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Bots buy beans

Once upon a time, investors used machines. Nowadays, machines use investors. Even so, you can't blame the algos for paying 22.6 times the consensus earnings forecast for Deere & Co. It wasn't the machines that wrote the algorithmic software. Humans—evidently the bullish ones—did.

Now in progress is a return visit to Deere (DE on the New York Stock Exchange) conjoined to a speculation on the consequences of auto-investing in stocks and commodities. To anticipate, we remain bearish on Deere, bullish on security analysis. As for corn and soybeans, you can have them.

Deere's share price trades where it does in the context of plunging farm incomes (if the USDA is on the beam, this year's total will represent a halving of the $123.7 billion registered as recently as 2013) and mounting agricultural surpluses. Last week, Reuters reported that Kansas farmers, fresh out of bins and elevators, were storing their harvested crops in parking lots, empty fields and decommissioned military bases.

Not that things couldn't be worse. Yes, allows Greyson Colvin, managing partner of Colvin & Co. LLP, which invests in agriculture, farmers are subsisting on tiny margins. "But at least," he tells colleague Evan Lorenz, "they can still forward-sell corn for $3.90 on the Board of Trade. Although that is not the $8.00 we had in 2012, it is enough to cover their costs per acre and leave a little bit of profit in their pocket."

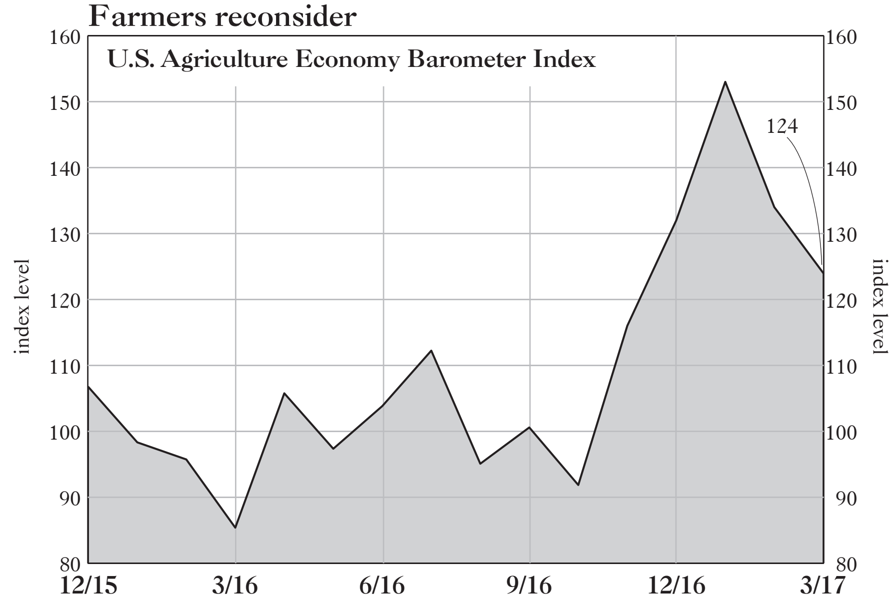
It's not hard to imagine how even that little bit could seep away. For instance, American grain exports may fall victim to the dollar exchange rate ("too high," President Trump averred last week) or to the politics of international trade. In anticipation of a redraft of the North American Free Trade Agreement, Mexico, the largest importer of U.S. corn, is in talks to buy more grain from Brazil and Argentina.

Enter, here, certain kinds of institutional money managers. Unfazed by USDA data or by the evident glut of row crops, they continue to buy farm commodities. They do what they do not out of any informed conviction about agricultural supply and demand, but rather in the cause of "hedging" or "diversifying" or "gaining exposure." Risk-parity managers are among these conceptual investors (*Grant's*, May 29, 2015). For instance, AQR Risk Parity Fund—a rare public mutual fund in the normally close-to-the-vest risk-parity industry—showed a 23.6% "risk allocation" to commodities futures contracts at year-end. They ranged from silver and copper to soybeans and wheat.

For many such seekers of commodity exposure, "risk" is just the word. The PowerShares DB Agriculture Fund (DBA on NYSE Arca), an index-tracking exchange-traded fund, is one example. DBA's top holdings as of April 17 were contracts on live cattle (15.8% of net assets), corn (12.8%), soybeans (12.5%), wheat (12.1%) and sugar (10.8%). The ETF's share price peaked at $42.98 on Feb. 26, 2008 and has since plummeted by 54.1% to $19.73. Over the same period, the CPI has increased by 14.9%, which drops DBA's inflation-adjusted loss to 69%.

"You have investors who put 1%, 3%, 4.5%—whatever their number is [of their

Farmers reconsider



source: The Bloomberg

portfolios]—into these commodity indexes," Keith D. Bronstein, a longtime commodities investor *and* fully paid-up subscriber, tells Lorenz. "At the end of the year, when the investment-policy committees meet—and I've sat on institutional committees like this—when they sit down and look at their returns, they say, 'We made 10%.'" And if the 3.5% of the portfolio that was invested in commodities happens to have lost 10%, who notices?

Chair Janet Yellen, Ph.D. and, before her, Chairman Ben S. Bernanke, Ph.D. exhibit similar habits of mind. They, too, are top-down thinkers. And they, too, are preoccupied with inflation, or rather with "price stability," which they define as 2% inflation. To foster a 2% inflation rate, the central bankers encourage credit formation, which—as in the retail grocery business (see *Grant's*, March 24)—leads to excess capacity and price wars and the very deflationary symptoms that the Fed is supposedly working to resist.

In Deere's improved tractors and Monsanto's drought-tolerant seed, engineers and scientists have likewise contributed to lower commodity prices. Investors have also proved a force for deflation, Bronstein goes on. Not that that persistent, conceptual buying has pushed grain prices lower, of course. It has rather prevented prices from falling to levels at which the traffic signal of production turns from green to red and the traffic signal of consumption turns from red to green. Today's prices, middling though they are in corn and beans and soybean meal, are high enough to entice producers to expand: "They are getting a signal from the market that says, 'We don't have enough. Give us more.' That is what they continue to do."

On April 11, the USDA raised its estimate of year-over-year growth in worldwide soybean stocks by 13.3% and forecast that record-high millions of American acres would be planted in beans this year. The front-month soybean contract buckled on this plainly bearish news but rallied to finish down only fractionally, at $9.39 a bushel. Do bots buy beans?

Perhaps the weather will make a winner of the auto-bidding commodity investors. Or perhaps the sheer weight of surplus supply will make its mark, as it seems to have done in wheat (according to USDA prognostications, in 2017 American farmers will plant the fewest acres of this crop in 98 years). "In the case of corn, it is just now beginning to roll over," says Bronstein. "It has taken years. The point is that planting corn is not a great option in the U.S. It remains a terrific option in Brazil, Argentina and Ukraine. So, production there continues to grow. Production in the U.S. in terms of acreage has plateaued."

Harrison Waddill

Green machines jam the lot of the Deere dealership in Orange, Va. Send us your snaps of the clogged Deere lot in your hometown.

. . .

The bear case for Deere begins with the drop in farmer income and continues with a twist in the U.S. tax code. Section 179 of the federal rent-seekers' guidebook allows businesses to deduct the full cost of equipment (new or used) against current-period taxes. In 2010, Congress doubled the tax write-off to $500,000. Flush as they were, farmers took to replacing their Deere tractors almost before the tires got muddy. The upshot is a new-ish American tractor fleet, late-model trade-ins crowding dealer lots and weak tractor prices. (See photographic evidence nearby.) To rev up business, Deere has increasingly turned to operating leases. They facilitated 14% of sales in fiscal 2016 (ended Oct. 31), up from 6% of sales in fiscal 2013.

From the date of the first *Grant's* analysis (see the issue dated March 11, 2016), Deere's share price has rallied by 19% to $108.47, only slightly below the all-time high of $111.22, set on March 1. Farmer sentiment did lurch upwards after Nov. 8, and that post-election cheer did help to move some used equipment, so a pair of Deere & Co. dealers, one in Illinois and another in Nebraska, tell Lorenz. Then, too, Deere reported an OK first quarter, ended Jan. 29.

Not that the figures were so good. What was good was that they were not so bad. Net sales slipped by 1.5% year over year to $4.7 billion, topping consensus estimates of $4.6 billion, while earnings per share fell by 24% year over year to $0.61, above the consensus forecast of $0.55. (The sale of a stake in SiteOne Landscape Supply, Inc. boosted EPS by $0.21.) Management raised full-year net income guidance to $1.5 billion from $1.4 billion (again, largely owing to the SiteOne disposition). Surprisingly, Deere reported a 2% year-over-year increase in average equipment prices, which bolstered operating income by $94 million and contributed mightily to the $247 million booked in equipment operating income.

"The share price was, no doubt, helped by short-covering," Lorenz observes. "Since Deere's CFO Rajesh Kalathur unveiled a $500 million cost-cutting program in the final minutes of the third-quarter earnings call on Aug. 19, 2016, shares sold short have declined to 15.7 million, or 5% of the float, from 29.4 million. Subsequent details of the cost-savings plan proved somewhat disappointing: One-third of savings are projected to stem from direct and indirect material savings, one-fifth from 'people-related' costs and the remainder from lower R&D, lower variable pay and lower depreciation. The last three categories of savings, generating half of the hypothetical whole, would disappear if sales actually rose. How a company can cut depreciation expense is a puzzler."

Something else has helped the share price. A certain kind of investor buys Deere (as a certain kind of investor buys corn or beans) because the stock (like the commodities) is a component of an index or ETF. Deere constitutes 6.7% of the Thomson Reuters CRB Agriculture Producers Index and 4.4% of the Indxx Global Agriculture Index. The big three passive managers—BlackRock, Inc., Vanguard Group, and State Street Corp.—hold 14.9% of Deere Common.

Like the Trump trade, the farm trade is apparently fading. Certainly, if farm incomes follow the USDA's script, nonexistent profits won't require a tax shield. Then, too, if the Trump tax plan comes to fruition, Section 179 offsets might lose their utility. Besides, the Deere tractor fleet is still young and shiny green; those massive purchases through 2013 have left the country over-tractored.

A recent analysis by Barclays analyst Robert Wertheimer compares the intensity of mechanization in American agriculture with that at SLC Agricola, the million-acre Brazilian mega-farm. In 2016, that world-class operation used 0.21 horsepower per hectare [one hectare equals 2.47 acres]. The average American farm used 0.59 horsepower per hectare. To quote Wertheimer: "The U.S. thus has almost triple the horsepower used at a world-class farm. . . . The last upcycle was only 30% more."

"Exactly how did Deere achieve its counterintuitively strong pricing on equipment sales?" Lorenz asks, and he answers: "In the first quarter, the company issued loans and leases financing 94% of total equipment sales, up from 89% in the first quarter of 2016 and 60% in fiscal year 2013. Customers care about monthly payments, not list prices. If Deere is supporting high prices through cheap financing or overly optimistic residual values, this will reduce future income from finance operations."

In 2016, Deere's customers struggled with low grain prices while Deere gained from low steel prices. In January 2016, cold-rolled steel changed hands at $420 per short ton; today, it's quoted at $720. *Grant's* happens to be bearish on seaborne iron ore (see the issue dated Jan. 13), but the posted rise in U.S. steel prices will put pressure on Deere's results for the next several quarters (it takes six months or so for changes in the cost of steel to show on Deere's gross margin).

The jump in steel prices is a "sector-wide issue" for industrial-equipment makers, says Jay Van Sciver, who rates Deere a sell for Hedgeye Risk Management. Deere, Caterpillar, Inc. and Wabtec Corp. posted better than estimated margins in 2016, weak sales notwithstanding. It's a bit of a mystery, says Van Sciver. As sales decline, you expect margins to fall faster as the same fixed costs get spread over a lower revenue base—a case of economies of scale working in reverse. There are two explanations for the surprise strength in 2016 margins, Van Sciver reflects: "Either . . . the idea of economies of scale has gone away or steel prices went down. I think it is not much of a mystery."

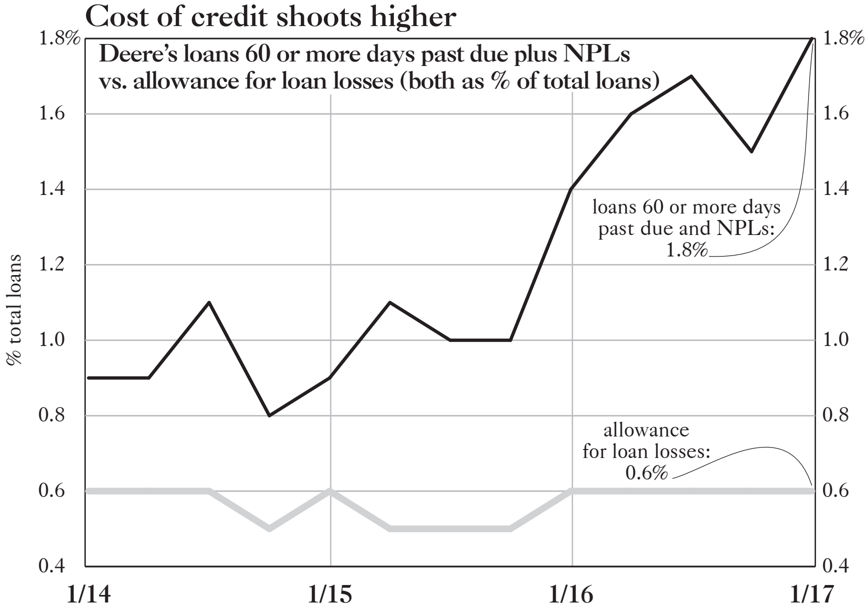
Deere does not disclose what percent of its cost of goods sold (COGS) is related to steel. Caterpillar has indicated that around one-fifth of its COGS are steel. "Deere is probably a little bit less [than Caterpillar]," Van Sciver says. Deere's equipment operations generated $1.9 billion in operating income in the 12 months ended Jan. 29. Let's assume that steel accounts for 15% of total COGS, which is a guess in the absence of company guidance. A 10% increase in the price of steel would lower operating profit for Deere's equipment businesses by 14%.

"As leasing became a bigger part of Deere's business," Lorenz relates, "the company changed the frequency with which it evaluates potential losses on residual values. In the 10-K report for fiscal year 2014, Deere states that, 'residual values are dependent on current economic conditions and are reviewed quarterly.' In the 10-K report for fiscal year 2015, management changed this to 'residual values are dependent on current economic conditions and are reviewed when events or circumstances necessitate an evaluation.' Which is to say that the front office can pick and choose when to take write-downs. As of Oct. 31, 2016, Deere had exposure to $4.3 billion in operating-lease residual values. Compare and contrast the $4.4 billion of book equity at Deere's finance sub as of Jan. 29. You would have to call the residual risk 'material.'"

Lorenz continues: "The ability to delay recognition of losses will be important in fiscal 2017. In the 10-K report for the fiscal year ended Oct. 31, 2016, management laid out the order of expected lease payments: 44% of future payments in fiscal 2017, 29% in fiscal 2018, 16% in fiscal 2019 and 10% in the years beyond. This implies that a large number of leases will expire this year, leaving Deere with a lot of used equipment.

"The change in residual-loss recognition fits a pattern: Deere's changing the presentation of figures to improve the financial atmospherics. Accompanying each quarter's results is a presentation of 40-plus pages in which a slide titled 'Worldwide Financial Services: Credit-Loss History' details provisions for credit losses divided by the average portfolio of loans; the data begin in 1991. In the third fiscal quarter of 2016 (ended July 31), a footnote appended to the slide

Cost of credit shoots higher



source: company reports

says that the last data point, 0.24%, is the 'annualized provision for credit losses as of 31 July 2016.'

"In the fourth fiscal quarter, the slide changed subtly but importantly: The footnote disappears, and the last data point is not part of the historical provision-to-loans line but a dot over '2017F' (the 'F' means 'forecasted'). That is, the chart now points out expected fiscal 2017 provisions-to-loans (0.29%), rather than the historical trend. The slide for the first quarter of 2017 (ended Jan. 29) is identical to the slide for the fourth quarter.

"Why does this matter? Delving into Deere's 10-Q and 10-K reports, you see that the company has been setting aside fewer funds for problems loans: Provisions were $34 million, $19 million and $7 million in the quarters ending July 31, Oct. 31 and Jan. 29.

"The information that the latest slide omits is vitally important. Between the quarter ended Jan. 31, 2014 and the one ended Jan. 29 of this year, loans past due by more than 60 days or loans deemed non-performing, expressed as a percentage of the total, climbed to 1.75% from 0.87%. Over those three years, provisions for credit losses edged higher to 0.64% of total loans from 0.58%. To bring the provisions to troubled loans back in line with the Jan. 29, 2014 ratio, Deere would need to increase loss reserves by $142 million. For perspective, management is guiding for financial-service income to be approximately $480 million in fiscal 2017."

In commenting on the farm economy, Jim Farrell, president and CEO of Omaha-based Farmers National Co., might as well have been referring to Deere. "I think we dodged a bullet in 2016," he says. "I kind of feel like that bullet is still sitting in the gun waiting to be fired. [This year] we are sitting on pretty good grain stocks. We've got prices that have held up fairly well, but we have a lot of farmer holdings. Farmers have not sold as much grain as they should have, and they are not selling enough 2017 ahead. I think they are hoping for a weather problem and some sort of bump in the market to get better prices. It could easily go the other way."

Management seems to agree. In the past six months, Deere insiders sold 203,889 shares for proceeds of $21.3 million. There were no purchases.

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