

Company: CF Industries	Ticker: CF	Price: \$82.35	Industry: Basic Materials Sub Industry: Agricultural Inputs
Target Price: \$107.66 Stop Loss: \$70 52 Week High/Low: \$72.73-119.60	TTM P/E: 5.21 Forward P/E: 6.46 EPS: 16.38	Beta: 1.05 Credit Rating: BBB Rating Outlook: Stable	Market Cap: 16.1088B Avg. Vol. (12 M): 2,735,990 Div. Yield: 1.94%

Company Background:

CF Industries is a global manufacturer and distributor of hydrogen and nitrogen products for use in clean energy, fertilizer, emissions abatement and other industrial applications. They are the world's largest producer specializing in the production of ammonia, selling ammonia along with upgrading it to urea, urea ammonium nitrate, ammonium nitrate, or diesel exhaust fluid. CF distributes globally, but their production takes place primarily in America, the UK, Canada, and the Caribbean through 9 distribution centers and 24 production facilities, with a total average annual capacity of 10.5 million tons of ammonia.

Industry Outlook:

The fertilizer industry can be quite unstable, as its performance is dependent on various macroeconomic factors, including developments in the highly integrated global supply and demand. Going into 2023, forward energy curves continue to point to persistently high energy prices in Europe, constraining global nitrogen supply as these high energy prices caused ammonia production in Europe to fall in 2022. Expansions in construction, mining, manufacturing, and power generation in 2023 will also help to support the price of ammonia.

Investment Thesis:

While there is volatility associated with the fertilizer market, the basic need for food leads to a minimum level of fertilizer demand. CF also has a globally efficient supply chain system with flexible manufacturing facilities, allowing them to change their product mix and route to meet customer needs and maximize margins. Additionally, while short term growth was fueled primarily by higher fertilizer prices, long term growth is likely to see greater demand for ammonia products in various other industries. Combined with the greater focus of CF on clean ammonia, the company will be able to expand its product offerings. CF is also able to evade the intense effects of higher natural gas prices compared to its European competitors. Lastly, CF has stakes in both hydrogen and nitrogen, which are critical fertilizer components, giving the company an advantage over other fertilizer companies that are focused on potash and phosphate.

Investment Risks:

The main risk facing CF is that fertilizer stocks tend to be volatile in their performance. The price of fertilizer mainly depends on the cost of gasoline, and reflects the same volatile market conditions that crops are subject to. Due to the global nature of food supply, supply adjustments are increasingly linked to global factors such as ocean vessel transportation rates, foreign policies, and exchange rate risk. Price volatility for fertilizers tends to affect nitrogen-based fertilizers the most as they are more closely linked to energy. In the long run, global energy prices are likely to continue be the dominating factor influencing fertilizer prices. There also are some fears regarding a potential recession in 2023, which may cause demand for fertilizer products may fall due to affordability issues.

3-5 takeaways from last quarter investor call transcript:

- Returned \$1.65 billion to shareholders through buybacks and dividends, programs which are expected to continue through 2025.
- Advancements in clean energy initiatives through partnerships and agreements with JERA, BP, and ExxonMobil.
- Low grain stocks will take several cycles to replenish to meet global demand, driving fertilizer demand for upcoming years.
- Expected high imports of fertilizer from many nations, including China, India, Brazil, and much of Europe.
- Boasts higher asset utilization capacity, yielding 0.9 to 1.3 million tons of incremental gross ammonia annually.

ESG: Discounted Cash Flow Valuation:

ESG Rating history

MSCI ESG Rating history data over the last five years or since records began.

CF Industries is **average** among 69 companies in the specialty chemicals industry.

ESG Rating distribution in relation to industry peers

Universe: MSCI ACWI Index constituents specialty chemicals, (69 companies)

Terminal Year FCF	\$	1,576.70
WACC		8.89%
Terminal Value	\$	27,594.83
PGR		3.00%
PV of Cash Flows	\$	5,289.49
PV Terminal Value	\$	18,029.51
Enterprise Value	\$	23,319.00
Cash		\$ 1,628
Debt	\$	3,465.00
Equity Value	\$	21,482.00
Shares outstanding		196
Current share price	\$	90.60
Implied Share Price	\$	109.60
Margin of Safety		20.97%

Relative Valuation:

	Market Cap (billions)	P/E	EPS	Dividend Yield	Total Debt (billions)	ROA	ROE
MOS	17.467	5.00	10.25	1.56%	4.35	15.02%	33.58%
NTR	41.695	5.69	14.07	2.44%	13.68	12.36%	31.32%
CF	17.753	5.91	15.3	1.77%	3.25	27.74%	59.59%
Mean	25.63833333	5.53	13.20666667	1.92%	7.093333333	18.37%	41.50%
Median	17.753	5.69	14.07	1.77%	4.35	15.02%	33.58%

Financial Performance:

	CF	Industry	S&P 500
YTD	-3.35%	6.10%	6.24%
3 Years	109.28%	12.82%	22.024%
5 Years	86.65%	6.00%	47.832%

