

Last Price Fair Value **Consider Buy Consider Sell** Uncertainty Economic Moat™ Moat Trend™ Stewardship **Morningstar Credit Rating Industry Group** 130.00 USD 120 81 usp 91.00 usp 175.50 usp Medium Wide Stable Standard Agriculture

Activist Investor Discloses Stake in Agrium; We See Value in a Number of Agriculture Companies

See Page 2 for the full Analyst Note from 24 Oct 2014

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The primary analyst covering this company does not own its stock.

Research as of 24 Oct 2014 Estimates as of 08 Oct 2014 Pricing data through 21 Nov 2014 Rating updated as of 21 Nov 2014

Currency amounts expressed with "\$" are in U.S. dollars (USD) unless otherwise denoted.

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Investment Thesis 08 Oct 2014

Monsanto's complementary business lines include crop chemicals and seeds. The company first commercialized Roundup weed killer in 1976; 20 years later, it began selling genetically modified seeds that were unaffected by Roundup. Roundup Ready crops allow farmers to spray their entire fields with the potent herbicide without harming crops. Additionally, Monsanto has developed biotech traits that make crops resistant to damaging insects. Monsanto's efforts in biotechnology have been hugely successful. Farmers value the reduced pesticide use, time savings, and yield protection provided by Monsanto's traits. About 90% of the soybeans and 80% of the corn grown in the U.S. contain a Monsanto trait. The firm has saturated the market by snapping up seed companies and also through its extensive licensing program. Monsanto made the decision early to broadly license its traits to competitors, leading to rapid adoption. This decision has created a GM seed industry with multiple licensing deals, collaboration efforts, and frequent lawsuits among the main players.

While the firm's main competitors have worked to close the gap in seed share, we still view Monsanto's research and development pipeline as a step ahead. We think the company will continue plowing about 10% of sales into research and believe its collaborations with the likes of BASF and Dow Chemical will make those dollars even more meaningful. Monsanto offers partners access to its world-class distribution and conventional seed-breeding capabilities, without the need to purchase their own seed platforms.

We think Monsanto will remain the industry leader, but the firm is not without its problems. In our opinion, profits from the Roundup business have been permanently damaged by generic competition. Further, the development of superweeds and bugs poses a real threat to the company's current line of GM seeds. Also, Monsanto is always in some kind of legal battle, and it could do more to strengthen its relationship with farmers. In our opinion, customer relationships and brand image will be even more important in coming years, as patents expire and generic competition enters the GM seed market

Vital Statistics	
Market Cap (USD Mil)	58,481
52-Week High (USD)	128.79
52-Week Low (USD)	104.08
52-Week Total Return %	9.5
YTD Total Return %	5.2
Last Fiscal Year End	31 Aug 2014
5-Yr Forward Revenue CAGR %	7.2
5-Yr Forward EPS CAGR %	14.9
Price/Fair Value	0.93
Valuation Summary and Forecasts	

Valuation Summary and Forecasts										
Fiscal Year:	2013	2014	2015(E)	2016(E)						
Price/Earnings	21.3	23.1	20.7	18.4						
EV/EBITDA	11.9	13.4	12.5	11.5						
EV/EBIT	14.0	156.7	14.7	13.5						
Free Cash Flow Yield %	3.9	3.5	3.9	4.9						
Dividend Yield %	1.6	1.6	1.7	1.9						

Financial Summary and Forecasts (USD Mil)										
	Fiscal Year:	2013	2014	2015(E)	2016(E)					
Revenue		14,861	15,855	16,619	17,556					
Revenue YoY %		10.1	6.7	4.8	5.6					
EBIT		3,570	4,075	4,342	4,739					
EBIT YoY %		13.8	14.2	6.6	9.1					
Net Income, Adjusted		2,482	2,740	2,892	3,178					
Net Income YoY %		21.8	10.4	5.6	9.9					
Diluted EPS		4.60	5.22	5.83	6.57					
Diluted EPS YoY %		21.9	13.5	11.7	12.7					
Free Cash Flow		1,889	806	2,345	2,911					
Free Cash Flow YoY $\%$		-4.4	-57.3	190.9	24.1					

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments

Profile

Originally a chemical company, Monsanto has morphed into an agricultural giant, focusing on seeds and crop-protection products. In a major breakthrough, Monsanto introduced the first genetically modified crop seeds in 1996 and has remained the industry leader. The St. Louis-based company generated more than \$15 billion in sales during fiscal 2014 and is focused on bringing new biotechnology traits to market to improve farmer yields and productivity.



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120.81 USD	130.00 USD	91.00 USD	175.50 usp	Medium	Wide	Stable	Standard	A	Agriculture

Morningstar Analysis

Activist Investor Discloses Stake in Agrium; We See Value in a Number of Agriculture Companies 24 Oct 2014 Activist investor ValueAct on Oct. 24 disclosed a 5.7% stake in Agrium, a company that had a recent rocky experience with activist Jana Partners in 2013. Jana wanted Agrium to split its retail farm store and wholesale fertilizer production business—shareholders eventually sided with Agrium management. ValueAct, however, seems to have no desire to split Agrium, according to management. According to The Wall Street Journal, Agrium's management said ValueAct considers the stock "fundamentally a good value." Agrium's stock is up about 7% intraday on the news. This puts Agrium

We think there are a number of values in the agriculture space today, as a severe dip in North American crop prices has put pressure on ag stocks. We see this pressure as near term, and, in general, we think the effect of crop prices on agriculture company profits is overblown. Our favorite names in agriculture are Monsanto and PotashCorp, both wide-moat companies.

shares very close to our fair value estimate of \$96 per share.

While the market seems to be focused on headwinds from lower corn and soybean prices, Monsanto is still expecting double-digit gross profit growth in seeds in fiscal 2015. Double-digit growth in 2015 would actually best annual growth in fiscal 2014 of 8.4%. We expect about an 11% advance in 2015. Overall, the firm's 2015 guidance matched our expectations.

This expected growth comes despite a precipitous drop in crop prices. Corn prices are currently less than half of peak levels from the past couple of years. Continued profit growth in a low crop price environment underlies Monsanto's technology advantage and its ability to improve its product pricing each season through mix shifts and new product growth.

We think PotashCorp is another good value. While potash

demand will likely see some pressure next season from lower crop prices and a reduction in planted acres, the longer-term growth story for potash is still intact. Over the long run, we expect PotashCorp's volumes to expand significantly as the company fills capacity that it has built over the past few years. In the meantime, this extra capacity serves as deterrent to expansion projects from other potential players, most notably BHP Billiton and its Jansen project in Saskatchewan.

Our outlook for the eventual filling of PotashCorp's new capacity is influenced heavily by our forecast for emerging-market food consumption. In particular, we expect strong caloric intake growth in India and sub-Saharan Africa over the next decade. Our forecast for emerging-market caloric intake and its implications are discussed thoroughly in two recent reports: "Rising Incomes, Changing Tastes: How Africa, India, and China Will Reshape the Global Food and Agriculture Landscape," and "Superior Growth Prospects for Potash as Emerging-Market Bellies Continue to Fill."

Valuation, Growth and Profitability 08 Oct 2014

Our fair value estimate is \$130 per share, which implies a fiscal-year price/earnings ratio of 24 times and an enterprise value/EBITDA ratio of about 15 times based on 2015 estimates. During the next several years, we think the firm's seed portfolio will continue to drive growth as Monsanto's current wave of new products achieves market penetration and subsequent new offerings come out of the pipeline. Further, expansion in international markets, especially Brazil and Argentina, should help boost sales. The operating margin expanded in fiscal 2014 to nearly 26% from 24% in 2013. We expect operating continued margin improvement as cost pressures retreat, INTACTA penetration increases in Brazil, and DuPont ramps up royalty payments for Roundup Ready 2 Yield soybeans. Product mix shifts toward the Reduced Refuge Family and RR2Y should improve margins further. We think operating margin will eclipse 30% by the end of our five-year explicit forecast period. Our cost of equity for Monsanto is 10%.



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Scenario Analysis

Our fair value estimate for Monsanto depends on the firm's ability to maintain and gain share in the important corn and soybean seed markets by continuing to introduce new and innovative products. We have constructed three scenarios—a base case (described in the valuation section), a bull case, and a bear case—to highlight a range of potential outcomes. Further, a handful of notable but difficult-to-estimate risks have the potential to damage the company's share price.

In our bull case, we assume the company is able to take greater share from rivals, as five-year compound annual sales growth climbs to 10% compared with 7% in our base case. In this case, we also assume generic soybean competition does not have much impact on Monsanto as the company is able to move most of its customers to RR2Y soybeans by the time RR1 patents expire and generic competition ramps up. We also assume greater margin expansion, based on cutting-edge product introductions that drive mix shift toward higher-margin stacked traits. Our bull-case fair value estimate is \$160 per share.

In our bear case, we assume share losses to DuPont and Syngenta as rivals catch up to Monsanto in genetically modified seeds. Monsanto's sales growth falls below projected market growth rates, and the firm is forced to cut prices to stem market share losses, leading to lower profitability. Further, we have incorporated stiff generic soybean competition into our bear case. In this scenario, our fair value estimate drops to \$67 per share. Additionally, Monsanto has a few potential negative events looming. The firm is facing two separate government investigations into its business practices, each of which could carry financial penalties. Also, there is the risk that bugs and weeds will develop resistance to the products Monsanto sells. We do not account for any of these events in our bear case, but still note that the risks are real and potentially material.

Economic Moat

Having created the agricultural biotechnology market where it now competes, Monsanto has a wide economic moat, in our opinion. The company's portfolio of patented traits forms the basis of its moat, much in the same way patent-protected drugs form the moat foundation for a pharmaceutical firm like Pfizer. Monsanto's proprietary seed companies use the traits it develops, but the firm also licenses traits for use by others. This strategy has led to dominant market share, and Monsanto enjoys premium pricing for its patented traits. Monsanto uses the cash flows generated from its current product lineup to invest in research and development for next-generation offerings. The company consistently pours 10% of sales into R&D each year.

Monsanto is an attractive partner for agricultural biotech companies without their own extensive seed platforms. Further, the company owns an industry-leading germplasm (a seed bank for conventional and molecular hybrid breeding) and global breeding operation that is difficult to replicate. Signs of Monsanto's dominance in GM seeds are



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readily apparent, including rivals' accusations of controlling an unfair monopoly and the fact that some competitors choose to license the firm's technology instead of going head-to-head with Monsanto. For example, Syngenta has chosen to license Roundup Ready 2 Yield for its second-generation soybean offering instead of investing the dollars to develop its own platform. We think Monsanto will earn returns on invested capital above its cost of capital for quite some time.

Moat Trend

Our moat trend for Monsanto is stable. Despite all of the recent negative headlines, we think the company will continue generating returns on capital for shareholders at a rate similar to historical averages. While the company may not be able to extract large share gains from competitors DuPont and Syngenta, we think its massive R&D budget and important collaboration projects will keep Monsanto at or above industry growth rates in the GM seed market. We think the company will continue to plow about 10% of sales back into R&D in an effort to maintain its market lead. Monsanto's long-term seed profitability will depend on the company's ability to drive farmers toward new products with younger patents in order to fend off inevitable generic competition. We think the company will be relatively successful in this regard and don't expect a dramatic drop-off in seed margins over time.

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Bulls Say/Bears Say

Bulls Say

- Our long term view of the company is bolstered by our forecast for caloric intake in emerging markets, which will put stress on crop yield improvements globally and should play to Monsanto's strengths.
- ► A large global breeding operation gives Monsanto access to a massive germplasm bank across six continents, giving the firm the tools to tailor seeds worldwide.
- ► It looks as if Monsanto's drought-tolerant corn trait will make it to market faster than similar offerings from DuPont and Syngenta. Getting there first is very important in GM seeds.

Bears Say

- ► Increased generic glyphosate competition probably means that Roundup profits have seen their peak.
- Negative sentiment around genetically modified seeds could diminish Monsanto's ability to penetrate new markets.
- Increasing bug and weed resistance could render Monsanto's biotech traits ineffective.

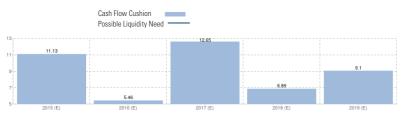


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Credit Analysis

Five Year Adjusted Cash Flow Forecast (USD Mil) 2015(E) 2016(E) 2017(E) 2018(E) 2019(E) Cash and Equivalents (beginning of period) 2,367 1,508 2,095 1,855 2.952 Adjusted Available Cash Flow 2,878 1.584 2.038 2.218 2 563 Total Cash Available before Debt Service 3,951 3.545 4,313 4.418 5,830 Principal Payments -15 -309 -301 -301 -340 -340 -340 -340 -340 Interest Payments Other Cash Obligations and Commitments Total Cash Obligations and Commitments -355 -649 -341 -641 -641

Cumulative Annual Cash Flow Cushion



Adjusted Cash Flow Summary

Beginning Cash Balance Sum of 5-Year Adjusted Free Cash Flow Sum of Cash and 5-Year Cash Generation	USD Millions 2,367 11,281 13,648	% of Commitments 90.1 429.4 519.5
Revolver Availability Asset Adjusted Borrowings (Repayment)	_ _	_ _
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments Sum of 5-Year Cash Commitments	13,648 -2,627	519.5 —

Credit Rating Pillars-Peer Group Comparison

•				
	MON	Sector	Universe	
Business Risk	4	6.3	5.1	
Cash Flow Cushion	3	6.8	6.1	
Solvency Score	3	5.4	4.7	
Distance to Default	2	4.8	3.7	
Credit Rating	A	BBB	BBB+	

Source: Morningstar Estimates

Note: Scoring is on a scale 1-10, 1 being Best, 10 being Worst

Financial Health & Capital Structure

Monsanto sports a healthy balance sheet, even after its recent recapitalization program that we expect to increase leverage from a net cash position to management's net debt/EBITDA target of 1.5 times by 2015. The firm is a strong cash flow generator, and we don't think it will have any trouble meeting its additional debt obligations. We continue to forecast EBITDA to cover interest expense more than 15 times throughout our explicit forecast period.

The company maintains good liquidity, with more than \$2 billion in cash at August 2014 and \$2 billion availability under its unsecured credit facility. Furthermore, the company's debt maturities are well-laddered, with the next scheduled maturity of \$700 million coming due in 2016. We think the company will continue to meet its debt maturity requirements through a combination of strong cash flow and continued access to public debt markets. Based on our forecast for increased gross margins and 50% growth in EBITDA over the next four years, we believe Monsanto will begin to reduce debt from peak levels beginning in 2016.

Enterprise Risk

Despite its position as an industry leader, Monsanto faces stiff competition in both seeds and crop chemicals. There is no guarantee its investments in researching and developing the next generation of biotech traits will bear fruit, and Monsanto could be passed by its rivals, eventually losing share in the lucrative corn and soybean seed markets. Further, once GM seed patents expire, Monsanto will need to compete with generic manufacturers and could see margins erode, similar to the dynamics that currently plague the firm's glyphosate business. Also, weeds and bugs could develop resistance to the firm's traits, rendering Monsanto's technology useless. Additionally, consumer sentiment could turn against bioengineered crops in the United States and South America, similar to conditions prevailing in Europe. The firm also faces government



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Credit Analysis

scrutiny. The U.S. Department of Justice is investigating Monsanto's competitive practices, and the company's products are subject to extensive regulation. Finally, demand for Monsanto's seeds and crop chemicals is tied to highly unpredictable factors, including weather and commodity grain prices. We place a medium uncertainty rating on Monsanto. We expect the firm's solid pipeline will allow Monsanto to remain in the pole position in the seeds and genomics industry. That said, as with any R&D pipeline, the value of future products is uncertain. While weather will drive volume numbers for the company, we believe pricing in the seed industry is much less volatile than for other agricultural inputs, such as fertilizer. Further, we believe Monsanto's leading technology gives the firm a measure of pricing power. Bug and weed resistance issues add to Monsanto's downside uncertainty, but we think the company also has a considerable upside if game-changing breakthroughs are made on the R&D front.



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Management & Ownership

Management Activity				
Name	Position	Shares Held	Report Date*	InsiderActivity
WILLIAM U. PARFET	Director	286,138	31 Oct 2014	_
HUGH GRANT	CEO/Chairman of the Board/ Director,Director	142,000	20 Oct 2014	90,000
DAVID A. FRIEDBERG	Vice President/CEO, Divisional	123,921	15 Sep 2014	_
BRETT D. BEGEMANN	President/COO	98,153	31 Aug 2014	_
ROBERT T. FRALEY,PHD	Executive VP/Chief Technology Officer	76,911	15 Oct 2014	10,679
MR. ROBERT J. STEVENS	Director	67,931	31 Oct 2014	_
DAVID F. SNIVELY	Executive VP/Secretary/General Counsel	56,748	27 Oct 2014	_
C. STEVEN MCMILLAN	Director	52,052	31 Oct 2014	_

^{*}Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer

Fund Ownership				
Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Vanguard Total Stock Mkt Idx	1.80	0.27	107	31 Oct 2014
Vanguard PrimeCap Fund	1.30	1.60	_	30 Sep 2014
Vanguard Five Hundred Index Fund	1.14	0.33	89	31 Oct 2014
SPDR® S&P 500 ETF	1.12	0.32	2	20 Nov 2014
Vanguard Institutional Index Fund	1.10	0.34	1	31 Oct 2014
Concentrated Holders				
Tebas Investment FI	_	41.69	21	30 Jun 2014
iShares MSCI GlbI Agriculture Producers	0.01	15.74	_	20 Nov 2014
Global agricultural Related Equity MF	0.01	14.40	_	15 May 2014
iShares Agribusiness	0.01	10.87	0	31 Oct 2014
Materials Select Sector SPDR® Fund	0.55	9.56	-18	20 Nov 2014

Institutional Transactions				
Top 5 Buyers	% of Shares Held	% of Fund Assets	Shares Bought/ Sold (k)	Portfolio Date
Capital Research Global Investors	2.54	0.48	9,150	30 Sep 2014
Goldman, Sachs & Co.	1.90	0.51	7,336	30 Sep 2014
Capital Research & Mgmt Co - Division 3	0.77	1.02	1,989	30 Sep 2014
Manning & Napier Advisors, LLC	1.16	2.63	1,615	30 Sep 2014
D. E. Shaw & Co LP	0.66	0.46	1,331	30 Sep 2014
Top 5 Sellers				
Viking Global Investors LP	0.13	0.28	-5,163	30 Sep 2014
Fidelity Management and Research Company	4.73	0.37	-3,188	30 Sep 2014
American Century Inv Mgt, Inc.	0.76	0.49	-2,545	30 Sep 2014
Jennison Associates LLC	2.04	1.03	-2,484	30 Sep 2014
Credit Suisse First Boston (CSFB)	0.23	0.10	-2,453	30 Sep 2014

Management 02 Apr 2014

Hugh Grant has been chairman and CEO of Monsanto since 2003. Before that, he was COO. Under Grant's leadership, we think the firm stumbled with its introduction of SmartStax and RR2Y. The company tried too hard to push a high-priced new wave of products on farmers without giving them enough germplasm flexibility. The firm seems to have corrected this strategy and is listening more closely to farmers' wants and desires. We think the company should focus on its customer relationships to avoid driving farmers into the waiting arms of DuPont and other competitors.

In our view, Monsanto has been smart to focus on yield improvements as the number-one priority for its products. The money that management has poured back into R&D should help Monsanto defend its wide economic moat and lead to the next generation of seed technology. We also think the company's drive to push farmers toward new products will help offset the negative impact of products coming off patent down the road. Even with internal needs for research and development, Monsanto had generated enough cash to return money to shareholders in the form of dividends.



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Analyst Notes

Monsanto's Seed Business Will Fare Well Despite Lower Crop Prices; Shares Look Undervalued 08 Oct 2014

We're holding firm on our \$130-per-share fair value estimate for Monsanto after the release of fiscal fourth-quarter and full-year results. Our wide moat rating is intact. The firm has built a wide economic moat on the back of its intangible assets in seeds, both from biotech traits, which are licensed broadly to competitors and create high returns on invested capital, and from Monsanto's best-in-class seed-breeding operation, which contributes to industry-leading yields. We continue to think Monsanto's shares look moderately undervalued and see the current price as an attractive entry point.

While the market seems to be focused on headwinds from lower corn and soybean prices, Monsanto is still expecting double-digit gross profit growth in seeds in fiscal 2015. Double-digit growth in 2015 would actually best annual growth in fiscal 2014 of 8.4%. We expect about an 11% advance in 2015. Overall, the firm's 2015 guidance matched our expectations.

This expected growth comes despite a precipitous drop in crop prices. Corn prices are currently less than half of peak levels from the past couple of years. Continued profit growth in a low crop price environment underlies Monsanto's technology advantage and its ability to improve its product pricing each season through mix shifts and new product growth.

More than three-fourths of the seeds' gross profit increase is expected to come from corn and soybeans. In corn, pricing should benefit from the annual practice of swapping out the company's oldest hybrids, for newer, higher-yielding, and more expensive offerings. Soybeans profits will push higher as Intacta adoption continues to ramp up in Brazil and Roundup Ready 2 Yield increases licensing revenue in North America. Notably, DuPont, Monsanto's chief rival, is

licensing RR2Y from Monsanto instead of selling a nextgeneration soybean trait of its own.

Over the long run, we think Monsanto is set to realize its goal of doubling earnings per share from 2014 to 2019. Our long term view of the company is bolstered by our forecast for caloric intake in emerging markets, which will put stress on crop yield improvements globally and should play to Monsanto's strengths.

Adding Monsanto to Our Best Ideas List; Fair Value Estimate of \$130 01 Oct 2014

We're adding Monsanto to our equity Best Ideas list. We think Monsanto is the undisputed leader in seeds and genomics, which is more akin to the pharmaceutical industry than other agriculture markets.

The firm has built a wide economic moat on the back of its intangible assets in seeds; both from biotech traits, which are licensed broadly to competitors and create high margins and returns on invested capital, and from Monsanto's best-in-class seed breeding operation, which contributes to industry-leading yields. The company has shown the ability to raise prices, even in years when corn and soybean prices drop, primarily through introducing higher-yielding seeds and new biotech traits. We think the recent weakness in the stock, primarily driven by falling crop prices, is misplaced, and we expect Monsanto to generate impressive returns over the long run. Our long-term view of the company is bolstered by our forecast for caloric intake in emerging markets, which will put stress on crop yield improvements globally and should play to Monsanto's strengths.

Raising Our Fair Value Estimate on Wide-Moat Monsanto to \$130 per Share 25 Jun 2014

We're raising our fair value estimate for Monsanto to \$130 per share from \$111 driven by upward adjustments to both our medium- and long-term outlooks. Our wide moat rating



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Analyst Notes

remains intact. The company's fiscal third-quarter results were fairly unsurprising, and management marginally adjusted its guidance, moving to the high end of its previously released EPS guidance (our 2014 forecast remains at the high end). But more importantly, the company committed to longer-term profit projections, which it had been loath to do over the past couple years, and announced a \$10 billion share repurchase plan.

Monsanto will seek to double 2014 annual EPS (guidance of \$5.10-\$5.20) by the end of fiscal 2019. We think this is a realistic goal, and while our explicit forecast only reaches year-end 2018, our previous EPS estimate was in range of this target (after adjusting for the new share repurchase plan).

Given recent strength in the soybean business, we're slightly bumping up our 2018 profit forecast. With the Intacta launch successfully completed and South American opportunities for the product outside Brazil apparent, the soybean business is set for strong growth. This increase in our medium-term forecast, along with the positive effect of the time value of money, added about \$6 per share to our fair value estimate.

The additional lift in our fair value stems from a more bullish outlook past our explicit forecast period. Over the longer term, we think Monsanto will be a key player in the global push to increase crop yields. Our view of emerging-market caloric intake growth has become increasingly bullish, and we expect sizable gains over the next decade in India and sub-Saharan Africa. Further, China's shift to more animal-intensive diets will magnify the need for crop yield increases. In our view, the firm's wide moat, built on an industry-leading seeds business, will allow the company to generate returns above costs of capital for the next couple decades.

In addition to laying out a long-term goal for EPS, Monsanto announced a sizable two-year \$10 billion share repurchase program, with \$6 billion expected to be completed within six to 12 months. The company will fund the buybacks with a combination of cash on hand (about \$1.9 billion on the balance sheet as of May 31, 2014) and new debt. Given that Monsanto shares trade fairly close to our fair value estimate, we see the repurchase plan as value-neutral.

We think the size of the buyback program is a signal that a large acquisition is unlikely in the near term. Recently, rumors swirled that Monsanto was interested in acquiring rival Syngenta for more than \$40 billion. We viewed this rumored deal as a negative for Monsanto. First, we're not sure Syngenta is worth more than \$40 billion, and second, we don't know that Monsanto would gain much competitively from buying Syngenta's inferior seed portfolio.



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Morningstar Analyst Forecasts

Financial Summary and Forecasts Fiscal Year Ends in August						Forecast	
Tiodal Todal Elido III / tagast	3-Year					TUIGUASE	5-Year
Growth (% YoY)	3-Year Hist. CAGR	2012	2013	2014	2015	2016	o-real Proj. CAGR
Revenue	10.3	14.2	10.1	6.7	4.8	5.6	7.2
EBIT	17.6	25.4	13.8	14.2	6.6	9.1	11.4
EBITDA	15.2	20.7	11.3	13.9	6.8	8.6	10.9
Net Income	19.5	26.8	21.8	10.4	5.6	9.9	11.9
Diluted EPS	20.8	27.3	21.9	13.5	11.7	12.7	14.9
Earnings Before Interest, after Tax	17.2	32.1	8.0	12.8	2.3	9.2	10.5
Free Cash Flow	-27.5	-6.5	-4.4	-57.3	190.9	24.1	39.2
	3-Year						5-Year
Profitability	Hist. Avg	2012	2013	2014	2015	2016	Proj. Avg
Operating Margin %	24.3	23.2	24.0	25.7	26.1	27.0	28.6
EBITDA Margin %	28.7	27.8	28.2	30.1	30.6	31.5	33.1
Net Margin %	16.4	15.1	16.7	17.3	17.4	18.1	19.3
Free Cash Flow Margin %	10.8	14.6	12.7	5.1	14.1	16.6	16.9
ROIC %	18.1	17.3	18.0	19.1	19.6	20.0	21.7
Adjusted ROIC %	24.0	24.1	24.9	22.9	22.1	23.3	25.7
Return on Assets %	11.7	10.2	12.1	12.9	13.2	14.1	15.7
Return on Equity %	21.6	17.5	20.4	26.8	36.9	38.2	39.3
	3-Year						5-Year
Leverage	Hist. Avg	2012	2013	2014	2015	2016	Proj. Avg
Debt/Capital	0.26	0.15	0.14	0.50	0.50	0.47	0.44
Total Debt/EBITDA	0.89	0.55	0.50	1.63	1.52	1.40	1.24
EBITDA/Interest Expense	21.08	19.69	24.33	19.22	14.97	16.26	18.88

28.0

6.0

15.0

Valuation Summary and F	orecasts				
•	2013	2014	2015(E)	2016(E)	
Price/Fair Value	0.97	0.93	_	_	
Price/Earnings	21.3	23.1	20.7	18.4	
EV/EBITDA	11.9	13.4	12.5	11.5	
EV/EBIT	14.0	156.7	14.7	13.5	
Free Cash Flow Yield %	3.9	3.5	3.9	4.9	
Dividend Yield %	1.6	1.6	1.7	1.9	
Key Valuation Drivers					
Cost of Equity %				10.0	
Pre-Tax Cost of Debt %				5.0	
Weighted Average Cost of Car	ital %			9.4	

Additional estimates and scenarios available for download at http://select.morningstar.com.

Long-Run Tax Rate %

Perpetuity Year

Stage II EBI Growth Rate %

Stage II Investment Rate %

Discounted Cash Flow Valuation			
	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	12,342	17.6	25.34
Present Value Stage II	57,825	82.4	118.73
Present Value Stage III	_	_	_
Total Firm Value	70,166	100.0	144.07
Cash and Equivalents	2,407	_	4.94
Debt	-7,761	_	-15.94
Preferred Stock	_	_	_
Other Adjustments	-2,113	_	-4.34
Equity Value	62,699	_	128.74
Projected Diluted Shares	487		
Fair Value per Share (USD)	_		

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
120.81 USD	130.00 USD	91.00 USD	175.50 USD	Medium	Wide	Stable	Standard	A	Agriculture

Morningstar Analyst Forecasts

Income Statement (USD Mil) Fiscal Year Ends in August				Fore	ecast
	2012	2013	2014	2015	2016
Revenue	13,504	14,861	15,855	16,619	17,556
Cost of Goods Sold	6,459	7,208	7,281	7,517	7,845
Gross Profit	7,045	7,653	8,574	9,102	9,711
Selling, General & Administrative Expenses	2,390	2,550	2,774	2,982	3,146
Research & Development	1,517	1,533	1,725	1,778	1,826
Other Operating Expense (Income)	_	_	_	_	_
Depreciation & Amortization (if reported separately)	_	_	_	_	_
Operating Income (ex charges)	3,138	3,570	4,075	4,342	4,739
Restructuring & Other Cash Charges	-10	_	_	_	_
Impairment Charges (if reported separately)	_	_	_	_	_
Other Non-Cash (Income)/Charges					
Operating Income (incl charges)	3,148	3,570	4,075	4,342	4,739
Interest Expense	191	172	248	340	340
Interest Income	31	31		50	50
Pre-Tax Income	2,988	3,429	3,827	4,052	4,449
Income Tax Expense	901	915	1,078	1,135	1,246
Other After-Tax Cash Gains (Losses)	6	11	13	_	_
Other After-Tax Non-Cash Gains (Losses)	_	_	_	_	_
(Minority Interest)	-48	-43	-22	-25	-25
(Preferred Dividends)					
Net Income	2,045	2,482	2,740	2,892	3,178
Weighted Average Diluted Shares Outstanding	540	540	525	496	484
Diluted Earnings Per Share	3.79	4.60	5.22	5.83	6.57
Adjusted Net Income	2,038	2,482	2,740	2,892	3,178
Diluted Earnings Per Share (Adjusted)	3.77	4.60	5.22	5.83	6.57
Dividends Per Common Share	1.19	1.49	1.72	1.98	2.28
EBITDA	3,770	4,185	4,766	5,090	5,529
Adjusted EBITDA	3,760	4,185	4,766	5,090	5,529



Monsanto Co MON (NYSE) | $\star\star\star$

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
120.81 USD	130.00 USD	91.00 USD	175.50 usp	Medium	Wide	Stable	Standard	A	Agriculture

Morningstar Analyst Forecasts

Balance Sheet (USD Mil)					
Fiscal Year Ends in August					ecast
	2012	2013	2014	2015	2016
Cash and Equivalents	3,283	3,668	2,367	1,508	2,095
Investments	302	254	40	40	40
Accounts Receivable	2,517	2,463	2,831	2,968	3,135
Inventory	2,839	2,947	3,597	3,714	3,876
Deferred Tax Assets (Current)	534	579	635	635	635
Other Short Term Assets	183	166	205	205	205
Current Assets	9,658	10,077	9,675	9,069	9,985
Net Property Plant, and Equipment	4,365	4,654	5,082	5,634	5,844
Goodwill	3,435	3,520	4,319	4,319	4,319
Other Intangibles	1,237	1,226	1,554	1,554	1,554
Deferred Tax Assets (Long-Term)	551	454	450	450	450
Other Long-Term Operating Assets	978	733	901	901	901
Long-Term Non-Operating Assets	_	_	_	_	_
Total Assets	20,224	20,664	21,981	21,927	23,053
Accounts Payable	794	995	1,111	1,147	1,197
Short-Term Debt	36	51	233	233	233
Deferred Tax Liabilities (Current)	_	_	_	_	_
Other Short-Term Liabilities	3,391	3,290	3,768	3,768	3,768
Current Liabilities	4,221	4,336	5,112	5,148	5,198
Long-Term Debt	2,038	2,061	7,528	7,528	7,528
Deferred Tax Liabilities (Long-Term)	313	469	509	509	509
Other Long-Term Operating Liabilities	1,073	713	573	573	573
Long-Term Non-Operating Liabilities	543	357	345	345	345
Total Liabilities	8,188	7,936	14,067	14,103	14,153
Preferred Stock	_	_	_	_	_
Common Stock	6	6	6	6	6
Additional Paid-in Capital	10,371	10,783	10,783	10,783	10,783
Retained Earnings (Deficit)	5,537	7,188	2,504	4,414	6,490
(Treasury Stock)	-3,045	-4,140	-4,140	-6,140	-7,140
Other Equity	-1,036	-1,278	-1,278	-1,278	-1,278
Shareholder's Equity	11,833	12,559	7,875	7,785	8,861
Minority Interest	203	169	39	39	39
Total Equity	12,036	12,728	7,914	7,824	8,900



Monsanto Co MON (NYSE) | $\star\star\star$

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
120.81 USD	130.00 USD	91.00 USD	175.50 usp	Medium	Wide	Stable	Standard	A	Agriculture

Morningstar Analyst Forecasts

Cash Flow (USD Mil)					
Fiscal Year Ends in August	0040	0040	004.4		ecast
N. d	2012	2013	2014	2015	2016
Net Income	2,093	2,525	2,762	2,917	3,203
Depreciation	622	615	691	748	790
Amortization	_	_	_	_	_
Stock-Based Compensation	128	100	120	129	136
Impairment of Goodwill	_	_	_	_	_
Impairment of Other Intangibles	_	_	_	_	_
Deferred Taxes	242	262	12	_	_
Other Non-Cash Adjustments	78	-162	101	_	_
(Increase) Decrease in Accounts Receivable	89	222	-172	-137	-167
(Increase) Decrease in Inventory	-422	-192	-650	-117	-162
Change in Other Short-Term Assets	-43	50	-163	_	_
Increase (Decrease) in Accounts Payable	430	-128	709	36	50
Change in Other Short-Term Liabilities	-166	-552	-356	_	_
Cash From Operations	3,051	2,740	3,054	3,577	3,850
(Capital Expenditures)	-646	-741	-1,005	-1,300	-1,000
Net (Acquisitions), Asset Sales, and Disposals	-322	-165	-922	_	_
Net Sales (Purchases) of Investments	_	48	202	_	_
Other Investing Cash Flows	-66	81	-370	_	_
Cash From Investing	-1,034	-777	-2,095	-1,300	-1,000
Common Stock Issuance (or Repurchase)	-315	-838	-6,834	-2,000	-1,000
Common Stock (Dividends)	-642	-802	-904	-983	-1,102
Short-Term Debt Issuance (or Retirement)	-128	97	64	_	_
Long-Term Debt Issuance (or Retirement)	-130	30	5,472	_	_
Other Financing Cash Flows	50	28	-57	-154	-161
Cash From Financing	-1,165	-1,485	-2,259	-3,137	-2,263
Exchange Rates, Discontinued Ops, etc. (net)	-141	-93	-1	_	_
Net Change in Cash	711	385	-1,301	-859	587



Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
120.81 USD	130.00 USD	91.00 USD	175.50 usp	Medium	Wide	Stable	Standard	A	Agriculture

Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis																
		Price/Ea	rnings		EV/EBITE)A		Price/Fr	ee Cash Flo	w	Price/Bo	ok		Price/Sa	iles	
Company/Ticker	Price/Fair Value	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
E I du Pont de Nemours & Company DD	1.13	18.0	15.6	14.7	11.0	10.1	9.6	19.8	19.8	19.6	4.1	3.8	3.6	1.8	1.7	1.6
Syngenta AG SYT USA	0.91	16.4	13.8	11.7	11.6	10.1	8.8	19.4	17.8	14.4	3.0	2.8	2.5	2.0	1.9	1.8
Average		17.2	14.7	13.2	11.3	10.1	9.2	19.6	18.8	17.0	3.6	3.3	3.1	1.9	1.8	1.7
Monsanto Co MON US	0.93	23.1	20.7	18.4	13.4	12.5	11.5	28.5	25.7	20.5	7.4	7.5	6.6	3.7	3.5	3.3

Returns Analysis		ROIC %			Adjusted	ROIC %		Return o	n Equity %		Return o	n Assets %		Dividend	l Yield %	
Las Company/Ticker E I du Pont de Nemours & Company DD	Historical Year Total Assets (Mil) — USD	2014 13.1	2015(E) 14.8	2016(E) 14.6	2014 17.8	2015(E) 19.4	2016(E) 19.0	2014 22.0	2015(E) 25.3	2016(E) 24.7	2014 6.9	2015(E) 8.2	2016(E) 8.4	2014 2.5	2015(E) 2.5	2016(E) 2.5
Syngenta AG SYT USA	— USD	15.1	16.5	17.7	16.5	18.7	21.2	17.7	19.5	21.1	8.5	9.7	10.9	3.3	3.6	4.0
Average Monsanto Co MON US	— USD	14.1 19.1	15.7 19.6	16.2 20.0	17.2 22.9	19.1 22.1	20.1 23.3	19.9 26.8	22.4 36.9	22.9 38.2	7.7 12.9	9.0 13.2	9.7 14.1	2.9 1.6	3.1 1.7	3.3 1.9

Growth Analysis																
		Revenue	Growth %		EBIT Gro	wth %		EPS Gro	wth %		Free Cas	h Flow Gro	wth %	Dividend	/Share Gro	wth %
Las	st Historical Year Revenue															
Company/Ticker	(Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
E I du Pont de Nemours & Company DD	35,879 USD	0.4	6.2	6.8	25.9	10.9	5.2	5.7	15.8	6.3	-34.6	-12.5	0.1	1.1	3.0	3.0
Syngenta AG SYT USA	15,139 USD	3.1	6.3	5.9	3.0	18.1	17.8	3.9	18.6	18.1	491.7	9.3	24.1	10.0	10.0	10.0
Average		1.8	6.3	6.4	14.5	14.5	11.5	4.8	17.2	12.2	228.6	-1.6	12.1	5.6	6.5	6.5
Monsanto Co MON US	15,855 USD	6.7	4.8	5.6	14.2	6.6	9.1	13.5	11.7	12.7	-57.3	190.9	24.1	15.9	15.0	15.0



Monsanto Co MON (NYSE) | $\star\star\star$

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
120.81 USD	130.00 USD	91.00 USD	175.50 USD	Medium	Wide	Stable	Standard	A	Agriculture

Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Profita	hility	Ana	lvsis

	Gross Margin %			EBITDA Margin % Operating Margin %				0	Net Mar	gin %		Free Cash Flow Margin %				
Last	Historical Year Net Income															
Company/Ticker	(Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
E I du Pont de Nemours & Company DD	3,672 USD	30.1	29.4	29.2	18.7	19.3	19.0	14.2	14.8	14.6	10.2	10.8	10.5	9.2	8.7	8.2
Syngenta AG SYT USA	1,867 USD	46.2	47.2	48.7	19.7	21.3	23.2	15.4	17.1	19.0	12.3	13.8	15.3	10.5	10.8	12.6
Average		38.2	38.3	39.0	19.2	20.3	21.1	14.8	16.0	16.8	11.3	12.3	12.9	9.9	9.8	10.4
Monsanto Co MON US	2,740 USD	54.1	54.8	<i>55.3</i>	30.1	30.6	31.5	25.7	26.1	27.0	17.3	17.4	18.1	12.9	13.7	16.2

Leverage Analysis		Debt/Equ	ıity %		Debt/Tota	ıl Cap %		EBITDA/	Interest Exp	p.	Total De	bt/EBITDA		Assets/E	quity	
Las Company/Ticker E I du Pont de Nemours & Company DD	st Historical Year Total Debt (Mil) 11,462 USD	2014 71.3	2015(E) 61.4	2016(E) 57.6	2014 41.6	2015(E) 38.0	2016(E) 36.5	2014 17.7	2015(E) 21.7	2016(E) 24.1	2014 1.7	2015(E) 1.4	2016(E) 1.4	2014 3.1	2015(E) 3.0	2016(E) 2.9
Syngenta AG SYT USA	3,387 USD	33.1	30.2	27.2	24.9	23.2	21.4	19.9	22.9	26.3	1.1	1.0	0.9	2.1	2.0	1.9
Average		52.2	45.8	42.4	33.3	30.6	29.0	18.8	22.3	25.2	1.4	1.2	1.2	2.6	2.5	2.4
Monsanto Co MON US	7,761 USD	98.6	99.7	87.6	49.6	49.9	46.7	19.2	15.0	16.3	1.6	1.5	1.4	2.8	2.8	2.6

Liquidity Analysis																
	Market Cap	Cash per Share		Current Ratio			Quick Ratio			Cash/Short-Term Debt			Payout Ratio %			
Company/Ticker	(Mil)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)	2014	2015(E)	2016(E)
E I du Pont de Nemours & Company DD	65,364 USD	8.84	8.12	8.48	1.77	1.73	1.76	1.19	1.12	1.13	4.72	4.21	4.29	47.2	40.1	38.8
Syngenta AG SYT USA	30,867 USD	15.93	22.58	32.53	1.64	1.75	1.90	0.87	0.97	1.11	0.93	1.31	1.89	58.0	53.3	49.1
Average		12.39	15.35	20.51	1.71	1.74	1.83	1.03	1.05	1.12	2.83	2.76	3.09	52.6	46.7	44.0
Monsanto Co MON US	58,481 USD	4.51	3.04	4.33	1.89	1.76	1.92	1.19	1.04	1.18	10.16	6.47	8.99	33.0	34.0	34.7



Research Methodology for Valuing Companies

Components of Our Methodology

- ► Economic Moat[™] Rating
- ► Moat Trend™ Rating
- ► Moat Valuation
- ► Three-Stage Discounted
- Weighted Average Cost of Capital
- ► Fair Value Estimate
- ► Scenario Analysis
- ► Uncertainty Ratings
- ► Margin of Safety
- ► Consider Buying/Selling
- ► Stewardship Rating

The Morningstar Rating for stocks identifies companies trading at a discount or premium to our analysts' assessment of their fair value. A number of components drive this rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's intrinsic value based on a discounted cash-flow model, (3) the margin of safety bands we apply to our Fair Value Estimate, and (4) the current stock price relative to our fair value estimate.

The concept of the Morningstar Economic Moat™ Rating plays a vital role not only in our qualitative assessment of a firm's investment potential, but also in our valuation process. We assign three moat ratings—none, narrow, or wide—as well as the Morningstar Moat Trend™ Rating—positive, stable, or negative—to each company we cover. There are two major requirements for firms to earn either a narrow or wide moat rating: (1) the prospect of earning above-average returns on capital; and (2) some competitive edge that prevents these returns from quickly eroding. The assumptions we make about a firm's moat determine the length of "economic outperformance" that we assume in the latter stages

of our valuation model. We also quantify the value of each firm's moat, which represents the difference between a firm's enterprise value and the value of the firm if no future net investment were to occur. Said differently, moat value identifies the value generated by the firm as a result of any future net new investment. Our Moat Trend Rating reflects our assessment of whether each firm's competitive advantage is either getting stronger or weaker, since we think of moats as dynamic, rather than static.

At the heart of our valuation system is a detailed projection of a company's future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model—where a firm's return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from 0 years (for no-moat firms) to 20 years (for wide-moat companies). In our third stage, we assume the firm's RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard

Morningstar Research Methodology for Valuing Companies

Fundamental Analysis

Company Valuation

Fair Value Estimate

Uncertainty Assessment

★★★★

★★★★

★★★★

★★★★

Analyst conducts company and industry research:

- Financial statement analysis
- ► Channel checks
- ► Trade-show visits
- ► Industry and company reports and journals
- ► Conference calls
- Management and site visits

Strength of competitive advantage is rated:
None, Narrow, or Wide

Advantages that confer an economic moat:

High Switching Costs (Microsoft)

Cost advantage (Wal-Mart)

Intangible assets (Johnson & Johnson)

Network Effect (Mastercard)

Efficient Scale
(Lockheed Martin)

Analyst considers past financial results and focuses on competitive position and future prospects to forecast future

cash flows

Assumptions are entered into Morningstar's proprietary discounted cash-flow model.

Analyst uses a discounted cash-flow model to develop a Fair Value Estimate, which serves as the foundation for the Morningstar Rating for stocks.

The analyst then evaluates the range of potential intrinsic values for the company and assigns an Uncertainty Rating: Low, Medium, High, Very High, or Extreme.

The Uncertainty Rating determines the margin of safety required before we would recommend the stock. The higher the uncertainty, the wider the margin of safety.

The current stock price relative to Morningstar's Fair Value Estimate, adjusted for uncertainty, determines the Morningstar Rating for stocks

The Morningstar Rating for stocks is updated each evening after the market closes.



Research Methodology for Valuing Companies

Detailed Methodology Documents and Materials*

- ► Comprehensive Equity Research Methodology
- ► Uncertainty Methodology
- ► Cost of Equity Methodology
- Morningstar DCF Valuation Model
- Stewardship Rating Methodology
- * Please contact a sales representative for more information.

perpetuity formula. In deciding on the rate at which to discount future cash flows, we ignore stock-price volatility. Instead, we rely on a system that measures the estimated volatility of a firm's underlying future free cash flows, taking into account fundamental factors such as the diversity of revenue sources and the firm's fixed cost structure.

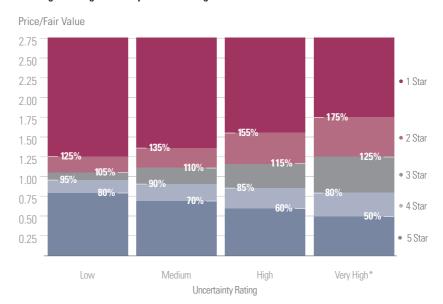
We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts typically model three to five scenarios for each company we cover, stress-testing the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of these potential fair values, based on an assessment of a company's future sales range, the firm's operating and financial leverage, and any other contingent events that may impact the business. Our analysts use this range to assign an appropriate margin of safety—or the discount/premium

to a fair value we apply in setting our consider buying/consider selling prices. Firms trading below our consider-buying prices receive our highest rating of five stars, whereas firms trading above our consider-selling prices receive our lowest rating of one star.

Our corporate Stewardship Rating represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

Morningstar Margin of Safety and Star Rating Bands



 $^{^{*}}$ Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.



Morningstar's Approach to Rating Corporate Credit

- Offers a proprietary measure of the credit quality of companies on our coverage list.
- Encapsulates our in-depth modeling and quantitative work in one letter grade.
- Allows investors to rank companies by each of the four underlying components of our credit ratings, including both analyst-driven and quantitative measures.
- Provides access to all the underlying forecasts that go into the rating, available through our institutional service.

Purpose

The Morningstar Corporate Credit Rating measures the ability of a firm to satisfy its debt and debt-like obligations. The higher the rating, the less likely we think the company is to default on these obligations.

The Morningstar Corporate Credit Rating builds on the modeling expertise of our securities research team. For each company, we publish:

- ► Five years of detailed pro-forma financial statements
- ► Annual estimates of free cash flow
- ► Annual forecasts of return on invested capital
- Scenario analyses, including upside and downside cases
- ► Forecasts of leverage, coverage, and liquidity ratios for five years
- ► Estimates of off balance sheet liabilities

These forecasts are key inputs into the Morningstar Corporate Credit Rating and are available to subscribers at select.morningstar.com.

Methodology

We feel it's important to perform credit analysis through different lenses—qualitative and quantitative, as well as fundamental and market-driven. We therefore evaluate each company in four broad categories.

Business Risk

Business Risk captures the fundamental uncertainty around a firm's business operations and the cash flow generated by those operations. Key components of the Business Risk rating include the Morningstar Economic Moat™ Rating and the Morningstar Uncertainty Rating.

Cash Flow Cushion™

Morningstar's proprietary Cash Flow Cushion™ ratio is a fundamental indicator of a firm's future financial health The measure reveals how many times a company's internal cash generation plus total excess liquid cash will cover its debt-like contractual commitments over the next five years. The Cash Flow Cushion acts as a predictor of financial distress, bringing to light potential refinancing, operational, and liquidity risks inherent to the firm.

Morningstar Research Methodology for Determining Corporate Credit Ratings



Analyst conducts company and industry research:

- Management interviews
- · Conference calls
- · Trade show visits
- · Competitor, supplier, distributor, and customer interviews

· Assign Economic Moat™ Rating



Analyst considers company financial statements and competitive dynamics to forecast future free cash

Analyst derives estimate of Cash-Flow Cushion™.

flows to the firm.



Analysts run bull and bear cases through the model to derive alternate estimates of enterprise value.

Based on competitive analysis, cash-flow forecasts, and scenario analysis, the analyst assigns Business Risk



We gauge a firm's health using quantitative tools supported by our own backtesting and academic research.

- Morningstar Solvency Score™
- Distance to Default



Senior personnel review each company to determine the appropriate final credit rating.

- Review modeling assumptions
- Approve company-specific adjustments



AAA Extremely Low Default Risk

AA Very Low Default Risk Α Low Default Risk

BBB Moderate Default Risk

Above Average Default Risk

High Default Risk В

CCC Currently Very High Default Risk Currently Extreme Default Risk

C Imminent Payment Default

Payment Default

UR Under Review

Positive Credit Implication

UR-Negative Credit Implication



Morningstar's Approach to Rating Corporate Credit

The advantage of the Cash Flow Cushion ratio relative to other fundamental indicators of credit health is that the measure focuses on the future cash-generating performance of the firm derived from Morningstar's proprietary discounted cash flow model. By making standardized adjustments for certain expenses to reflect their debt-like characteristics, we can compare future projected free cash flows with debt-like cash commitments coming due in any particular year. The forward-looking nature of this metric allows us to anticipate changes in a firm's financial health and pinpoint periods where cash shortfalls are likely to occur.

Morningstar Solvency Score™

The Morningstar Solvency Score™ is a quantitative score derived from both historical and forecasted financial ratios. It includes ratios that focus on liquidity (a company's ability to meet short term cash outflows), profitability (a company's ability to generate profit per unit of input), capital structure (how does the company finance its operations), and interest coverage (how much of profit is used up by interest payments).

Distance to Default

Morningstar's quantitative Distance to Default measure ranks companies on the likelihood that they will tumble into financial distress. The measure is a linear model of the percentile of a firm's leverage (ratio of Enterprise Value to Market Value), the percentile of a firm's equity volatility relative to the rest of the universe and the interaction of these two percentiles. This is a proxy methodology for the common definition of Distance to Default which relies on option-based pricing models. The proxy has the benefit of increased breadth of coverage, greater simplicity of calculation, and more predictive power.

For each of these four categories, we assign a score, which we then translate into a descriptive rating along the scale of Very Good / Good / Fair / Poor / Very Poor.

Overall Credit Rating

The four component ratings roll up into a single preliminary credit rating. To determine the final credit rating, a credit committee of at least five senior research personnel reviews each preliminary rating.

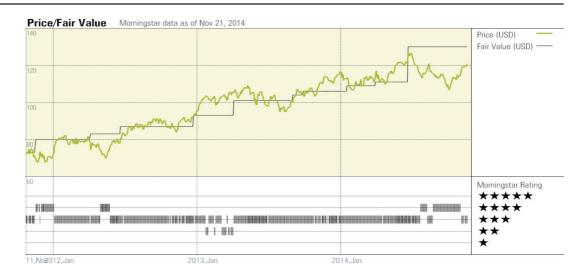
We review credit ratings on a regular basis and as events warrant. Any change in rating must be approved by the Credit Rating Committee.

Investor Access

Morningstar Corporate Credit Ratings are available on Morningstar.com. Our credit research, including detailed cash-flow models that contain all of the components of the Morningstar Corporate Credit Rating, is available to subscribers at select.morningstar.com.



Last Price Fair Value **Consider Buy** Consider Sell Uncertainty Economic Moat™ Moat Trend™ Stewardship **Morningstar Credit Rating Industry Group** 130.00 USD 120.81 USD 91.00 usp 175.50 usp Medium Wide Stable Standard Agriculture



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Five-star stocks sell for the biggest risk-adjusted discount whereas one-star stocks trade at premiums to their intrinsic value. Based on a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's Equity Analysts, four key components drive the Morningstar Rating: 1. Assessment of the firm's economic moat, 2. Estimate of the stock's fair value, 3. Uncertainty around that fair value estimate and 4. Current market price. Further information on Morningstar's methodology is available from http://global.morningstar.com/equitydisclosures.

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Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
120.81 USD	130.00 USD	91.00 USD	175.50 usp	Medium	Wide	Stable	Standard	A	Agriculture

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