS BY LARRY FINK

IS $5.1 TRILLION ENOUGH? Not if you're Larry Fink. The man who built BlackRock Inc. and helped popularize exchange-traded funds now has ambitions to turn the world's largest asset manager into something more like Google. It's all about Aladdin, the pioneering software his company developed to analyze investments. Fink sees Aladdin becoming the Android of finance and predicts technology will soon become one of the biggest of BlackRock's businesses, with revenue approaching $5 billion in five years. ¶ There were few computers on Wall Street when Fink arrived at First Boston in 1976. Hired as a bond trader, he quickly became a star in the burgeoning market for mortgage-backed securities. But eventually he made a trading error, lost too much money, and, after 12 years at the company, was forced out. At 35, determined to reboot his career, Fink co-founded an asset management unit inside Steve Schwarzman's Blackstone Group. That's how BlackRock was born. Today the company's clients include central banks, sovereign wealth funds, and pensions, plus millions of individual investors. ¶ Ask Fink anything, and he's liable to have an opinion. Fees? Coming down. Active equities? Not dead. The most impressive company? Yep, Google Inc. He's less certain about the Trump administration: "We'll know in a year or two." In this interview, Fink relives the decisive moments that shaped his company, sets a limit on his tenure as CEO, explains the reasoning—and risks—in his succession strategy, and shares his plans for a life after BlackRock. ▸

ERIK SCHATZKER: You've been described as the most powerful man on Wall Street. Are you?

LARRY FINK: I'm not on Wall Street, so the framing of the question is wrong.

ES: Let's define Wall Street in a writ-large way—finance, financial markets.

LF: That's fair. I have no objection to that phraseology. I would say I really take it as a compliment, not as a negative. We built BlackRock into an organization that is active in most of the major countries in the world. We have deep relationships and many conversations with political and business leaders. We do that to help guide our clients in probably one of the most arduous tasks they have during their lifetime, and that is to build wealth so they can live in retirement with dignity. We have lost that conversation. The conversation more than ever before is about the trade, fast money, the moment, the short-termism of the world.

I don't think of us as powerful. I don't identify as powerful. But I do identify myself as working as hard as anyone I know in this long-term quest of trying to build our relationships and outcomes for our clients, and hopefully that leads to a great position for BlackRock. I don't know if I answered your question specifically, because I don't think of myself as powerful. I think of myself as the CEO of the largest asset management company in the world, and that has a lot of attendant responsibilities.

ES: BlackRock began 29 years ago with $0. Today it has more than $5 trillion. Tell me about that evolution.

LF: Let me start off by saying that evolution has been fun. It hasn't been accidental. I think that evolution actually began the first day we started the organization. A quarter of the founders came from risk management—which was very unusual, especially at that time. We used risk management as a mechanism to understand fixed income. We were entirely a fixed-income manager, with a concentration in mortgages. We started in that narrow niche; I believed that was how to grow. We did not want to be a full-service organization. What people don't know is that we were probably the fastest-growing manager ever from scratch. The growth from zero assets in 1988? That was all organic and something we were very proud of. So we didn't rush into an IPO.

ES: Which finally came in 1999. Why even go public at all?

LF: Because I believed we needed to expand. And ultimately I thought we could use our currency for acquisitions—if we did well. But the IPO in '99 was not a well-sought-after IPO. It was as close to a failure as any IPO during the dot-com era. Technology companies back then saw a 40 to 50 percent boost the first day. Our stock went public at the low end of the range, not at the high end, and it moved up an eighth of a point. It was just the most boring IPO ever.

ES: What did you get out of it?

LF: Becoming a public firm allowed me to see my competitors firsthand, because they were my investors, too. And it was very clear to me that we had a platform that was very valuable—and yet I couldn't sell it at all. I was an absolute failure in terms of convincing people that bonds should trade at a higher p-e than equities; they have less volatility, and with less volatility they should trade at a higher p-e. That's just math, but in the fast and furious dot-com era, nobody cared. They cared about growth.

ES: When did you realize BlackRock was destined to become more than just a fixed-income player?

LF: Around 2002 it became very clear to me. That's when we began thinking, Could we do a merger? And, importantly, Do we have the DNA to do a merger? In 2003 I started really looking at different opportunities and went to see Bob Benmosche, who was the CEO of MetLife, about acquiring State Street Research, which had a great, long legacy and managed the Harvard endowment. Bob called me a few months later and said, "You have 30 days to buy it. If we can't come to terms, I'm going to put it up for auction." That acquisition cost about $375 million, which at that time was pretty large, and it taught us we had the ability to integrate another asset manager onto our platform.

ES: Let's talk about that platform, Aladdin, for a moment. When did you first appreciate what you had?

LF: If you go back to 1994, when GE hired us to liquidate Kidder, Peabody & Co., that was the first time our technology platform was used for outside purposes—for our client's needs, not our internal portfolio. In 1997 we were hired for Freddie Mac, and that's when we renamed the software Aladdin. On the day of closing State Street, we turned off the MetLife switch, turned on the Aladdin switch, and everything was unified on one platform. That was pretty eye-opening, that we had that technology.

ES: Was that also the key to the Merrill Lynch Investment Managers deal in 2006?

LF: Well, the other big issue was, before that first acquisition, we were a pretty arrogant firm. We were so proud of what we did with our organic growth. We believed we were smarter than everybody. When we acquired State Street Research, we saw that there were some smart people there, too. We found out that we did not have as strong a platform as we thought. This is why I believe firms should do mergers, because they really force you to look at your team and, if you're very open, the team you're bringing on board. Probably the most important thing we learned is that you should accept some of the foundational cultures of the firm you acquire. What BlackRock became after that merger was a different firm. Our principles never changed—you never change your principles—but the legacies of your firm are different.

ES: Is all of that arrogance gone?

LF: I would say a great deal of it. You know, when you do these transactions—and this is one thing the asset management industry is pretty weak at—it forces you to be inclusive, to identify the characteristics of these people. Most of the "assets" in asset management are the human beings you're acquiring anyway. So right after we closed the State Street Research transaction in 2005, we started having conversations with Morgan Stanley, and ultimately, eight or nine months later, we started having a conversation with Merrill Lynch. The conversations with Morgan Stanley never came to fruition, but seven or eight firms contacted us.

ES: What other deals didn't make it over the finish line?

LF: We had AIG, Mellon, Morgan Stanley. There's a little cartoon in my conference room that's the deals we walked away from, all in a concentrated period of about nine months.

ES: They wanted to make BlackRock part of their asset management units?

LF: Or we would absorb something. People were showing us all the different combinations. You can't believe some of the conversations. Most of it maybe lasted a week or two weeks, and

“So much of the anger in this past election is based on people’s fear of their future”

then I’d kill it. There was probably not a month that went by that people weren’t contacting us. It was a pretty interesting time.

ES: The financial industry has undergone tremendous change since you walked in the door at First Boston in 1976. What do you think it will look like 20 years from now?

LF: I think the industry has lost sight of what our responsibilities are. And I think through digitization and technology, it’s going to be reshaped. We need to help elevate this whole concept of financial literacy. It’s shocking to me how many people focus on their health, but so little on their money, on affording longevity and dignity. So we need to help families—especially in this country, as we navigate away from defined benefits and contributions. We have to be leading that effort.

ES: You’ve been at the center of two great revolutions in finance: the syndication of asset-backed risk through the mortgage bond and the shift from actively managed assets to passive vehicles, specifically ETFs. What’s next?

LF: Erik, I wasn’t smart enough when I was actively involved in those two things to know it was a revolution. When you talk about revolutions, it’s always with the benefit of hindsight. When you’re in the moment, you’re working toward an objective. Even back in the infancy of the mortgage business and asset-based finance, it was very clear we were changing finance, but I don’t think we were very clear on where this was going to go and how far this was going to get. When we bought BGI [Barclays Global Investors], iShares had $385 billion in assets; today iShares has $1.3 trillion. If you’d asked me if I had expected that when I acquired BGI in 2009, I would have said no. But if you’d asked if I’d known ETFs would change the investment management business, yes. In 2007 we did a strategy piece at BlackRock looking at ETFs and concluded we missed it. The only way we were going to be able to get into it was through an acquisition.

ES: When you’re deciding how the company needs to evolve, what informs your thinking?

LF: We don’t spend enough time as a society understanding how bad the retirement system is in this country. I think so much of the anger in this past election is based on people’s fear of their future. People are frightened; they know they haven’t saved enough money for retirement. They’re going to be highly dependent on Social Security—which, if that’s the only source of income, means living in poverty. In addition, the bigger problem many of our cities and states are facing is that their retirement plans are defined-benefit plans. Their liabilities are so large, and increasing, especially as we transform deadly diseases into chronic ones. That translates into greater longevity and—you’re witnessing it every day as an American—underspending on our infrastructure. It’s a direct cause of the financial positions of state and local governments. And it’s only going to get worse.

I believe the recognition of our precarious retirement position is one of the most underappreciated future crises in this country. I think this crisis is going to be much bigger than health care. Health care is immediate. If you don’t have proper health care, it is today’s problem. But as you know—investing, the whole concept of compounding—if you’re not building your nest egg year after year after year, you’re not going to have enough savings to retire with dignity.

ES: You’ve been warning for several years of the toxic implications of workplace automation, growing inequality, and polarizing politics. It’s all there in your letters to shareholders. Here we are. Have we arrived at the reality you foresaw?

LF: I don’t know what reality is. All I know is any time I spend time with people and talk about technology, I see even greater implications of what it may do for future jobs. It’s very clear in the rise of global populism; we have not truly identified the bulk reason for this dissatisfaction, this stagnation. It’s chiefly a technological change and a lack of education and retraining. It’s clear that wages have been stagnant in the lower echelons and in some areas of the middle class for some time. It is true that many people who are “employed” are employed at two-thirds, or half, of what their wages were five-plus years ago. Their jobs were lost. All the academic studies show these jobs were lost to some parts of the emerging world, but the major reason was the reduction of human input in the manufacturing process. I was with the CEO of a large shoe company recently, and I learned only two ►

processes of shoe manufacturing now have human input. Do you know what those are? Putting laces on and putting shoes in a box. But even in manufacturing, I'm learning there are many jobs that can't be filled. Why? Because some of these manufacturing jobs still require some level of technological knowledge.

ES: I'm having trouble divining what you think of the state of the world. Are these dark times?

LF: No, the opportunities are going to be great. But there are greater opportunities for innovative societies. So, more in the U.S.—we are the most innovative society—than elsewhere. We're in a period of time where technology is displacing some, advancing others.

You've seen real good job growth in cities. Cities are where immigrants move to, and worldwide, cities are where the educated generally go. So what I'm saying about the United States is true in China as well as the U.K.: job growth in cities, job loss in the rural areas. We have to have government policies to help the families who are being displaced. And maybe it's corporate responsibility, partially, to help them be retooled.

We have to have an understanding of this process. We can't turn our backs on it. I actually believe there are many good things going on. Right now the mood is not about focusing on the good things. I do believe if the Trump administration is successful in focusing on infrastructure, if we are successful in bringing some jobs back or retaining some jobs, the combination of all this, plus a whole emphasis on job training—

ES: There are a lot of "ifs" there. How much confidence do you have that this administration will be successful?

LF: Our job is to be guiding any administration, and our job is to be working with this administration to try to be as successful as possible.

ES: Will the Trump presidency be good or bad for the economy?

LF: The marketplace is saying it's good. We will know in a year or two—certainly in four years.

ES: In the seven years since BlackRock bought BGI from Barclays, assets in actively managed equities have shrunk more than 20 percent. Why are you still a believer in that business?

LF: During that period of time, we had coordinated central bank behaviors and great correlations. It's my belief that we'll have less correlations, different central bank behaviors. There is a higher probability that some in active management will be able to prove that their stock selection, their asset allocation can earn an excess return after fees. But I do subscribe to the belief that investing is no different from baseball.

ES: By which you mean?

LF: Let's say you have a thousand baseball players. The majority hit .250. We'll have 45 who hit .300, and we'll have 10 to 15 who can hit consistently over .300. I don't believe investing is much different, and I believe the trend will still be toward beta, factors, smart beta.

One thing you have to understand related to the growth of ETFs is that a large component of the growth is not people seeking beta; it's active managers navigating beta for alpha. They're doing asset allocation. It's cheaper; it's more efficient; you have less idiosyncratic risk than in any one stock. So I actually believe one of the unknown secrets about the growth of ETFs is that they're heavily used by active managers.

I do believe, because of our positioning and the information flow that we have, that we can be one of those .300 hitters. Despite how dark people are painting active equities, we have pockets that have done really well.

ES: Long term, what part of that business doesn't make sense?

LF: Well, we'll see in two or three years how well we're doing.

ES: What about the economics? If an iShares ETF gives me exposure to the S&P 500 for 4 basis points and investment grade credit for 5 basis points, how much can you realistically charge for active management?

LF: You can't charge more than your excess performance. So let's be clear: Depending on where rates are going, and if indeed less correlation will prove more fruitful for active management, you'll be able to charge more than the index platform. But do I believe active fees will continue to go down? Yes. I think that headwind is still in front of the industry, that it will continue to affect hedge funds, and that it may start impacting private equity.

ES: In other words, if you can't generate alpha, you're done for?

LF: You're not living up to the requirements that the clients are asking of you as a fiduciary. The clients are saying, "We will pay you the fees with the idea that you will earn in excess after my fees above the targeted index." If you can't meet that over a period of time, you're not serving your clients well. There are some very fine equity managers that no one talks about. I can think of three or four equity managers who have done well over a 10-, 15-, 20-year horizon. And I could spend a lot of time talking about how bad many managers have done. It gets back to my .300 hitter analogy.

ES: Tell me more about your recent shake-up in active equities. You merged some funds, even fired some people. Where do you think the world of equities is going?

LF: This wasn't about machines replacing human beings. Some of our large-cap products, our core alpha products, were underperforming, but our quant equity teams were doing quite well. They were looking at different insights. We wanted a much more holistic platform where the fundamental teams can work with the model people. They see things that the model people do not see, and more importantly we wanted to have the output of the models going to some of the fundamental people. Cross-fertilization, no different from what we do in fixed income. The net result of that: Some people are no longer going to be part of BlackRock. But a year from now, we'll have just as many people in equities as we do now, they'll just have different skill sets. It'll be more data analysis, there will be more model producers. We are not saying active is dead. We think active can be more alive, just using different insights.

ES: How big a role will machines end up playing?

LF: We have a venture right now in AI [artificial intelligence], a whole group of people working on developing computer-based investing. And that's truly a computer saying, "Buy this. Sell that." We're not there yet. We have a bunch of data scientists working with another company on computer-based learning, but there's no true AI yet in investing. We'll see where that goes.

ES: What conclusions have you drawn? Is there anything machines can do better than humans?

LF: In theory, yes. Humans have subconscious biases. We all do. In theory a computer is not going to have those subconscious biases; it can assess all this information very rapidly, come up

with a theme, and invest. But to do real AI, a computer has to constantly learn and update and grow and triangulate and all that. Very high-level stuff.

ES: Who's the other company you're working with?

LF: I can't say. We have a confidentiality agreement.

ES: How long before you know if it works?

LF: We are probably going to seed an investment in June. Two firms. So we're going to put real money there.

ES: Do you have any reservations about putting your own money to work in something like that?

LF: No, I'd be happy to. But if the firm's capital wants to be there, I can't invest my own money. That'd be harming my shareholders. There are many things I would love to invest in but am not allowed to.

ES: Speaking of outside investments, weren't you involved with a rock band for a few years?

LF: I'm a big music fan, but I also like helping young people start their own careers. Around 2000 I met a young man, James Diener, who was working at Columbia Records. He showed me a business plan for an independent record label and introduced me to his two partners. It reminded me of BlackRock–young, talented people who wanted to start their own thing. I was intrigued and enthusiastic enough about this person and his business model that we raised money. I was the lead investor in Octone Records. The first artist we signed was a band called Kara's Flowers. We worked with them and changed their name to Maroon 5. We were the label Maroon 5 used for, I think, their first five albums. We made a lot of money on that record company—in a depression! Think about what happened to the record industry at that time. It was the age of pirating and YouTube. People got their music from different sources, they didn't buy it on CDs.

ES: We're seeing a similar kind of disruption in the financial industry now. Henderson is buying Janus. Standard Life is buying Aberdeen. Your competitors seem to agree that bigger is better. Will that consolidation continue?

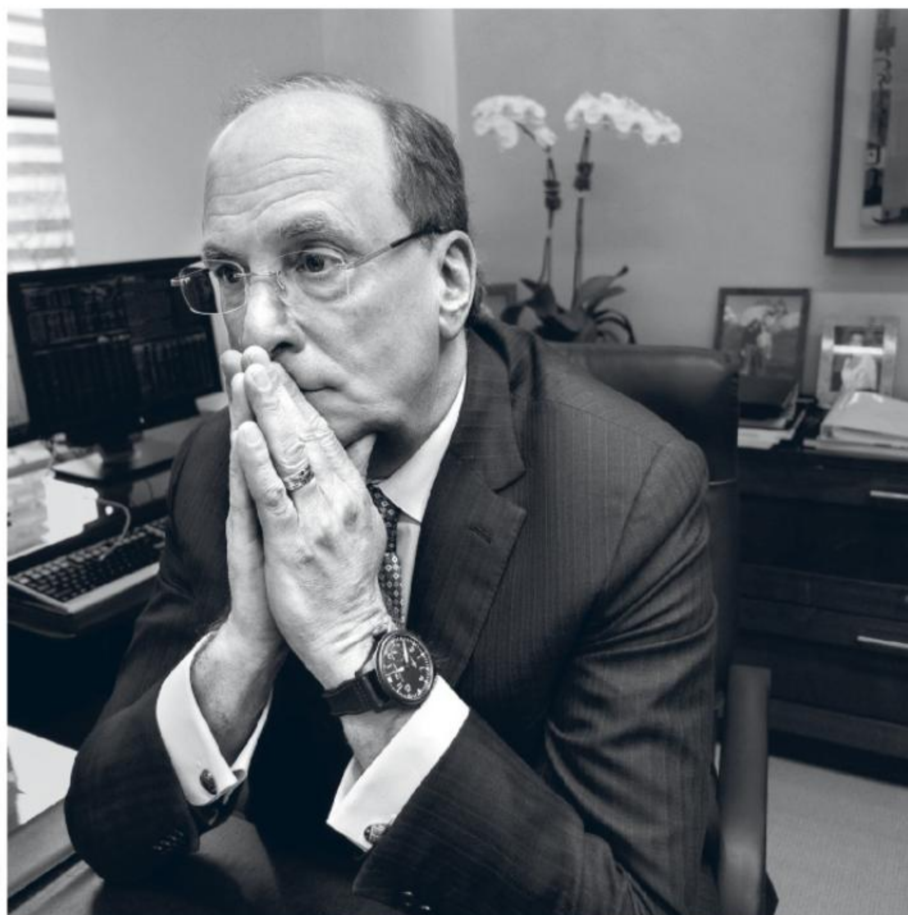
LF: I would think so. I am leery of any mergers that are done for cost reductions, though. It's hard to merge cultures at the same time you're eliminating people and making cost reductions. That's a very difficult combination.

ES: Are you saying it's all going to end in tears?

LF: A one-time cost reduction doesn't change trends. There has to be more than just being larger.

ES: Is there a limit to BlackRock's size?

LF: Sure. If we don't do our job for our clients, that will put a limit on it. It comes down to clients. If we don't continue to educate, if we don't continue to reinforce to our employees that you have to be students of the world, students of the market, that you have to be relevant every day, we're going to lose that connection with our clients. The limit is how well we continue to educate. If we don't continue to educate our employees so they can be in front of our clients and teaching our clients every day, if we're not providing them with that leadership in information, then someone else will be. ►



“The first artist we signed was a band called Kara’s Flowers. We worked with them and changed their name to Maroon 5”

ES: So you know you’re too big when you’re …?

LF: Failing to meet the needs of your clients. The one thing I’m most proud of: When we did the BGI merger, 80 percent of our clients had one [BlackRock] product; I think that today 40 percent of our clients have eight products.

ES: You know I’m thinking much more prosaically. You’re north of $5 trillion in assets today. Is there any reason BlackRock can’t be a $10 trillion firm?

LF: If we continue to build the mindshare we have with our clients, if we continue to be that trusted partner, if we continue to educate our employee base, if we continue to live the culture that we talk about, whether it’s $10 trillion or $8 trillion or $12 trillion, we can get there. Right now I don’t sense any pressure from our clients related to our size. If anything, scale has become a greater necessity—and for us a greater advantage—than it’s ever been. We’re building deeper relationships and clients are looking to us for more things.

ES: On a relative basis, BlackRock is still a small player in many classes of alternatives. Do you need to be bigger in credit opportunities, real estate, infrastructure?

LF: Yes, and this is an area we’re going to be focusing on.

ES: How do you get there? How do you achieve scale?

LF: Blocking and tackling. We have scale in some of our products already. We’re developing scale in infrastructure, with $14 billion [in assets]. Our objective in infrastructure is to be $30 to $40 billion over the course of time. We have a great team. In the funds of funds for private equity, in the funds of funds for hedge funds, we’re one of the top.

ES: You’ve never been afraid to make an acquisition to gain scale or to expand in an industry. Why not do that in alternatives?

LF: Because you have such “key man” risk in alternatives, and you have to pay a premium. It’s far easier for me to lift out teams or bring up one individual. I don’t see us making a large acquisition in the alt space. There’s not a month that goes by when one of the alt managers or their investment bank doesn’t come knocking on the door to ask if we’d be interested. It’s very hard for me, having to buy a firm twice, because you pay a price and then you pay to lock in the people. That’s not a good plan. Some of these are great, idiosyncratic firms, but they’re based on one or two or five personalities. It’s very hard to buy those organizations. It’s best to systematically build your own team.

ES: So to be clear, the answer to the question is … never?

LF: Is doubtful. “Never” is—there’s too much finality to that. It is not an emphasis at all at this time. Where we’re going to do acquisitions is in technology, to be adding more to this whole foundation. Take Aladdin for wealth management. We can now do Aladdin for every small account, and we have signed up four different [wealth-management] platforms to put Aladdin onto their desktops.

ES: Technology generates how much of your revenue now?

LF: Seven percent.

ES: Where will it be 10 years from now?

LF: Let’s say five years from now. This is a reach, a giant reach, but if we do our job right, 30 percent of our revenue could be from that platform.

ES: That’s between Aladdin in its various forms, FutureAdvisor, iCapital, and whatever else you buy?

LF: Yes, I’m spending a great deal of time on that right now. I’m looking at acquisitions.

ES: Do your competitors appreciate this?

LF: If they used Aladdin, they’d certainly appreciate it. Some of our asset management competitors are using Aladdin.

ES: You make it sound like a Trojan horse.

LF: No, it’s how people frame it. I look at everything as cooperation now. We do so much with so many people. We have a great relationship with JPMorgan [Chase]. JPMorgan was just awarded our big custodial platform, and yet we compete with J.P. Morgan Asset Management. So I look at all of that as—you know what?—it’s just the ecosystem we live in.

ES: What company impresses you the most?

LF: Google. I think they are maniacal. I don’t mean that in a negative way, but there’s intensity in terms of trying to adapt and change. I am very impressed with what they have done in autonomous vehicles, in AI with DeepMind. I think they stay in

front of their competitors continually and adapt and refine their algorithms for having better and better searches. You watch what the leadership team has done there, and it's really, really impressive. It's not a fluke. Today, when you meet the leadership team, they're just as intense as they were 20 years ago.

ES: Is there someone, or was there someone, on whom you model yourself as a leader?

LF: No.

ES: Larry's own brand of leadership?

LF: I don't call it that, but yeah. People ask me who inspired me. I say Lee Kuan Yew and Phil Jackson. Why those two? In 1965, Lee Kuan Yew took this mosquito-infested port that the English and then the Malays ravaged, and look at that society today—Singapore is really impressive.

ES: And Phil Jackson?

LF: The key to success in basketball is the organization, not one individual. And winning in the NBA is all team. It is just as much defense as offense. It's one thing to have some hedonistic phenoms who have this extraordinary year and win the championship. Jackson's done it 11 times. To do that every year, rallying athletes to play as a team, to me that's leadership.

ES: You're 64. How much longer do you plan on being CEO?

LF: I'm not planning. I want to be here, if my health and energy allow me to do the job well. You're talking to someone who travels two weeks a month. Hopefully I will know when I'm not doing it well; that will be a key. The other part of the consideration is when I believe there's someone capable of doing the job better than I can. And that could be in a year or in five years. I don't think I'm doing the job in 10 years. But the one thing I know: I don't want to go home. I don't think my wife wants me to go home.

ES: Can you imagine what it would be like to be retired?

LF: I don't think I'll ever be retired. Hopefully, I'm active in philanthropy, and I would probably go on a bunch of boards if asked. I think I could provide some advice.

ES: When the time comes to let somebody else be CEO, how about staying on as chairman?

LF: That would be a disaster.

ES: Why?

LF: Because it's unfair. When I leave, I'm going to leave. I only know of a few examples where the CEO stayed on as chairman. It doesn't work. Leave. Make sure that when you leave, you're there to provide advice when asked, but leave and allow the new leadership to create their identity.

ES: You have no designated successor or heir apparent. Why?

LF: Because why would we? Why would we do that and close optionality? If we did that, some members of our leadership team would not be growing as fast as they're growing. The beauty of what we have now is seven or eight people who are fully in the mix.

ES: Any one of whom could end up running the company?

LF: I would say that depends on who is designated the CEO and who is chairman. I believe great leadership is about the mix of people. When I mark-to-market my strengths and weaknesses, it's clear I'm not a person who can operate a division day to day with scale. I'm a more big-picture guy. I'm much better at strategy than most people, and so we have a group of leaders below me with greater abilities as scale operators.

ES: With the same vision?

LF: That may not be the case. Whoever is the next leader, we'll have to see if that person is capable of doing the strategy, as I have done, or maybe the president is the strategy person and the CEO is a great scale operator. I don't believe it's about one person; it's about the success of the people around me, and their responsibilities, and how they're contributing. I don't believe it's about one magical person. I've seen organizations that have that one magical person, and when that one person leaves, it all becomes a mess.

ES: Of these seven or eight people, only one will be "king," so to speak. Why should they all stay here and play this *Game of Thrones*?

LF: I would not call it a *Game of Thrones*. It's not *Leave It to Beaver*, but it's a very cohesive, collaborative group.

ES: So you don't think there will be an exodus of talent like there was at GE, when all of those great managers went off and ran Boeing or Home Depot?

LF: That may be an outcome, but I don't think so. I have heard already from two or three of those [seven or eight] people, and if one of them gets the job, the others will stay. They've already made personal handshakes.

ES: Commitments to you?

LF: No, to each other.

ES: What about other jobs you've considered taking?

LF: I have no intention of leaving. There was a narrative about me leaving BlackRock for Washington if the other political party won. I would have still stayed here. I have—without using the word "powerful"—a great job. I really enjoy where we are.

ES: If you never end up serving in government, will that be a disappointment?

LF: No, I don't think so.

ES: Why? What conclusions did you draw for yourself in those considerations?

LF: I'm a pretty private person. And there's an unfortunate part about being in Washington today, with all the media and the minutiae that's being focused on—whether the eyebrow was twitching the wrong way or not. It just doesn't interest me. I'm much more interested in working behind the scenes. I believe I've played that role pretty well, and I believe I'm playing that role probably even more today. Having the singularity of a job in Washington, in different circumstances or during a crisis, would be of interest. But getting put under a microscope daily is not appealing. What's appealing today is whether I have a conversation about helping our country, or the conversations I'm having with other countries. In the last few weeks I've had meetings with four leaders of state.

ES: That's a role you enjoy?

LF: Well, I'm doing it with the idea that we could have an impact on their financial situation and create better prosperity for their citizens. I do believe globalization has been one of humanity's greatest achievements. In these last 30 years, we've lifted more humans to a middle-class level than at any time in human existence. What we have forgotten, and President Trump and Brexit have identified, is the number of people left behind.

ES: So you schedule meetings with world leaders and express a genuine interest in improving their financial markets, growing their economies, and creating better outcomes. Why? ▶

LF: Whether you're selling cars or banking services, you're doing it with the idea that you're helping a society. One of the great foundations that created the U.S. was the growth of our capital markets. The main reason we were able to get out of the financial crisis far better than Europe and Japan was that foundation. As banks pulled back, companies were able to finance in the capital markets. That was not the case in Europe. The need to grow capital markets is imperative.

ES: Are U.S. capital markets healthy? More and more money is being raised and invested privately.

LF: There has been a great change in the psychology of going public. Just like how it's not appealing to be in Washington because of the public scrutiny, I believe many people are saying, "I'm going to stay private longer."

ES: That doesn't sound good for capital markets.

LF: It's not; it's one of the weaknesses. And this is one of the reasons why we need to be applauding our public companies. There's a war for great talent. We need to make sure that our best CEOs are paid well. We need to be making sure our public companies have the ability to attract the best and the brightest so they can compete in a global world where talent is a rare commodity. If we make it so caustic to be a public company, there will be more and more companies remaining private.

ES: Is there more to governance than shareholder value?

LF: We have asked CEOs and their boards to focus on long-term strategy, to tell us about how they are going to be navigating as part of the community and to share their societal impact.

ES: One of your messages is that companies need to be more sensitive to the environment. Why is that such a concern for you?

LF: My mother was allergic to cats and dogs, so to have pets as a kid I had to do something unusual. Growing up in the San Fernando Valley, there was a creek and an open field and a lot of snakes. I used to collect snakes there as well as in the Santa Monica Mountains and the Mojave Desert. It was a real passion, to be outdoors and to see all these different animals. I remember going to the desert and seeing thousands of desert tortoises. Today they're pretty rare. And I used to go to these fields in Palm Springs and see desert iguanas. I don't know if you can even find them in that area anymore. It's really remarkable how much habitat has been destroyed. Climate change is definitely happening. You see that everywhere.

ES: Are companies listening to BlackRock about the environment, about long-term strategy? Or are they saying, "There's that guy who keeps talking about short-termism and tells us not to buy back our stock."

LF: No, I don't tell them not to buy back their stock. That is wrong. I am not against buybacks. I am against a buyback if you have a better opportunity to invest in your future, because the return for a long-term shareholder is going to be far better than buying back your stock.

ES: BlackRock says it's in the business of building better financial futures. If you generate alpha for clients or beta at a lower cost, terrific. But there's more to running an asset manager, no?

LF: We have to be part of the narrative, yes. Before 2008 the buy side, the asset management industry, had no voice. We wanted to be silent; in fact, clients wanted us to be silent. The banks had the voice—in Washington, in Frankfurt, in Brussels. They played such a powerful role, and we believed, maybe mistakenly, that they had a responsibility to make the market fluid. We learned that they were not speaking on our behalf, so we had to generate a voice—and our voice has become louder. I don't mean louder because we want to be loud; louder because we have an enormous responsibility. Today, clients recognize that our voices are important, our voices are necessary, and importantly now, especially in this world that's evolving and changing—whether that's good or bad, depending on your political view—we have to be a part of that reshaping.

ES: Does this shift in the balance of power, from the sell-side precrisis to the buy-side postcrisis, continue?

LF: I would say that's a little overblown. Jamie Dimon's voice is just as loud today as it was precrisis. I think the role that Goldman Sachs plays in the capital markets is as strong today as it was eight years ago. I think business leaders listen to Lloyd [Blankfein], listened to Gary [Cohn] before he went to government. So I think that's a little overblown, but I believe there is a need for both viewpoints, and the buy side now understands that it needs to have a voice. I believe we at BlackRock have played that role; Vanguard has played that role; Pimco continues to play a large role. But very few on the buy side really have a voice.

ES: Do you want to hear more from Fidelity, from Wamco [Western Asset Management Co.]?

LF: That's not my role.

ES: Would it help you?

LF: No, I think it would help them. I actually believe many of these people have something to say.

ES: Let's take a moment to reflect on all the various things you've achieved: You built this firm, arguably the most successful firm in the history of asset management; you're one of New York's most generous philanthropists; you're a husband, father, grandfather. What's left? Is there anything more you want to be able to say that you've done?

LF: I'm not looking for any more check marks, because I'm not a check-mark person. But if I had one more check mark, it's this: When I'm not here, the firm's better without me. That would be the ultimate check mark—not that I failed, but that the firm goes to another level of strength.

ES: What about issues on a personal level? What do the philanthropies you've chosen to support with your time and your money say about you?

LF: I've always believed in giving back. I've been really fortunate—way beyond my wildest dreams. My wife and I never dreamed of the financial wealth that we've created. I had to sell my car in grad school, OK?

ES: What did you get for it?

LF: A few hundred dollars, enough for a month of pizza or whatever. You know what the beauty of it was? We never had any aspiration. Growing up where we grew up, you never had aspirations.

ES: On a personal level, what's important?

LF: Oh, this sounds trite, but it's really important for me to be perceived as a good human being, a caring individual who always comes across as real and unpretentious. And one thing I tell everybody—you may not be able to print this—is that I'm the same turd I was 30 years ago, and I really am proud of that. ●

Schatzker is an editor-at-large for Bloomberg TV in New York.

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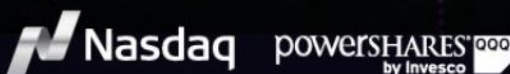

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Indonesia's reform-minded finance minister, Sri Mulyani Indrawati, gets a second chance to recharge

'Are We There Yet?'

Southeast Asia's largest economy

By ENDA CURRAN, YUDITH HO, and KARLIS SALNA

PHOTOGRAPH BY DIMAS ADRIAN

THE MOOD at the meeting should have been tense. Seventy bank analysts gathered in January at the Indonesian Ministry of Finance, a sprawling stylistic mix of art deco and 19th century East Indies colonial, and made their way to a tower dubbed "the devil's building" for the hexagram formed by its blue-tinted windows.

Hostile questions for the finance minister, Sri Mulyani Indrawati, seemed inevitable; some of the attendees might even stage a protest. JPMorgan Chase & Co. analysts had, following the U.S. presidential election, put a sell order on Indonesia's equities. The finance ministry's response was swift, decisive, and resolute: the immediate termination of all business partnerships with the bank. Now two weeks had passed, and JPMorgan had reversed its bearish call, but the shiver was still reverberating through the research arms of global banks as the ministry considered preventing them from issuing negative reports. (JPMorgan declined to comment.)

Indrawati—a stylish 54-year-old economist who combines Indonesian batik with Anne Klein kitten heels—has earned a reputation for toughness. She'd been finance minister in the 2000s and returned to the job last year, charged with a reform agenda that's so ambitious it seems audacious.

As she addressed the quarterly meeting of analysts, she likened those who are impatient with the government to her 3-year-old grandson when he got restless during car journeys. Although such behavior might be expected of a toddler, she said, it was uncalled for from investors who wished the government would just hurry up, jump through the necessary hoops, and get on with the reform agenda. "I don't want you to ask me, 'Are we there yet?'" she said. "If you ask me that, I would think you're unprofessional or you're not competent."

Indrawati was clearly back in town, and the message was coded but simple: her ministry, her rules. She was going to clean house—and, if she had to, break some glassware in the process.

And the bankers? Rather than protest or hurl hostile questions at Indrawati, they mobbed her for selfies. Before long, social media sites were awash in images of the smiling finance minister and the analysts who fell under her spell. It was a striking display of respect, if not affection.

SINCE JOINING Joko Widodo's "dream team" cabinet in Southeast Asia's largest economy last July, Indrawati has been the president's chief instrument in a push to get millions of Indonesians to take part in a tax amnesty. The tax reprieve, which ended on March 31 and was a key plank in Widodo's reform agenda, levied generous penalty rates as low as 2 percent to allow those who've been hiding their true wealth to clear up their affairs, no questions asked. It's already prompted businesses and individuals who'd stashed money at home and abroad—including Aburizal Bakrie, former chairman of Golkar, a major political party, and Tommy Suharto, son of the country's former dictator—to bring more than $330 billion to the attention of the tax office.

A former university academic, Indrawati fought graft during her first spell as finance minister from 2005 to 2010. She was forced out after making enemies of powerful Indonesians, including Bakrie. Before returning last year, she won praise during six years as managing director of the World Bank in Washington.

Back in her old job, Indrawati has also vowed to clean up the tax office itself, an institution long beset by corruption. It was a challenge she took up with mixed success the first time around. She's confronting it again: In a country of 260 million people, only about 10 million filed a tax return in 2015. Now Indrawati plans to revamp the overall taxation system and double the number of auditors to widen the tax base.

The tax cleanup is politically crucial for Widodo and therefore Indrawati herself. He won his bid for the presidency in 2014 on a campaign pledging zero tolerance of corruption. Having once run a furniture business, he came from outside Indonesia's traditional political elite and enjoyed a meteoric rise since entering politics in 2005 to run for mayor in his hometown of Solo, Central Java.

If the reform agenda stumbles, Indonesia, for all its economic potential, could end up looking like a nation adrift—"ambling around," as Achmad Sukarsono, Indonesia analyst at Eurasia Group Ltd. in London, puts it. The world's fourth-most populous nation and most populous Muslim nation, Indonesia is blessed with some of the richest reserves of natural resources on the planet, and, crucially, it's a near neighbor to China and its voracious consumer demand. And yet its promise has been heralded for decades—and fallen short. "Indonesia has suffered from its reliance on commodities, and that's still the case," says Rajeev de Mello, Singapore-based head of Asian fixed income at Schroder Investment Management Ltd. "But there are signs of efforts to diversify."

Indrawati wants to be part of her country's turnaround. "Indonesia is a bit of an outlier," she says. She's sitting in her outer office, where she prays five times a day, surrounded by thick volumes on economic policy and coffee table books depicting the riches of the 3,100-mile-long Indonesian archipelago. "People say, 'Oh yeah, I know about Indonesia.' But it's a little bit distant on your mental map. Indonesia is vulnerable to this, because people don't really understand it that well."

INDRAWATI GREW UP in Semarang, Java, in a home where books and research papers were the family's main sources of entertainment. She was one of 10 children born to education professors who, in turn, coaxed their offspring into careers as academics, doctors, and engineers. Indrawati and her siblings still return home during the Eid al-Fitr holiday to a peach-and-green house so frequently flooded by a nearby river that the children pooled funds to build a second floor for their parents.

When Ani, as she's known to her family, was growing up, money was tight. Her mother, to supplement what she made at Semarang State University, ran a food co-op and sold an inexpensive traditional fabric, *lurik*, commonly worn by Javanese farmers. Splurging on birthdays meant a whole chicken to share at the crowded family table. "Well, we weren't poor, we had just enough to get by," says one of Indrawati's sisters, Nining Indroyono Soesilo. "The joy is in the solidarity of sharing one chicken."

When Indrawati announced that she was going to study economics—her way of stepping out of the shadow of her academically gifted older siblings—her parents thought she would end up a bank teller. Getting as far as she has was "an accident," she says. Attending economics classes at the University of Indonesia, she saw the unequal opportunities afforded to a clique of students surrounding a privileged student, Siti Hediati Hariyadi, known as Titiek, daughter of then-President Suharto. It was then

that she knew what she wanted to pursue in life. "That feeling of exclusion was very strong," Indrawati says. "If you're not a friend of those people, then your career path is going to be very different, and that is exactly what influences very strongly the way I think about economics and the economy in Indonesia."

She may not have been part of Titiek's crowd, but Indrawati was among the handful of students the university chose to study overseas on scholarships. This placed her on a well-trodden path for elite graduates of the University of Indonesia, which has been a breeding ground for many of the country's finance ministers, central bank governors, and presidential economic advisers. Her selection reflected a practice the Javanese call *ijon*, meaning to buy something before it's ripe and at a lower price than you might pay otherwise. "So even then," says Ari Kuncoro, a classmate who's now dean of the university's economics department, "she showed promise."

With her scholarship, Indrawati pursued a doctorate degree in economics at the University of Illinois at Urbana-Champaign from 1988 to 1992 before returning to Indonesia to teach at her alma mater. She became the head of the university's economics research arm in 1998, just in time to witness students taking to the streets in May of that year. They rose up to protest the government's response to the devastating impact of the Asian financial crisis the year before: widespread layoffs and bankruptcies, with more than half the population slipping below the poverty line.

This was a crucial time for Indonesia—and a formative one for Indrawati. Indeed, her evolution as a technocrat and a politician with, as she says, "the fire in your belly" can be traced back to those days. Most other faculty members at the state-owned university refrained from joining the demonstrations, but the research center Indrawati ran was independent, so she went along to the manifestations at the Parliament building.

Within days, the 30-year reign of Suharto, whom Transparency International would later classify as one of the most corrupt leaders of all time, came to an end. What followed was a hopeful but turbulent period known as Orde Reformasi, the era of reformation.

Indrawati recalls those days with bittersweet nostalgia. "I was an activist at that time," she says. "I was very active in really advocating against what we saw as the wrong policy, the wrong approach." She also remembers the anguish she felt when she learned that several student protesters had been shot and killed. "It was televised," she says. "I was in a TV interview, crying."

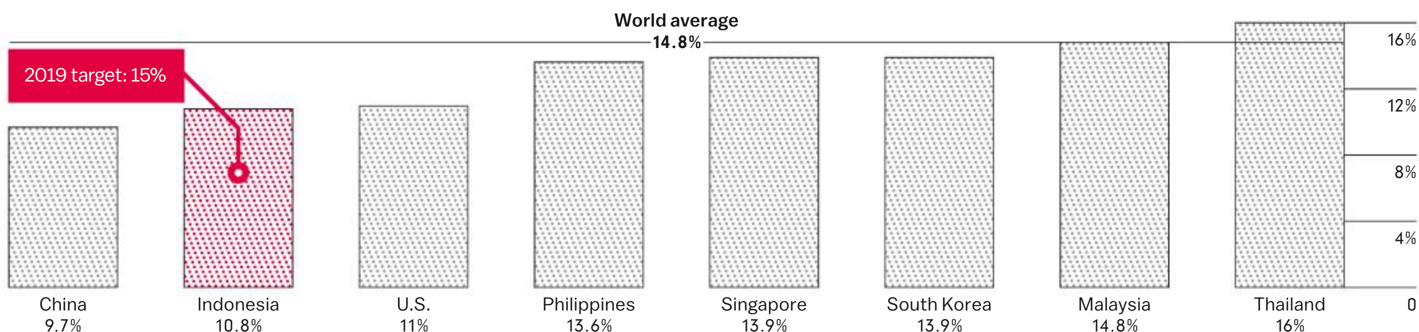
The Asian financial crisis and its aftermath racked Indonesia. "The crisis destroyed the foundation of the financial system," she says. "It had been abused, only to become a machine for reproducing this kind of wealth and welfare for an elite." But those days, she says, also laid the groundwork for real reform—"an opportunity for rebuilding."

The rebuilding began with Megawati Soekarnoputri, daughter of Indonesia's founding father, Sukarno. After she became president in 2001, she set a 3 percent legal limit on the budget deficit, boosted tax revenue 50 percent in four years, and established the Corruption Eradication Commission, which has brought to justice government ministers, among others.

In the parallel world of nongovernmental organizations, meanwhile, Indrawati was doing her bit. She worked as a U.S. Agency for International Development consultant engaged in strengthening local government institutions and in training budding journalists how to hold finance ministers and central bankers accountable. In 2002 she moved on to represent Southeast Asia as an executive director on the board of the International Monetary Fund.

Eventually, the Indonesian economy revived, aided by a commodities boom, China's surging growth, and reforms to the banking sector and exchange rate mechanisms. By the early 2010s, Moody's Investors Service Inc. and Fitch Ratings Ltd. had lifted the government's debt out of junk status and, since then, signaled the possibility of more upgrades soon. S&P Global Ratings Inc., the only one of the three main rating companies that has a junk score on Indonesia's credit, said in a Jan. 10 report that it may raise the country's rating in 2017 or 2018 if the books continue to improve.

For its part, the Widodo government is pumping money into roads, ports, airports, and railways and is aiming to achieve 7 percent growth at some point during the final three years of the president's current term. ►



Sources: World Bank, Indonesia Finance Ministry

AT THE HEIGHT of the global financial crisis in October 2008, midway through her half-decade as finance minister, Indrawati was in Jakarta drafting an emergency economic response to the meltdown when she learned that her mother had died. She stepped out of the room to hear the news, then immediately went back in to continue working. Just before midnight she flew home for the funeral in Semarang. The next day she returned to Jakarta to announce the emergency measures she'd drawn up. "Mother was a very tough woman whose message has always been, 'Fight for the country and be professional,'" says Indrawati's sister Nining. "That's why Ani was strong enough to stay and finish her job."

Three years earlier then-President Susilo Bambang Yudhoyono had persuaded Indrawati to take over the finance ministry. His charge to her: Cool inflation, almost 18 percent at the time, without choking the wider economy. But Indrawati had other things on her mind, too. Wayne Swan, who was treasurer of Australia at the time, says Indrawati gave voice to the developing world as prime ministers, presidents, and finance ministers crisscrossed the globe in a scramble for solutions to the financial crisis. She was "laserlike" in her focus, Swan says, and through her, "the developing world had a seat at the table."

Having risen well beyond the bank teller's job her parents once worried she'd have to settle for, Indrawati lost her lofty position in 2010. She'd been under fire for some time. In the aftermath of the crisis, opposition politicians claimed that she abused her authority in granting a 6.7 trillion-rupiah ($503 million) bailout of PT Bank Century in 2008 to prevent the collapse of 23 other banks. Also that year, she clashed with Bakrie, the ex-Golkar party chairman, when she opposed closing the Jakarta bourse as shares in companies linked to him plunged. "They had a difference of opinion," says Lalu Mara Satriawangsa, a spokesman for Bakrie, "but it was never personal."

It was a harrowing time, and it ended in tears. Following her resignation and before she flew off to Washington to work for the World Bank, Indrawati held a press conference. "I can finally cry now, because I'm no longer the minister of finance," she told reporters. "If the minister of finance cries, then the rupiah will be volatile."

DESPITE WHAT Indrawati went through during her first stint as finance minister, her family understood why she returned last year to have another crack at it. Her siblings never said to her, "Your life was better in Washington," according to her sister Nining. She had been making good money at the World Bank: $409,950 in 2015. As finance minister in Indonesia, her base salary would now fall to about 220 million rupiah a year, or about $16,500. Coming home to serve her country was what her parents would have wanted Indrawati to do, Nining says: "We knew her reason for coming back was simple."

The activist spirit kindled back in 1998 is still there. During an interview in her office at the Finance Ministry, with some of her team present, she expresses disdain for the kind of person who "loves the power, who loves the money, and is simply greedy." She says she wants to "slash them away," adding, "We have the moral authority to cut and chop those people."

Indrawati lives behind the Indonesia tax office building in an official residence that's part of a complex of ministerial houses. She's married to Tonny Sumartono, an economist; they have two sons and a married daughter (the mother of the toddler who featured in Indrawati's January parenting lesson to bank analysts). Given her reputation for toughness, people who know Indrawati joke that it's no coincidence that she keeps a feisty bantam rooster in the backyard and fighting fish in a tank in her dining room. "I have never really struggled with speaking my mind," she says.

John Lipsky, a senior fellow at Johns Hopkins University and a former first deputy managing director of the IMF, who knew Indrawati in Washington, says, "She is not typically enamored of squishy, soft ideas. Her eye is always on producing results." In Jakarta political circles, there's periodic speculation that Indrawati might one day run for elected office. But if she harbors such ambitions, she hasn't signaled them publicly.

Her diary is chockablock with meetings suggesting the challenges that she—and Indonesia—face. One day she met with a clutch of generals at the Defense Ministry, admonishing them for the amount of money going to salaries. She recalled for them a time during her first spell as finance minister when she was asked to take a flight on a military helicopter to see firsthand how dated the

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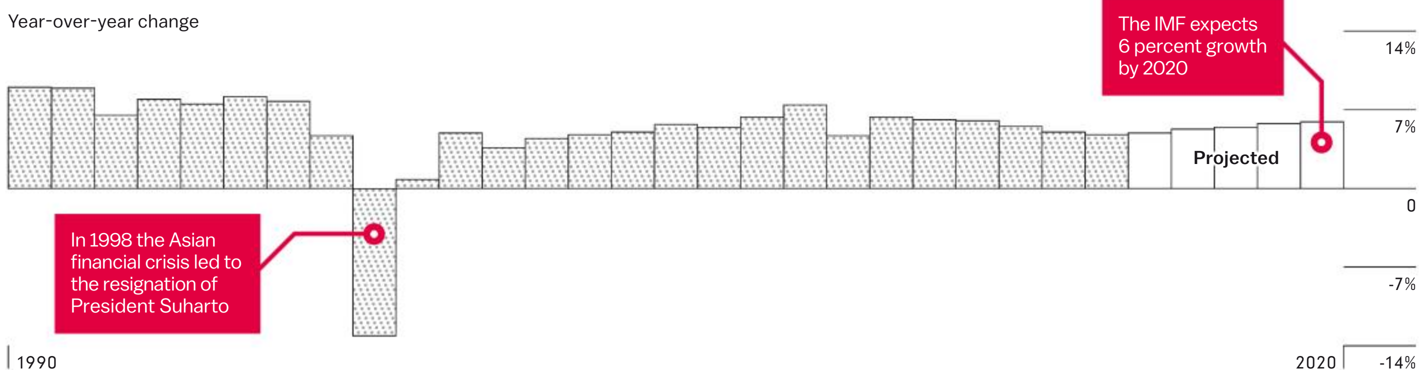


Source: International Monetary Fund

“Even my husband told me, ‘Ani, you were talking in your sleep again about tax’ ”

equipment was. “That was 10 years ago,” she said, “and now I see the biggest proportion of your budget is still going to salaries.”

Tax reform is at the heart of what she does. A popular meme lit up social media after Indrawati returned to Jakarta last year. It showed her gripping a pistol and taking aim at an imagined tax dodger, with the words “Who hasn’t joined the tax amnesty?”

The tax program, which Widodo introduced before Indrawati left Washington, had raised 116 trillion rupiah by late March. The compliance record of Indonesians is notoriously poor. Even so, the amnesty—under which tax-avoiding individuals and companies pay as much as 10 percent in penalties, or about a third of the top income tax rate—has its critics. The Organization for Economic Cooperation and Development says the program favors those who cheat and penalizes those who don’t.

To no one’s surprise, Indrawati was embarrassed and indignant last year when a midranking tax official was arrested in connection with an alleged scheme to help a businessman avoid a $5.8 million bill. She sent copies of a handwritten note around to tax office staff, saying she was “devastated by those unfaithful acts, which betray the values and integrity we all hold. Still, we should vent our disappointment by working even better, even harder, to achieve even higher. We will, together, sanitize our Ministry of Finance from such individuals who bring down the reputation of our institution.”

In January she brought her message in person to the tax office. She addressed more than 500 mostly male tax officials dressed in sky blue shirts and navy ties following a rousing rendition of the tax agency’s official song. “From my house,” she told them solemnly, “whenever I look over I can see the lights still on at the tax office building, and I know you are all working hard. So if someone calls you lazy, you wouldn’t be offended; it’s not true. But if someone calls you incompetent or unprofessional, you would be offended because it’s partly true.”

She lightened the mood with some humor. She told the sea of blue that her title might as well be “minister for tax,” given how large the issue looms in the government’s agenda. “It’s always about tax, tax, and tax,” she said. “Last night even my husband told me, ‘Ani, you were talking in your sleep again about tax.’ ”

For all the credit she’s received as a tax crusader, doubts remain over whether Indrawati can meet government income targets. “Seeking a 20 percent revenue increase this year is too aggressive when you don’t have that massive boost from the tax amnesty program,” said Joshua Tanja, local country head of UBS Group AG, at an investment outlook seminar in March. “What we’ll end up seeing is another adjustment to government spending.”

Indrawati’s handling of the JPMorgan affair didn’t go over universally well, either. “I don’t agree with Sri Mulyani with this kind of action against analysts,” says Eurasia Group’s Sukarsono. He says it’s wrong for a minister to seem to be placing limits on analysts’ assessments. “If you want to give good analysis,” he says, “then you have to have the freedom to make it.” In addition, says Bakrie spokesman Satriawangsa, “A good friend would criticize even when it’s unpleasant. She should know and accept this.”

Alan Richardson, an investment manager at Samsung Asset Management Ltd. in Hong Kong, says Indrawati’s run-in with JPMorgan needs to be put in context. “I wouldn’t fault Sri Mulyani,” he says, “because I suspect she was frustrated that structural reform progress is being overlooked. After all, the government has made progress in sustaining fiscal discipline, namely committing to and remaining below the fiscal deficit target of 3 percent of GDP, implementing structural reforms such as the tax amnesty and removal of fuel subsidies—both of which should enhance future fiscal performance.”

As for Indrawati, she says that of course analysts shouldn’t be limited to saying only “good things” about Indonesia. “This isn’t the case,” she adds. But without addressing the JPMorgan issue directly, she makes it clear that her job is to promote and defend her country. Even if that means breaking some glassware. “It’s again touching the issue of justice,” she says. “Where is the justice if the country has been treated unfairly?”

Curran is the chief Asia economics correspondent in Hong Kong for Bloomberg News; Ho is on the speed desk in Jakarta; and Salna covers economics in Indonesia.

The Hacienda Hedge

The untold story of how, year after year, Mexico and Wall Street put together the world's largest and most secretive oil trade

By JAVIER BLAS

ILLUSTRATION BY ARMANDO VEVE

THE MEN HUDDLED in the same first-floor conference room as always, only this time they'd decided to make their annual oil bet bigger and bolder than ever before. Fewer than a dozen representatives from three Mexican government ministries and Petróleos Mexicanos, the state energy company, were about to make a wildly contrarian play. If it paid off, the profits would be enormous. And if they were wrong? They would have spent a small fortune in vain.

Almost seven months earlier, at the beginning of January 2008, the price of oil had flirted with $100 a barrel for the first time in history. It retreated to below $90 by the end of the month, but then, in early February, the price took off. West Texas Intermediate, the U.S. benchmark, reached a new high every month—$103.05, $111.80, $119.93, $135.09, $143.67—until finally, in early July, it hit $147.27 a barrel. Seemingly insatiable demand from emerging economies, including China and Brazil, encouraged outrageous chatter of $200 a barrel among the giddiest traders. Even those with bearish outlooks were fairly optimistic, figuring there would be a correction, not a crash.

Yet on July 22, 2008, just 11 days after oil reached its all-time high, this small group of Mexicans gathered to discuss their very different outlook in the ornate surroundings of Mexico's finance ministry, the Secretaría de Hacienda y Crédito Público. The palace—located on the Zócalo, the capital's vast main square—had been built centuries earlier atop what once was the home of conquistador Hernán Cortés. On the walls around the main entrance, gigantic Diego Rivera murals depict the country's history.

When "the men from Hacienda," as they're known, headed back to their desks, their mission was to lock in, or hedge, Mexico's oil revenue through a deal with Wall Street banks. Within minutes they began firing off messages to the oil trading desks of Barclays, Goldman Sachs, Morgan Stanley, and Deutsche Bank. Their instructions were to buy "put" options, contracts giving them the right to sell oil at a predetermined future price, at levels ranging from $66.50 to $87 a barrel. The banks receiving the orders had never seen an oil deal this big. The price tag for the options was $1.5 billion.

From Houston to New York to London, bankers worked against the clock to close the gigantic transaction. It amounted to 330 million barrels, enough to meet the annual oil imports of the Netherlands. Barclays, which was then muscling into the commodity big leagues, did the bulk of the buying with 220 million barrels. Goldman followed, at 85 million barrels.

Betting that oil prices were about to crash was an audacious wager, one made all the more remarkable by the individuals behind the deal—civil servants with unassuming titles such as "director general of fiscal planning." In the lucrative oil business, a profession known for its generous compensation, these government employees were probably the worst-paid stiffs around. Yet the men from Hacienda—so called still, even though women are sometimes in the room—proved prescient in predicting a crash.

Everybody knew the world was tipping into a financial crisis at the time, but because of its excellent banking and political connections in the U.S., Mexico may well have had special insight into just how bad things would get. What's more, as one of the world's top oil exporters, the country generally has better information than, say, hedge funds, about where the market is heading. In 2008, that information led those in the room to believe global supply was well in excess of global demand.

Sure enough, as the banks executed the deal over a five-month period, oil prices tipped into free fall amid the worst financial catastrophe since the Great Depression. In 2009 oil prices would average less than $55, well below the average price of the options of $70.

The key to success behind this huge sovereign oil hedge was moving "quickly, very quickly," says Gerardo Rodriguez. Undersecretary of finance and public credit at the time, he was one of those in the room; he's now a managing director at BlackRock Inc. "At the start of the summer we saw that the financial crisis was spreading fast," he says. "Despite that, oil prices were still high. They were even climbing. We told ourselves, 'We need insurance, and we need to take advantage of $150 oil prices.' "

In December 2009 the four investment banks involved in the deal wired the proceeds of the wager back to Mexico. Official records tracking the money that landed in Account No. 420127 at state-owned Nacional Financiera bank show the tidy sum Mexico made: $5,084,873,500.

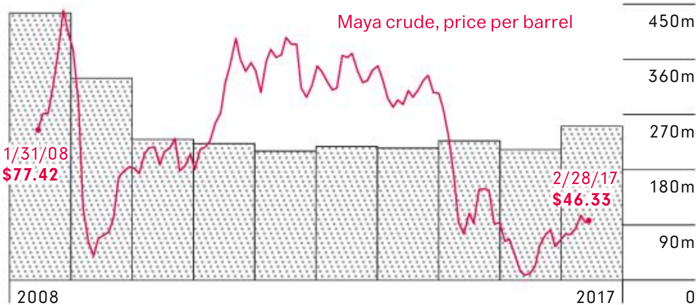
OIL HEDGES AREN'T UNCOMMON. Airlines do them to insure against rising prices; U.S. shale producers rely on them to lock in revenue. But no deal comes close to matching Mexico's annual "Hacienda hedge." "Mexico is the biggest annual oil deal," says Goran Trapp, founder of boutique advisory firm Energex Partners and former global head of oil trading at Morgan Stanley. Over the last 10 years, the notional value of the hedge has added up to $163 billion. "It's the deal that all banks wait for each year," says Richard Fullarton, founder of commodity fund Matilda Capital Management and a former senior trader at Royal Dutch Shell and Glencore. "It's so large that it can make or break their year."

Despite its size, impact, and huge fees, the deal is one that few people, even in the energy industry or on Wall Street, know much about. Painstakingly, the world's 12th-largest oil producer and its bankers have cloaked the program in secrecy to prevent others—namely trading houses and hedge funds—from front-running Mexico's orders. "Minimizing its visibility is extremely important," wrote Javier Duclaud and Gerardo García, two senior officials at Mexico's central bank, in a 2012 report for the International Monetary Fund.

This is the untold story of how Mexico, as early as 1990,

MEXICO'S SOVEREIGN OIL PLAY

Barrels hedged



Sources: Auditoría Superior de la Federación, Bloomberg News, {LACRMAUS Index <Go>}

“It’s the deal that all banks wait for each year. It’s so large that it can make or break their year”

constructed what quickly became the world’s largest and best-concealed oil trade. *Bloomberg Markets* unraveled the secret history of the Hacienda hedge through dozens of interviews with current and former government officials, traders, brokers, bankers, and consultants, as well as a review of thousands of pages of previously unreported documents, some obtained through freedom-of-information requests in the U.S. and Mexico. Although some people agreed to speak on the record about the deal, others did so only on condition of anonymity because they were discussing a confidential government program.

Mexico’s oil hedge has real economic significance. Until fairly recently, the country relied on oil for about a third of its income, leaving it dangerously exposed to boom-and-bust price cycles. According to current and past government officials, the main purpose of the hedging is not to pad the country’s coffers but rather to protect the federal budget from fluctuations in oil prices.

What’s more, it’s a fiscally responsible exercise that reduces the country’s borrowing costs, says Fabián Valencia, a senior IMF economist in Washington who follows Mexico. “The hedge means Mexico pays about 30 basis points less on its sovereign debt,” he says. Hedging is like buying insurance, says Guillermo Ortiz, who was governor of the country’s central bank from 1998 to 2009: “You buy it hoping you won’t need it.”

For its part, Mexico has shown a Wall Street-style wizardry in trading oil. It usually makes money on its hedges—sometimes a lot of money, as in 2008-09. From 2001 to 2017, the country made a profit of $2.4 billion; its hedges raked in $14.1 billion in gains and paid out $11.7 billion in fees to banks and brokers. (The banks have an additional incentive: They can make money by creating trades of their own that are linked to but separate from the hedge itself.)

So far, Mexico has managed to dodge some obvious risks inherent in deals of this magnitude. “If you get it wrong,” says George Richardson, a senior official at the World Bank, speaking of megahedges in general, “it’s a serious political problem.” The fat fees going to the banks may also end up looking wasteful and may even dissuade other oil-producing countries from engaging in hedges of their own, he says. “Is it worth it to pay the premium rather than, say, build a new hospital?”

If anything, recent results have made the Mexican government look especially good. The country earned $6.4 billion in 2015 and $2.7 billion in 2016. For 2017, the jury is still out. Last summer, Mexico spent just above $1 billion buying put options with a floor price of $38 a barrel. If prices stay where they are now, hovering around $50 a barrel, the men from Hacienda won’t make any money, but if prices drop on average below $38 a barrel, they’ll start to. We won’t know the outcome until December.

MEXICO FIRST HEDGED oil in 1990, after Saddam Hussein invaded Kuwait and threw the petroleum-rich Middle East into crisis. Soon the United Nations had embargoed Iraqi and Kuwaiti crude, removing about 10 percent of the world’s supply from the market. Prices soared from a low of $15.06 a barrel in June of that year to $41.15 in October.

The Mexican treasury reaped the benefits of these fast-rising prices, but the government of Carlos Salinas de Gortari also sensed the boom wouldn’t last, not with the U.S. economy cooling and President George H.W. Bush preparing for war. According to Aldo Flores Quiroga, the country’s current deputy oil minister, the “thinking on the use of financial instruments of this kind has its origins in the 1980s, when Mexico was seeking to stabilize its fiscal stance.” In particular, the government had failed to anticipate the 1985-86 oil crisis, when Saudi Arabia flooded the market and prices tumbled. By 1990 the prospect that Washington could tap the brakes on oil prices by dipping into U.S. strategic petroleum reserves loomed large.

To make sure Mexico wasn’t again exposed to forces beyond its control, the Salinas government decided to bet on prices falling and enlisted Goldman Sachs. Stephen Semlitz, a rising star and head of energy trading at J. Aron & Co., the bank’s legendary in-house commodities unit, and Robert Rubin, Goldman’s co-chairman, who later became U.S. treasury secretary, proved instrumental in helping Mexico lock in a price of $17 a barrel for the first few months of 1991. The deal worked: Maya crude, ►

Mexico's benchmark, plunged as low as $9.75 a barrel that year. Despite the modest success of the Gulf War hedge, Mexico didn't do it again for years, as oil prices remained relatively stable.

The country was again caught off guard in the late 1990s, however, when the Asian economic crisis crippled oil demand just as OPEC countries boosted production in a brutal attempt to gain market share. As a result, prices crashed. In December 1998, Mexico sold crude for as little as $5.68 a barrel to a U.S. refinery. Mexico, which isn't a member of the Organization of Petroleum Exporting Countries, hadn't anticipated the crisis and hadn't hedged. In trader parlance, the country was naked.

The experience scarred a generation of government officials, who decided they could never leave themselves so exposed again. Thus began the modern Mexican hedge, which came into existence in the early 2000s after legislators passed a law allowing sufficient budgetary flexibility to accommodate the deals. In 2001, Mexico made a tentative showing, spending just $217.3 million on put options, a fraction of the approximately $1 billion a year it would spend later. In 2003 and 2004, with oil prices rising, the country opted not to hedge at all. (The Mexican government declined to comment for this story.)

The strategy came into its own in 2005, according to several officials familiar with the matter. Mexico has hedged every year since without interruption. Agustín Carstens, who later became head of the central bank, was finance minister when the big $5.1 billion payout came in 2009; some government officials also refer to the annual oil bet as "the Agustínian hedge."

IN THE EARLY 2000s, Goldman Sachs and Morgan Stanley, already known as "the Wall Street refineries," continued expanding into oil. The Hacienda hedge became an especially important part of their business, say bankers with knowledge of the deals. Goldman kept a particularly firm grip on the deal it had helped to fashion a decade earlier. As recently as 2010, according to Mexican government documents, Goldman was handling 56.5 percent of all the barrels involved in the deal.

Lured by the large fees and the cachet of landing part of such a prestigious deal, other banks—Barclays, Deutsche, JPMorgan Chase—began angling in. Mexico has since widened the net even further, recruiting outfits such as Citigroup, HSBC, and BNP Paribas, according to government documents. For the 2017 deal, the country reached outside the banking industry for the first time and hired the trading arm of Royal Dutch Shell Plc.

In most recent annual hedges, Mexico has used from four to six counterparties. Current and former bankers involved in the deal say the lenders' profits were $30 million to $80 million a year per bank. "The Mexican hedge is an extremely important part of the oil business of the banks," says George Kuznetsov, head of research at Coalition Development Ltd., an analytics company that tracks investment houses. Nonetheless, while Mexico has spent an average of $1 billion a year hedging over the past decade, the banks' slices of that rich pie have gotten smaller, as more and more lenders have entered the mix.

For some bankers, the deal's overall profitability hides the danger of big one-time losses, according to people familiar with it. "Over the years, the hedge has built a mixed reputation with the banks," Kuznetsov says. "There is a big potential you could lose." Tellingly, some banks that were—or still are—active players in the oil market never touched the Mexico deal, including Société Générale, UBS, and Credit Suisse, according to government documents; Morgan Stanley decided on several occasions against participating. (All the banks featured in this story declined to comment.)

What's more, U.S. regulations put into effect after the global financial crisis have introduced complications. Before 2008, banks kept the hedging risk in-house for weeks and even months, slowly offloading it to other clients without the need to go out into the broader oil futures market. For instance, a client other than the Mexican government—say, an airline seeking protection against rising prices—might take the other side of the Hacienda hedge.

After 2008, the rules of the game started to change. One example is the Volcker Rule, which prohibits banks from making certain speculative investments. The rule went into effect in July 2015. Its constraints on risk oblige the banks to get it off their books quickly. One way banks do this is by hedging in the futures market: They might take the other side of the hedge themselves, in effect selling futures within a mix of oil and refined products.

The Mexican government was so worried about the Volcker Rule that it dispatched a team of officials to Washington in October 2012 to lobby the U.S. Treasury, the Federal Reserve, and other agencies. A Mexican presentation seen by *Bloomberg Markets* argued, in effect, that the banks needed to be able to hang onto risk for longer—that a transaction "of the size and characteristics of Mexico's oil price hedging program requires swaps dealers to take significant commodity risk for extended periods of time in order to provide liquidity to markets."

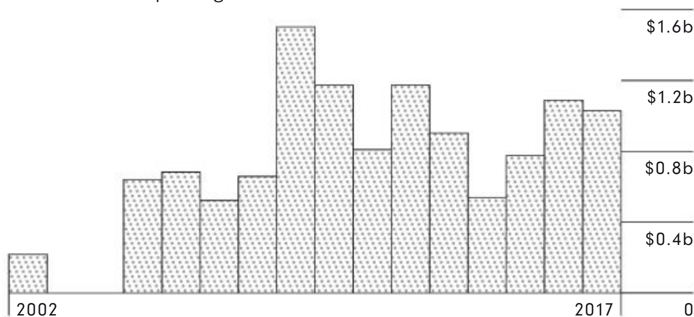
UNTIL 2009, the Mexican government didn't disclose any information about the Hacienda hedge. Since then, its practice is to disclose as little as possible. And the banks? They never publicly acknowledge their participation in deals like this. Still, for all the Mexican government's efforts to keep its megahedge hidden, a detailed history of how the deal works can be gleaned from the

FILLING THE TREASURY'S COFFERS

Noteworthy payouts from the hedge

$5.1b	$6.4b	$2.7b
2009	2015	2016

Sources: Mexican Secretariat of Finance and Public Credit, Mexico's annual government audits



Sources: Auditoría Superior de la Federación, Bloomberg News

thick, bound volumes of the legislature's annual audit, the Auditoría Superior de la Federación. Among other insights, the thousands of pages reveal that Mexico's current practice is to buy so-called Asian-style put options. That allows the country to hedge an average price rather than the price at the expiration of the contract, as is the case with "American-style" options.

While the Mexican government hedges every year, it doesn't enter the market at the same time. According to the audits, it has started buying options as early as May and as late as August. In the early years, Mexico locked in the price of West Texas Intermediate, but that caused trouble because of WTI's ever-changing price relationship with Maya, Mexico's main crude export grade. Today, to avoid price variations from benchmark to benchmark, the hedge involves a combination of Maya—usually 80 percent to 90 percent of the total—and Brent, the world standard.

The audits confirm Mexico's reputation in the oil market for shrewd trading and its keen desire to keep the deal quiet. No year epitomizes those characteristics as much as 2007, the year before the big deal that made $5.1 billion for Mexico. The men from Hacienda started early in 2007, hedging 5 million barrels during the week of June 18. With prices failing to decline, Mexico slowly built up its position, selling 185 million barrels in the next three weeks. In late July, with prices rising fast, it went all in, doing 100 million barrels in a single week. The wave of selling sent prices tumbling 10 percent. Mexico immediately vanished from the market, staying quiet for three weeks. The men from Hacienda didn't return until the end of August, as prices rose again, quickly selling an additional 85 million barrels in 10 days. In total that year, Mexico sold 435 million barrels in 68 deals. Goldman Sachs handled the bulk of those orders—250 million barrels in total.

The audits also disclose something oil traders have long suspected: Mexico doesn't trade just in the summer; it's been in the market during the winter at least once. In the summer of 2013, Mexico, as usual, bought put options, securing a price of $81 a barrel. But contrary to its usual practice, the country reentered the market in January and February 2014, restructuring the deal at $85 a barrel.

Mexican officials have argued that the hedge, which runs annually from Dec. 1 to Nov. 30, doesn't affect prices. However, bankers who are or have been involved in the deal, as well as oil traders who monitor it closely, say Mexico's hedging, in fact, roils the market. That certainly happens when Mexico's bankers sell futures to protect themselves, putting downward pressure on oil prices. If only because of its magnitude, the hedge is a fount of rumor, chatter, and volatility—particularly when Mexico is hedging and the market is falling, as in 2008 and again in 2014.

DESPITE MEXICO'S SUCCESS, no other oil-producing country has followed suit with similarly large hedges. Several nations, including Qatar and Russia, have come close to implementing a big hedging program through Morgan Stanley and Goldman Sachs, but they walked away at the last minute, according to people familiar with the talks.

For the massive Middle East producers, hedging appears to be a headache they'd just as soon avoid. With small populations and huge revenue, they instead self-insure, amassing their petrodollar reserves and saving during boom times by pouring money into their fat sovereign wealth funds. Saudi Arabia, for example, has since late 2014 used about $200 billion from its foreign exchange reserves to weather a period of low prices.

Poorer oil-producing countries don't have that luxury, and that's when oil hedging might look attractive. Ecuador, OPEC's smallest member, is a case study in how an oil hedge gone wrong can cause a political storm. In early 1993, Quito decided to lock in oil prices through a series of relatively complex deals involving put options and swaps orchestrated in conjunction with Goldman's J. Aron & Co.

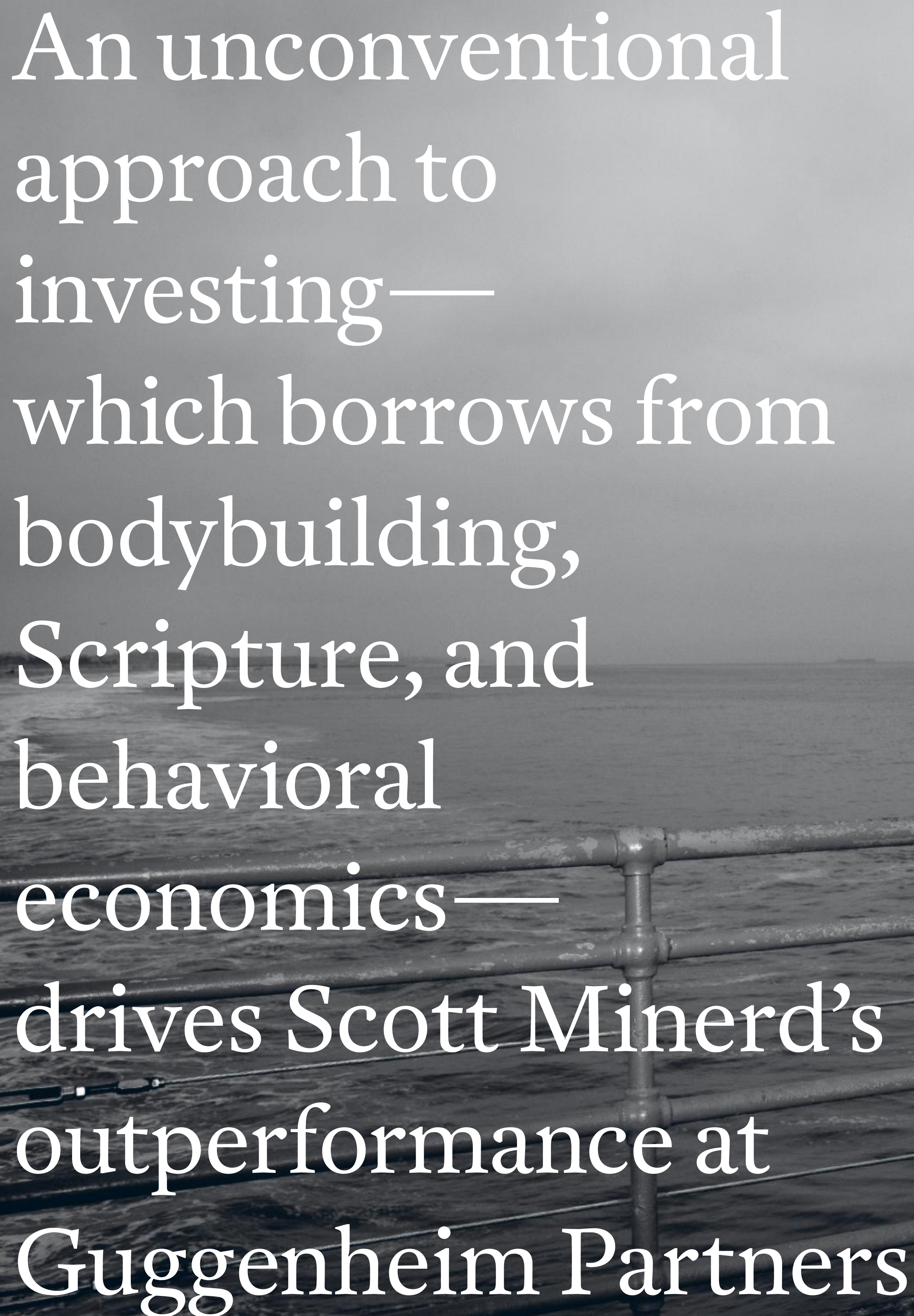
Ecuador secured a floor of $14.88 a barrel for the year, handing the bank $12 million in fees. But the deal left the country exposed to pay more if prices turned out to be higher. To the surprise of the government, oil did indeed move in that direction, averaging $15.85 a barrel. As a result, Ecuador not only lost the $12 million it paid for put options that turned out to be worthless but also had to pay an extra $6 million to Goldman for the swap.

The political opposition to President Sixto Durán Ballén, according to an IMF review of the deal, blasted "the high losses to the country," and Ecuadorean lawmakers appointed a special committee to investigate allegations of corruption against several officials involved in the hedge. (The panel concluded there was no wrongdoing.) Ecuador's mistake may well have been to see the hedge as a bet rather than an insurance policy.

Mexico's hedge has never triggered a political backlash of any real consequence. But that doesn't mean the joyride can last forever. Oil is no longer the make-or-break revenue generator it once was. Last year it accounted for only 17 percent of total government revenue. And oil production is declining even as domestic demand is climbing—reducing net exports and hence the size of the deal.

In the hedge's halcyon days, Mexico sold forward more than 450 million barrels of oil; this year it's done only 250 million. Despite the budgetary stability the annual big bet has brought to this country of 122 million people, the sun may be setting, however slowly, on the hedge and the men from Hacienda who pull it off. ●

Blas is chief energy correspondent for Bloomberg News in London.



An unconventional approach to investing—which borrows from bodybuilding, Scripture, and behavioral economics—drives Scott Minerd’s outperformance at Guggenheim Partners

The Think-Slow Portfolio

By JOHN GITTELSOHN

PHOTOGRAPH BY BRINSON + BANKS

SCOTT MINERD WADDED UP another piece of paper and looked out at the Pacific Ocean from his Santa Monica, Calif., office. He needed a better blueprint for his organization—a foundation for his investing process that could support consistent performance—and his ballpoint drawings still weren't right. So Minerd kept sketching: boxes, arrows, words, whatever came to mind. When he found himself swimming in "spaghetti" doodles again, he'd ball up the paper and start anew.

Minerd had dealt in bonds, structured securities, currencies, and derivatives during highflying stints at Merrill Lynch, Morgan Stanley, and Credit Suisse First Boston in the 1980s and '90s, running desks for bosses such as John Mack and Bob Diamond; the work burned him out at the ripe old age of 37. "I walked away from extremely large offers on Wall Street," he says today. "I realized this wasn't a dress rehearsal for life, this was it."

He'd been away from the business for two years when Mark Walter, a former client who ran the investment firm Liberty Hampshire, came to lure him out of early retirement in 1998. Minerd had two conditions: He would retain his autonomy and remain in California, his home since walking away from trading. Soon, Liberty merged with the family office of 19th century mining baron Meyer Guggenheim's heirs, transforming the little-known investment house into Guggenheim Partners, a boutique asset manager.

By 2002, Minerd realized he needed to be systematic to make Guggenheim a force, hence his ballpoint attempts at a new blueprint. Eventually, a concept from Adam Smith's *The Wealth of Nations*—about how the division of labor leads to higher productivity—popped into his head. "The idea is if you segregate duties, you get greater efficiency and better results," Minerd says. Inspired, he drew four boxes inside a wheel. For Minerd, each box represented a specific part of the investing process: macroeconomic analysis, security selection, portfolio construction, and portfolio management. The simple structure let "the data talk," he immediately realized. Managing money could be a coolheaded, calculated process with scalable, replicable results, "not me just sitting in a room saying, 'We need to do mortgage-backed securities.'"

It's common for money managers to break investing into specialties, but Guggenheim, which today oversees an impressive $260 billion, shows how structure can drive results. "Scott is methodical and patient," says Walter, the firm's chief executive officer. "He was a prime architect of Guggenheim Partners' disciplined investment process—a process we have inculcated throughout our asset management business."

In fixed income, in particular, Minerd has racked up a prolonged hot streak. According to data compiled by Bloomberg, the $5.7 billion flagship Guggenheim Total Return Bond Fund has beaten 97 percent of its peers over the past five years, chalking up a better record than similar funds headed by fixed-income gurus such as Jeffrey Gundlach, Bill Gross, and Dan Fuss. Assets doubled over the past 12 months, as more investors discovered the fund, which celebrated its five-year anniversary in November.

"I let the data talk to me and try to keep the emotion out of it," says the 58-year-old Minerd, who's barrel-chested from years of bodybuilding. His $5 billion Guggenheim Macro Opportunities Fund—a credit-focused fund that invests in a range of equities, commodities, and alternative investments, as well as bonds—has returned an average 5.6 percent over the five-year stretch, beating 95 percent of its peers. The $3.5 billion Guggenheim Floating Rate Strategies Fund, which focuses on bank loans and other adjustable-rate debt, has bested 96 percent of its peers over five years. About 57 percent of Guggenheim's assets are separate accounts for insurance companies, endowments, and other institutional investors who don't publicly disclose their results.

"I have never met anyone who's a better judge of credit or structurer of transactions than Scott Minerd," says Jim Dunn, CEO of Verger Capital Management, which oversees $1.5 billion for nonprofits, including Wake Forest University's endowment. "We call him the bond savant."

A built-in benefit of Guggenheim's structure, Minerd says, is a system that slows decision-making, preventing traders and portfolio managers from making hair-trigger moves based on fear, greed, or personal biases. "If you want to do emotional investing and call all the shots, Guggenheim is not the place for you to work," he says. "If you don't allow one person to make all the decisions, it really slows the process, resulting in better decisions."

Slow decision-making dovetails with research by Daniel Kahneman, a behavioral economist, 2002 Nobel Prize winner, and subject of Michael Lewis's 2016 book *The Undoing Project: A Friendship That Changed Our Minds*. In 2006, Kahneman helped Guggenheim develop and trademark individualized profiles for high-net-worth clients called "Riskometry," which matches return expectations and risk appetite. It provides a framework for thinking slow in the fast and furious field of investing, an approach Minerd says has paid dividends in bear and bull markets.

Over breakfast at an outdoor cafe in Santa Monica, Minerd recalls panicky clients phoning him during the 2008 financial crisis. Sell everything, they'd say. It was classic fear-driven decision-making, he says. To calm the investors, he'd retrieve their Riskometry assessments and ask two questions: Had performance met or exceeded expectations in the event of a market downturn? And had the investments stayed within risk guidelines? In every case, Minerd says, the answers were "yes." "We're really only left with one conclusion," he would tell his jittery customers. "We should increase your risk."

Minerd pauses to let the thought sink in. His pointy-eared rescue dog, Grace, stretches at his feet under the cafe table. "Virtually every client agreed to increase risk," he continues. "The financial crisis was the best thing that ever happened to us."

MINERD, THE SON OF an insurance salesman, grew up in southwestern Pennsylvania on land his family settled before the Revolutionary War. He quit high school a year early to follow a girlfriend to Philadelphia, where he persuaded the University of Pennsylvania to allow him to take courses at the Wharton School. After earning a degree in economics from Penn in 1980, he took classes at the University of Chicago's Booth School of Business and then worked as an accountant for Price Waterhouse. He switched to investing, which paid better, and started climbing Wall Street's ranks for the better part of a decade. "He's a hard-charging guy, and he doesn't suffer fools," says Mack, who supervised Minerd at Morgan Stanley. "That's what you need in this business."

In 1992, Minerd generated a big win for Morgan Stanley by trading Swedish bonds after the country raised its interest rate to 500 percent to defend its currency. The next year he orchestrated a debt restructuring for Italy that helped stave off a bailout by the International Monetary Fund. He left Morgan Stanley ►

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for CSFB in 1994, running the fixed-income credit trading group under Diamond, who two years later jumped to Barclays Plc. Minerd was shuttling between New York, London, and European capitals, facing second-guessers and corporate intrigue. He followed Diamond out the door, only in a different direction—west to California for the sun, the food, and the fitness.

"People thought I was crazy when I moved out here," Minerd later says over lunch at the Firehouse, a Venice Beach restaurant frequented by bodybuilders. He bought a waterfront home and devoted himself to lifting weights at Gold's Gym in Venice, an institution for bodybuilders such as Arnold Schwarzenegger, but eventually changed venues because people were constantly interrupting to ask about money management. "I couldn't get in a good workout," he says.

At his peak, the 300-pound Minerd could bench-press 495 pounds 20 times and even competed in the Super Heavyweight and over-40 divisions at Los Angeles bodybuilding championships. "I don't like to do things halfway," he says, tucking into a Bob Bowl, a 12-ounce steak with sautéed red peppers and onions over rice. "Bodybuilding is 24/7," he says. "It's everything that goes into your mouth. It's if you get enough sleep. It's how you manage your stress." Minerd remains disciplined in the gym—hence his Popeye arms. He tries to clock a two-hour workout five days a week in the window between the time markets close in New York and open in Asia.

"If I was ever going to say 'no' to him, it would be by phone," jokes Guggenheim Executive Chairman Alan Schwartz about Minerd looking so physically intimidating. "But I can tell you that his heart and brain are bigger than his body."

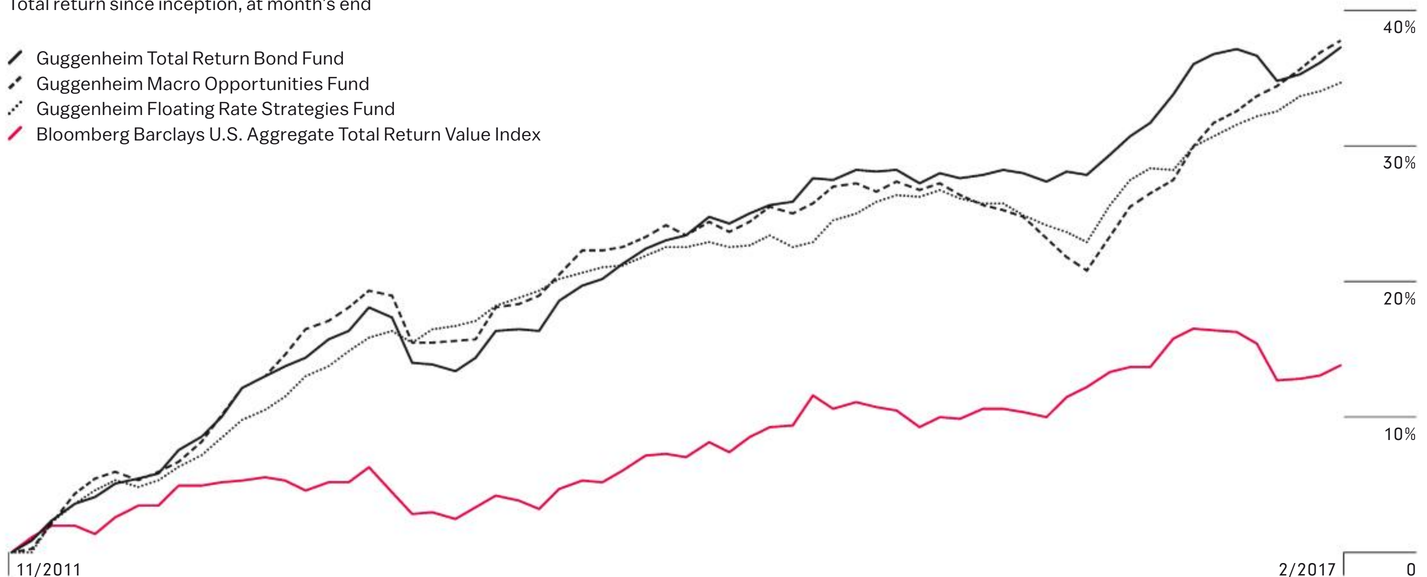
MINERD PRESIDED OVER a December meeting of his macro team in Guggenheim's Manhattan office in a glass-walled conference room overlooking Grand Central Terminal. Maria Giraldo, a research analyst, explained how his demands for data spurred her to reexamine her biases about the risks of credit investing. "I have this instinctively bearish view based on the length of the business cycle," she says.

At Minerd's urging, Giraldo read reports written before the 2008 financial crisis in search of early trouble signs, such as deals being pulled and credit spreads widening. The red flags that showed up a decade ago weren't happening in late 2016. By contrast, recent company earnings were better than expected, leading Giraldo to revise her forecasts for the current credit cycle to continue at least until 2019. "It could push it out even further," she says.

Minerd concedes that his investing process can test his clients' patience. "I tend to be early to sell, and I tend to be early to buy," he says. "If you're going to be early, you tend to have periods of underperformance." In late 2014 he began selling most of Guggenheim's energy-related debt after his economists predicted a long-term plunge in oil prices. Then, in late 2015, he began buying collateralized loan obligations, months before oil prices hit bottom. "Going into January and February, we were having a tough time," he says. "But those investments turned out to be a home run."

The CLOs included mezzanine debt tranches with 15 percent yields, acquired at 40 cents on the dollar. Other money managers shun Mezz CLOs, which can fall to zero in a default, because they don't have Guggenheim's resources, Minerd says, including a team of in-house lawyers who pore over indentures in search of claims priorities under different stress scenarios. "You can make money two ways," he says. "You can take risk or you can work. We do work."

Guggenheim's edge, according to Minerd, comes in part from handpicking debt products outside benchmarks such as the 10,000-security Bloomberg Barclays U.S. Aggregate Bond ►



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Florida Keys private island just 3 minutes by boat to shore accommodations in Ocean Reef. Self sufficient with water and electric in place from shore to 12 large bay front lots. 1 main home, 2 caretaker's cottages and 20 slip marina. **$95,000,000**. Russell Post.

Russell Post Sotheby's International Realty
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CANTON, GEORGIA

One-of-a-kind masterpiece estate encompassing 40± fenced acres with a guest house, barn, amazing gardens, peaceful pastures, relaxing pavilions, trails, a stocked lake and breathtaking landscapes. A true Georgia gem. **$13,500,000**. Cynthia Chandlee.

Atlanta Fine Homes Sotheby's International Realty
+1 770.442.7300 | atlantafinehomes.com

ANNAPOLIS, MARYLAND

Historic Holly Beach Farm with its 1908 Georgian mansion, exquisitely renovated by acclaimed Arlene Critzos and Warnock Studios, is magnificently sited on a 26 acre oasis with 3/4 of a mile of waterfront and private beach. **$14,500,000**. Marc Fleisher.

TTR Sotheby's International Realty
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NEW YORK, NEW YORK

The Woolworth Tower Residences offers a club-like intimacy while surrounded by world class restaurants, hotels and shopping. Price upon request. Stan Ponte and Joshua Judge.

Sotheby's International Realty
East Side Manhattan Brokerage
+1 212.606.4109 / 431.2476 | sothebyshomes.com/00111259

NEW YORK, NEW YORK

Located in a prestigious prewar cooperative in the heart of the Upper East Side, this 7-into-6 room apartment features 40+ ft overlooking Park Avenue. **$4,850,000**. Jeanne H. Bucknam and Nikki Field.

Sotheby's International Realty
East Side Manhattan Brokerage
+1 212.606.7717 / 606.7669 | sothebyshomes.com/00111296

NEW YORK, NEW YORK

Apartment 5D at the Knickerbocker has over 1,600 sf and is a true 2 BR, flex 3 BR apartment that is amazingly spacious with an open floor plan. **$2,645,000**. Vannessa A. Kaufman.

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RYE, NEW YORK

Exquisitely renovated historic Colonial ideally located in a prestigious private gated waterfront enclave. Customized luxury throughout all 3 floors and move in ready. Walk to beach clubs. **$6,750,000**. Christy Murphy and Melissa Kaminsky.

Julia B. Fee Sotheby's International Realty
+1 914.262.7123 | juliabfee.com

TYPE SIRA <GO>

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“Virtually every client agreed to increase risk. The financial crisis was the best thing that ever happened to us”

Index, which determines allocations for passive investors. He currently likes portfolios shaped like a barbell, with low-risk, low-yield securities, such as Treasuries, at one end balanced with esoteric asset-backed securities or collateralized mortgage obligations on the other end. He looks for relative value, rotating sectors or changing asset allocations as opportunities come and go. “About 80 percent of our securities aren’t in the index,” he says, noting that the benchmark aggregate represents a minority share of more than $40 trillion in the U.S. bond market. “Why limit yourself?”

The Guggenheim Total Return Bond Fund institutional class earns five stars, the highest possible rating, based on performance, low volatility, and relatively low fees, says Todd Rosenbluth, director of fund research for CFRA. But its 14 percent stake in unrated securities as well as ABS and CLO holdings poses a downside if the fund ever faces large redemptions because of their lack of liquidity, he says. “It’s a risk that investors perhaps need to be mindful of,” Rosenbluth says. “This fund has experienced strong inflows in its life. If and when that reverses, unrated securities would be harder to sell.”

Another concern is Guggenheim’s lack of senior talent and tenure below Minerd, especially on the credit desk, according to Eric Jacobson, a Morningstar Inc. fixed-income analyst, who visited Guggenheim’s Santa Monica offices in February to begin preparing a formal review of the funds. “You’d expect to see more of that in a team that has so much responsibility for getting securities into the Total Return portfolio, for example, where they have such a huge focus on structured credit and because it’s considered such a core competency,” he says.

Guggenheim paid a $20 million fine in August 2015 to settle Securities and Exchange Commission charges that it breached its fiduciary duty by failing to disclose a $50 million loan that an unnamed executive received from a client in 2010. The SEC also found Guggenheim charged a client fees for assets that weren’t under its management and failed to enforce its code of ethics that restricted taking flights on clients’ private airplanes. Guggenheim directed questions to the SEC order and a statement issued at the time of the settlement, which said the executive implicated in the scandal left Guggenheim and that the firm had implemented more comprehensive compliance policies and procedures. “We are fully mindful of—and deeply committed to—our fiduciary responsibilities to our clients,” the statement reads. “Any failure to perform to the highest level is not acceptable.”

IN DECEMBER, Minerd shared a Manhattan banquet stage with then-Vice President Joe Biden and Starbucks Corp. CEO Howard Schultz as the three men each received a Robert F. Kennedy Ripple of Hope Award. Minerd was recognized for his involvement in charities, such as a Los Angeles family planning clinic, a homeless mission, and a sanctuary in Uganda for persecuted gay, lesbian, and transgender people. “I don’t feel entirely worthy,” he said in his acceptance speech. “The acts were meant to be private, motivated by conscience and love in a secret place in my soul.”

Minerd credits Scripture as his guide, and often recites passages from memory. He describes his leadership style by quoting Matthew 8:9, about the Roman centurion whose faith was a marvel to Jesus: “For I myself am a man under authority, with soldiers under me.” He recalls how his dog, a mixed breed stray, was slated to be euthanized in a shelter before her rescue. When a friend suggested naming the dog Grace, Minerd says, a letter from the Apostle Paul sprang to mind, including the passage: “For by grace you were saved, and that is not of yourself but a gift from God.” Minerd brings the dog to his office; she even joins him when he flies cross-country on the company jet. “I realized that Grace was saved by grace, a gift from God,” Minerd says as he scratches her between the ears after breakfast in Santa Monica. The two make an odd couple—the knee-high mutt and the muscular Minerd. He’s the master investor, but in some ways she’s the boss, the one who gives his life structure and purpose. “We’ve been here too long,” Minerd says, as if reading Grace’s mind. “There’s squirrels to be seen.”

The two walk out, slowly. ●

Gittelsohn covers investing for Bloomberg News in Los Angeles.

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A New Way to Watch

By JOE WEISENTHAL

TV
<GO>

AS YOU PROBABLY know by now, linear television—the way your parents watched the tube—is starting to look pretty antiquated. We watch video whenever and wherever we want on a myriad of devices other than the rectangular boxes we call TVs. Yet despite a host of fantastic content made for on-demand bingeing, some programming, including sports and financial news, really is best seen live. I can't help you on the sports front, but I might be able to assist with the other one. While this is going to sound like some kind of shameless promotion, I assure you I'm being totally sincere: {TV <GO>} either is, or at least should be, the future of live television.

In addition to the live Bloomberg video feed, you can access a constantly updated tally of breaking news headlines and other relevant contextual material. Market data regularly flash on the scroll, as well as charts showcased by anchors. If we broadcast something that intrigues you—about the relative strength index, say—you don't have to let it float by. Click on the link, and you'll be able to interact with the data on your terminal.

Beyond experiencing TV interactively, you can also search video by keyword or topic (because it's crazy that television isn't searchable like everything else in the world in this day and age). You can hunt through past footage or pull up a schedule of coming guests and discussions.

Television as we know it may be under threat these days, but if broadcast content behaved more like what we've created with this function, TV might become a must-see spectacle again. ●

Weisenthal co-hosts *What'd You Miss?* on Bloomberg TV and is the executive editor of digital news at Bloomberg.

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