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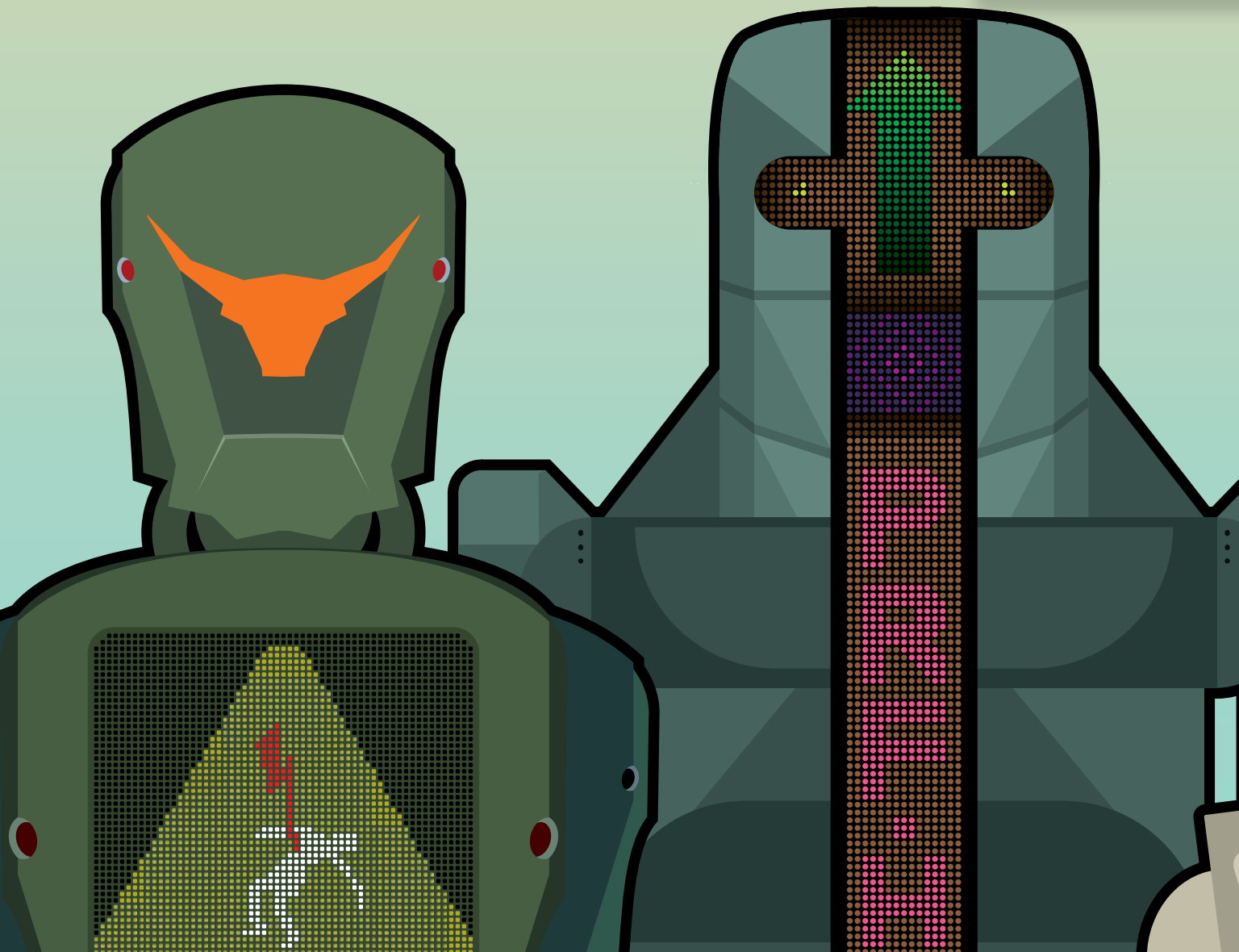
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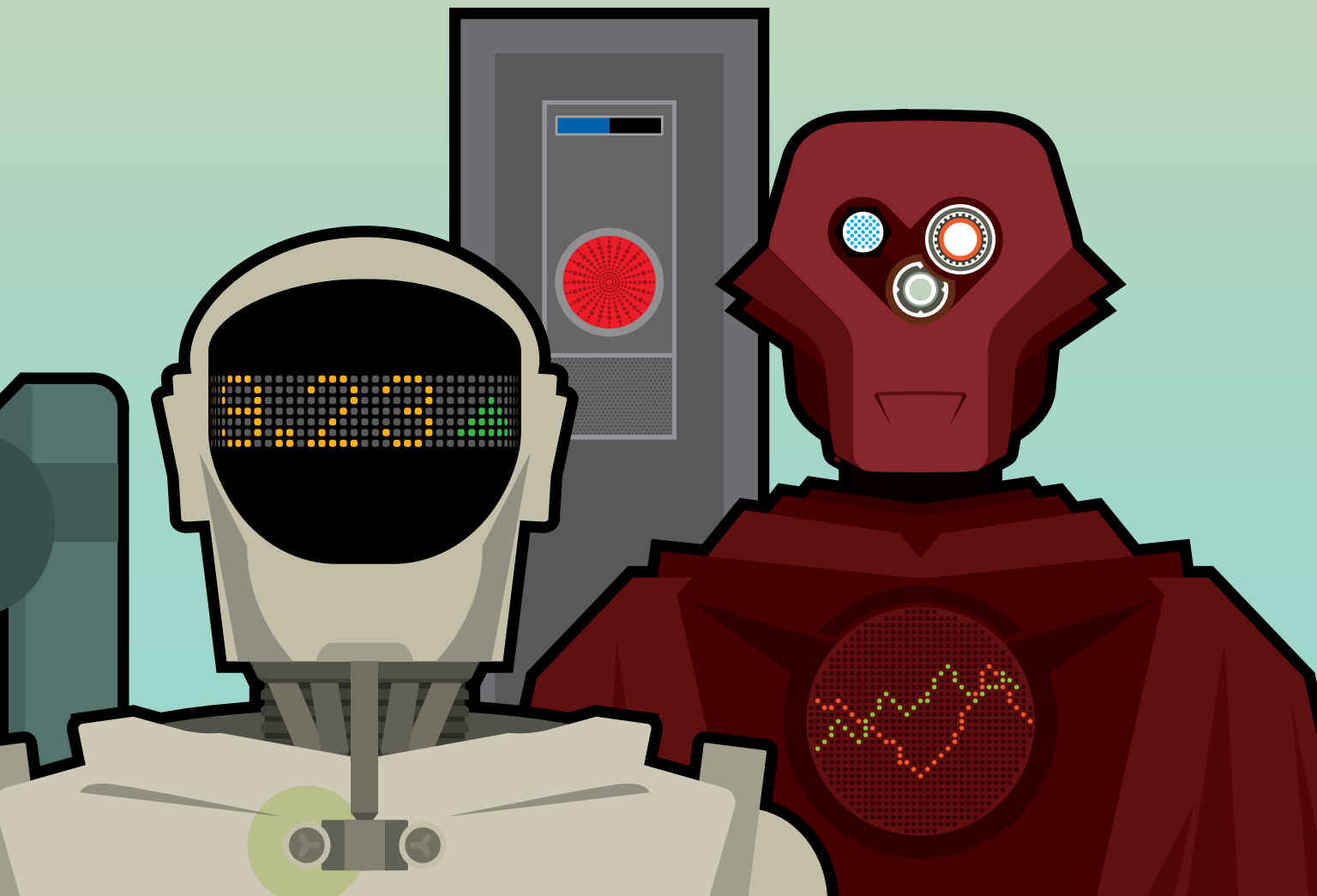


BY ANTHONY EFFINGER
AND ERIC BALCHUNAS

SMART-BETA ETFs USE MACHINES
TO OUTPERFORM HUMANS, BUT SOME
CAN BE LESS THAN BRILLIANT.

ILLUSTRATIONS
BY 5W731

GORITHMS!



FEW PEOPLE HAVE PROFITED MORE FROM THE SO-CALLED SMART-BETA CRAZE THAN TOM DORSEY. A NEW EXCHANGE-TRADED FUND THAT HE RUNS USING A CENTURY-OLD CHARTING METHOD TOOK IN \$1.2 BILLION LAST YEAR. THEN, IN JANUARY, HE SOLD HIS

22-person investment firm, Dorsey, Wright & Associates, to Nasdaq OMX Group for \$225 million.

Dorsey calls himself a money manager, but his methods are more robot designer. He says so himself, proudly. If Dorsey and his team got abducted from their Richmond, Virginia, office by aliens, their algorithms could keep picking investments for the firm's new money magnet, the First Trust Dorsey Wright Focus 5 ETF, forever. "Once a quarter, we press a button," Dorsey says. The Focus 5 algorithm then generates a list of investments, and First Trust Portfolios, his partner company, executes them. Otherwise, they don't meddle with the robot. "We just need someone to press the button."

That, for Dorsey, is the essence of smart beta, or strategic beta, or scientific beta, or factor-based investing, or fundamental indexing, depending on which Ph.D. is talking. (Most smart-beta funds are designed by finance geeks.) It's index investing with key twists, all of them rules-based, with no active management required. Most smart-beta funds track custom indexes. Some are simple variants of the Standard & Poor's 500 Index and do what they say on the box. Others are hand-crafted and small batch, made by people with little more than a stock-filtering system and a dream.

The idea is money—as marketing, at

least. There are almost 400 smart-beta funds in the U.S. right now, and they account for \$400 billion, or 20 percent of all assets, in domestic ETFs, according to Bloomberg Intelligence. That's up from zero in May 2000, when the first prototypes—one iShares ETF aimed at growth and another at value—marched out of the lab and onto exchanges.

Like any Wall Street bonanza, this one has drawn imitators, innovators, and possibly a few hucksters, according to the U.S. Financial Industry Regulatory Authority, which included smart beta on a list of eight product categories that it plans to scrutinize for sales violations this year. "For individual investors, products tracking these indices may be complex or unfamiliar," Finra said in a Jan. 6 letter. "It remains an open question how the indices and products tracking

Smart-beta believer
Tom Dorsey sold his firm to Nasdaq for \$225 million.



them will behave in different market environments.”

No one has claimed credit for coining the now ubiquitous term *smart beta*, which, in just two words, makes a big, market-beating promise. Among the financierati, *beta* means return you get simply for taking the risk of owning stocks. The much rarer *alpha* is extra return from spotting something that the market missed. Despite what human managers say, alpha is rare. Smart-beta enthusiasts accept that and try to better mine the returns from beta using an eclectic range of strategies, filtered for various factors and united by their set-it-and-forget-it rule books.

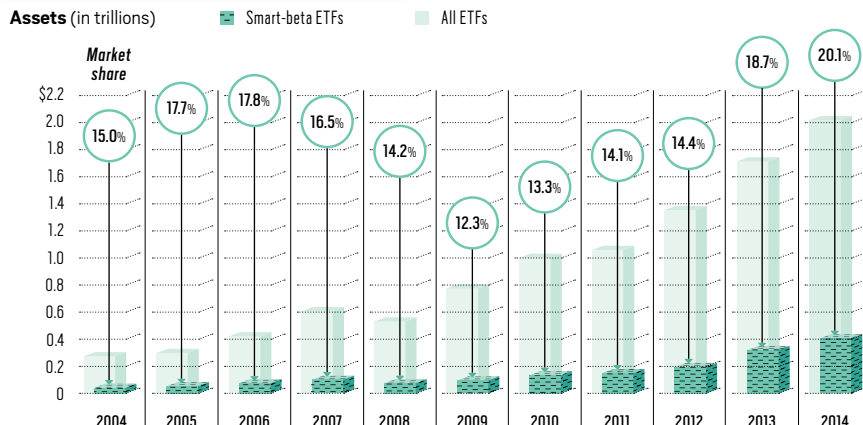
One can, for example, buy all the stocks in the S&P 500 in equal amounts (giant Apple down to tiny Diamond Offshore Drilling) with the Guggenheim S&P 500 Equal Weight ETF, rather than following the index's decades-old rule of giving greater weight to bigger market capitalizations. Other funds weight the index by volatility, dividends, sales, book value, or growth in earnings.

One of the most popular smart-beta ETFs is the WisdomTree Europe Hedged Equity Fund, which investors are using to surf the wave of money the European Central Bank is releasing to combat deflation. The dollar-based fund buys euro zone exporters but hedges against swings in the euro. That saved Europe Hedged from ruin last year when the currency tumbled 12 percent against the dollar, a move that would have turned its gains into losses. As of Feb. 17, the fund had taken in more money in 2015 than any other ETF, smart beta or otherwise, with \$4.3 billion.

Many smart-beta funds encode even-more-complex rules into their operating systems. ProShares Large Cap Core Plus, for instance, makes the WisdomTree fund look as clunky as a Commodore 64. ProShares Core Plus uses borrowed money—leverage—to buy stocks that meet 10 different targets, including value, growth, and price momentum. “It allows you to put a little more money where your mouth is on the long side,” says Michael Sapir, founder and CEO of ProShare Advisors.

GROWTH SPURT

ETFs have grown into a category with more than \$2 trillion in U.S. assets. Smart-beta funds now account for one-fifth of that figure.



Source: Bloomberg

ProShares Core Plus also sells short stocks that miss the targets, betting they'll decline. The strategy was designed by Andrew Lo, a professor of finance at the Massachusetts Institute of Technology Sloan School of Management, and Pankaj Patel, now an analyst at Evercore Partners. Between the leverage and the short sales, Core Plus looks like an exchange-traded hedge fund. From its inception in July 2009 through last year, the fund returned 166 percent, compared with 156 percent for the S&P 500.

What smart beta does best is sever the link between the price of a stock and

assets. “By linking the weight to price, the more expensive something is, the bigger your holding,” says Arnott, who received a bachelor's degree in economics, applied mathematics, and computer science from the University of California at Santa Barbara. That means you're buying some stocks because other people like them, he says, not because they're better companies. “Why on earth would you want to do that?” he asks.

Arnott and his chief robot designer, Jason Hsu, a finance Ph.D., unveiled the index that drives the \$4.3 billion PowerShares FTSE RAFI US 1000 Portfolio in

WHAT SMART BETA DOES BEST IS SEVER THE LINK BETWEEN THE PRICE OF A STOCK AND ITS WEIGHT IN AN INDEX, SAYS ROB ARNOTT, CHAIRMAN AND CO-FOUNDER OF RESEARCH AFFILIATES.

its weight in an index, says Rob Arnott, chairman and co-founder of Research Affiliates in Newport Beach, California. Arnott has become a demigod in the movement since co-authoring the 2005 paper “Fundamental Indexation.” Research Affiliates indexes are used by fund companies to manage \$180 billion of

2005 after testing myriad measures for company size, even the number of employees. The factors Arnott and Hsu settled on: book value, sales, dividends, and cash flow. Their algorithm requires that the fund sell stocks that are judged pricey by those measures and buy others deemed to be cheap.

So far, Arnott's robot is working—really well. PowerShares FTSE RAFI has beaten the S&P 500 since it started on Dec. 19, 2005, with a total return of 120 percent versus 103 percent.

The beauty of that fund, and smart beta in general, is that the machine will make hard trades when the human won't, Arnott says. It won't hesitate to pick up damaged goods at a fire sale, and it will hang on when the world looks ready to end. That, according to Warren Buffett, is when to buy, and it's exactly when most humans freak out and sell instead.

Take 2009. Lehman Brothers had failed the year before, and the financial system veered toward collapse. Human traders dumped anything that looked like a bank or brokerage. FTSE RAFI, on autopilot, more than doubled its positions in Bank of America and Citigroup. Then, government measures to end the panic took hold, and the fund returned 42 percent for 2009, compared with 26 percent for the S&P 500.

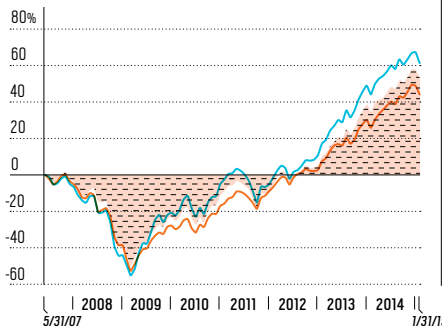
A client for whom Arnott manages money in a separate account that mirrors FTSE RAFI begged him not to rebalance into bloodied financial stocks; Arnott

HOW SMART?

While some smart-beta ETFs have outperformed market indexes, others have lagged.

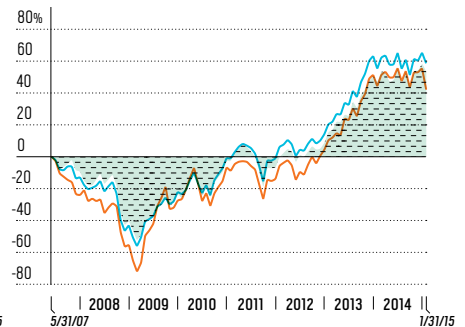
Large Cap

SPDR S&P 500 ETF Trust (SPY US)*
PowerShares FTSE RAFI US 1000 Portfolio (PRF US)
WisdomTree LargeCap Dividend Fund (DLN US)



Small Cap

iShares Russell 2000 ETF (IWM US)*
First Trust Small Cap Core AlphaDEX Fund (FYX US)
Guggenheim S&P Smallcap 600 Pure Value ETF (RZV US)



*Market cap-weighted ETFs that closely track the S&P 500 and Russell 2000, respectively. Source: Bloomberg

yielded, and the client lagged behind the fund by 7 percentage points. "The more uncomfortable the rebalance, the more likely it is to be profitable," Arnott says. "The rebalance into financials was predestined because all we do is maintain the weights of the sectors to reflect their weight in the macro economy. The financial sector hadn't gone away. It was just reeling." And Arnott's algorithm mandated that it buy more to rebalance, as insane as that looked at the time.

Many smart-beta believers are converts from other disciplines. Dorsey's story, for instance, borders on the spiritual. In 1979, after leaving his job as a stockbroker at Merrill Lynch, he started the options department at Wheat First Butcher Singer and discovered the book *The Three-Point Reversal Method of Point and Figure Stock Market Trading*. First published in 1947, it described a simple technique for tracking stocks that the author, A.W. Cohen, said could divine price patterns. The point-and-figure method has been around since the 1800s; Charles Dow, creator of the namesake index, even used a version to pick stocks, according to Dorsey. It's also absurdly low tech: You simply track a security's moves with columns of X's, for up,

and O's, for down. Get the right pattern of X's, you buy; O's, you sell.

The simplicity dazzled Dorsey, and in 1987, he started his own firm to teach the method to brokers. By the time the idea of smart beta came along, his firm, Dorsey, Wright & Associates, had taught thousands how to use it for their clients. "You could look at this like my ministry and the financial advisers as my ministers," he says.

Since then, Dorsey Wright has developed 82 different models for investing in stocks, ETFs, and country funds. Dorsey's computerized system holds a point-and-figure bake-off between every ETF, say, in his universe, pitting one against all, then another against all, and so on, to see which is sending the strongest buy signal. Brokers using Dorsey Wright pay for the recommendations. More recently, fund companies, including First Trust and Invesco PowerShares, have used his models to guide purchases in 17 ETFs and mutual funds, for which they pay Dorsey Wright a fee. The Focus 5 ETF, which launched in March 2014, uses point-and-figure methods to buy just five other ETFs offered by First Trust in Wheaton, Illinois, each of them industry-specific. Brokers already using the Dorsey Wright models flocked

BLOOMBERG TIPS

How to Spot a Smart-Beta ETF

You can use the ETF Finder (ETF) function to spot smart-beta funds. Type **ETF <Go>** on the Bloomberg Professional service. Pick any category you want from the drop-down menus at the top; try the equity asset class and the health-care industry, for instance. In the bottom half of the screen, you'll see the ETFs that meet those criteria. Bloomberg classifies ETFs according to their weighting methodology, which is shown in a column on the right side of the screen. Any fund weighted by something other than "Market Cap" is a smart-beta ETF. In this list, we can see smart-beta ETFs with index weightings ranging from "Equal" to "Fundamentals" to "Multi Factor." For further analysis, you can right click on any ETF to see more information or examine its portfolio. **ERIC BALCHUNAS**

to it. By year's end, Focus 5 had \$1.62 billion under management, the most of 200 ETFs launched last year. And then Nasdaq came calling, looking to get a piece of the smart-beta boom and reduce its dependence on low-margin trading, Dorsey says. It bought the whole firm.

The craze is driving traditional indexers nuts. "Don't mention smart beta in this office!" Jack Bogle, 85, founder of Vanguard Group and father of the index fund, tells *Bloomberg Markets*. (See "Is There a Next Jack Bogle? Not If You Ask Jack Bogle," page 54.) "I don't even know what it means. Baloney. Marketing!"

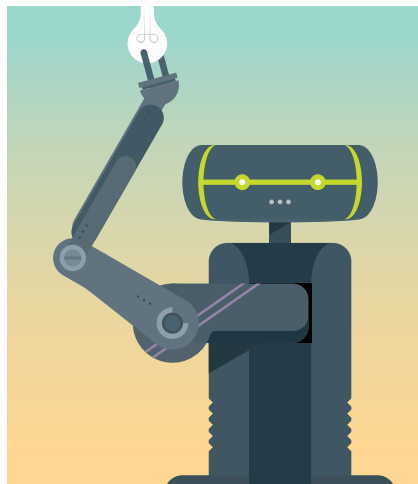
Rick Ferri, founder of Portfolio Solutions in Troy, Michigan, says smart beta is a ploy for active managers to retake some of the billions lost to Bogle and his low-cost indexes. If an active manager has an investment strategy that shows positive returns over the past decade or so, and it can be encoded in an algorithm, he can call himself an indexer, charge higher fees for his secret sauce, and kick back and get rich, Ferri says. "Everything that used to be active management became fundamental indexing," he says.

SMART BETA IS A PLOY FOR ACTIVE MANAGERS TO RETAKE MONEY LOST TO LOW-COST INDEXES, SAYS RICK FERRI, FOUNDER OF PORTFOLIO SOLUTIONS. 'THEY'RE MAKING REALLY GOOD JUICE ON THIS,' HE SAYS.

The Janus Velocity Tail Risk Hedged Large Cap ETF has many of the things that smart-beta critics such as Ferri love to hate. Started in June 2013, the fund returned 6.8 percent in 2014, compared with 13.7 percent for the S&P 500, even though it invests in S&P 500-tracking ETFs. It underperformed because it paid for derivatives that protected it from tail risk—the slim chance that

something would go really wrong. That insurance lowered its risk, certainly, but the fund captured just 50 percent of the index's return, after expenses. Those totaled 0.71 percent, or \$71 on each \$10,000, compared with 0.39 percent, or \$39 per \$10,000, for Arnott's PowerShares FTSE RAFI. "They're making really good juice on this," Ferri says.

Velocity Tail Risk doesn't trade much either. Some days fewer than 1,000 shares



change hands, making it harder for sellers to find buyers. Last year, the average difference between an offer to buy and an offer to sell was 0.31 percent, or 62 times the average spread in the SPDR S&P 500 ETF Trust, which closely tracks the index. The Velocity Tail Risk fund is designed to give up some gains in exchange for peace of mind, says Nick Cherney, head of exchange-traded products at Janus Capital Group in Denver. "In major bull markets, we don't do as well," Cherney says. "Our real value comes on the worst days."

Newer funds have become even more esoteric. The AlphaClone Alternative Alpha ETF searches regulatory filings to find stocks owned by hedge funds and also has the option to apply a partial hedge by shorting the stock market. The ALPS US Equity High Volatility Put Write Index Fund sells options on stocks prone to big swings and distributes the proceeds to investors. The Gold Shares Covered

Call ETN sells options on another ETF that holds gold.

Some money managers say smart beta has become too clever. Peter Mallouk, president of Creative Planning, a financial advisory firm in Leawood, Kansas, sees a lot of marketing B.S. "I think a lot of people are going to be negatively surprised by smart beta," he says.

William Bernstein, a retired neurologist in Portland, Oregon, who's written four books on investing, is also skeptical. "Is there a lot of dumb money going into smart beta?" he asks. Probably, he says, and it makes him wary. "When I own an asset class, I ask how savvy my co-owners are. Here, you're getting an influx of undisciplined investors who think they're getting a free lunch."

Dorsey plays pool in a league in Richmond. After the Nasdaq purchase of his firm, he could doubtless take more time to hone his skills. But he plans to stay on as a consultant. He has his copy of Cohen's book on his office wall, and he still marvels at how his system just chugs along. Yet even Dorsey recognizes that robots have their limits. "The more esoteric you get with ETFs," he says, "the more they don't work."

Best to stick with a 100-year-old charting system, Dorsey says. Simple though it may be, the fees and expenses on Focus 5 are 0.94 percent a year, which is high even for a smart-beta fund. Dorsey says most of that goes to First Trust and that his firm gets about 0.2 percent.

But the expenses could be worth it. The oldest ETF using a Dorsey Wright model, PowerShares DWA Momentum Portfolio, has returned 82 percent after fees since it was started in March 2007, compared with 78 percent for the S&P 500. That's not exactly a Terminator triumph, but smart beta isn't a Skynet strategy for world domination. It's about incremental wins over time that compound their way to greater wealth. Leave the robot alone and that's what you get—provided you have the right robot.

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