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Signed by:

Ian Bates Raegan Beeding Ileana Braddock Alisa Grigorieva Jackson McKinney



PRICE: USD 7.74 AS OF 02/09/24



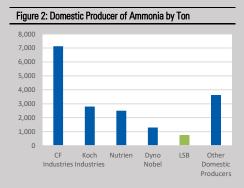
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RECCOMENDATION	HOLD
Date	09 February 2024
Target Price	\$10.56
Upside	43.8%
Sector	Chemicals
Industry	Agricultural Chemicals
Market Capitalization	\$566 million
Shares Outstanding	74.34 million
Current Share Price	\$7.74
52 Week High	\$14.71
52 Week Low	\$7.30
Beta	0.96
EPS	-0.10
PE Ratio	6.09
Return on Equity	18.73
Source: Bloomberg, Team Anal	ysis

Figure 1: Geographic Map of Company Assets





Source: International Fertilizer Industry Association; Nutrien, Team Analysis

EXECUTIVE SUMMARY

We issue a HOLD recommendation for the security. Though LXU positioned itself to generate sufficient free cash flow to support higher share price levels and its debt service, the company's high leverage, exposure to volatile commodity prices, and a severe lag in environmental patronage efforts pose risks that we believe support a hold recommendation, despite its valuation suggesting its share is undervalued.

LSB Industries, Inc., manufactures and sells chemical products for agricultural, industrial, and mining markets. LXU is headquartered in Oklahoma, but also operates in Texas, Missouri, Alabama, and Arkansas (Figure 1).

Our quantitative and qualitative analyses suggest the company will continue to profitably invest in its facilities to support increased production to meet the long-term growth of the chemical market demand in its segments. Post COVID-19, LXU has been hoarding assets and cash; the company faces competition from domestic companies ten times LXU's size. Furthermore, its focus on carbon friendly ammonia production, and innovative use of partnerships to bolster revenue and take advantage of carbon sequestration tax incentives show potential intangible gains not yet factored into their stock price. Their current infrastructure and operating process can generate sufficient cash flows to manage LXU's high debt service effectively. Nevertheless, LXU's revenue correlates highly to the price of the three nitrogen-based chemicals discussed in the business description below, and their variable costs move in tandem with natural gas prices.

BUSINESS DESCRIPTION

Company History

LSB Industries, Inc. was formed in 1968 as a holding company for a variety of manufacturing companies owned by Jack E. Golsen. The original holdings have all since been divested. Beginning in 1983, LXU acquired three chemical manufacturing facilities, with 2016 marking the year of the final divestiture of a non-chemical company. Since 2017, LSB Industries, Inc. became a pure play, specialized chemical company for the new generation of upper management after Golsen announced his retirement from the board as executive chairman.

Business Segments and Customer Base

In the nitrogen-product industry, ammonia is the precursor to the other value-added agricultural, industrial, and mining products that make up most of LXU's net sales, with ammonia making up 31.47% of LXU's revenue (Figure 3). LXU has historically viewed its segments through the lens of the products and what end market they are sold into. However, in 2022 we have seen a regime change to reporting based on net sales by chemical type, which serves to change reporting to better show how management views the production portion of the business and obfuscate the average price per ton that the contract-based mining and industrial companies are paying by mixing in the marketbased spot pricing at which the agricultural customers buy. These mining and industrial customers are much more important to LXU than to other ammonia producers, as eightyfive percent of the total supply of ammonia is used for agricultural production while for LXU their sales to agricultural users hovers around fifty percent of their production capacity. So, decreasing their customers' knowledge benefits their negotiating position.

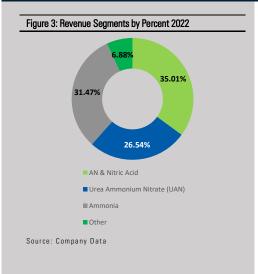
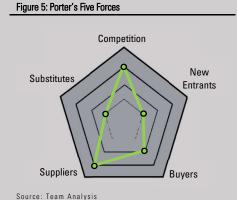


Figure 4: Company Comparable by Market	Cap (Millions)									
Corteva Inc	\$ 32,143									
Nutrien Ltd	\$ 25,391									
CF Industries Holdings Inc	\$ 14,327									
Mosaic Co/The	\$ 10,491									
FMC Corp	\$ 6,943									
CVR Partners LP	\$ 705									
AdvanSix Inc	\$ 680									
LSB Industries Inc	\$ 566									
Cibus Inc	\$ 403									
American Vanguard Corp	\$ 284									
Source: Bloomberg, Team Analysis										



An interesting relationship within the industry is that some of LXU's larger competitors are also some of their largest customers, such as Koch Industries and CVR Partners; they have the capability to produce nitrogen products in-house, but they buy from LXU to fill in the gaps in their downstream input needs.

On-Going Growth Projects

The largest new project that LXU is publicly a partner in is between INPEX, Japan's largest E&P corporation with goals of being net-zero by 2050; Air Liquide, who bring expertise in low-carbon hydrogen production; Vopak Moda, which owns and operates a deepwater berth in the Houston Ship Channel with ammonia storage and handling infrastructure in place; and LXU, who have experience operating ammonia production loops and leading their construction. This HSC project is intended to produce 1.1 million tons of blue ammonia per year by the end of 2027, for context, this is more than the current amount of ammonia that LXU produces at its wholly owned facilities.

Another Blue Ammonia project of note is a venture between Lapis Energy LP and LXU. This project will have Lapis invest in the additional infrastructure necessary to purchase CO from LXU's gray ammonia production and permanently sequester it, which is expected to earn them 450 Tax Credits. This project is planned to make most of the ammonia coming from the El Dorado facility blue, reducing LXU's Scope 1 emissions by twenty-five percent. LXU's only public Green Ammonia project is intended to make the Pryor, OK facility the largest green ammonia site on the continent producing thirty thousand tons per year. Bloom Energy will supply, own, and operate the hydrogen electrolyzers, and Thyssenkrupp Uhde is developing the engineering design to retrofit a portion of Pryor's Gray Ammonia capacity into Green Ammonia capacity.

INDUSTRY & COMPETITIVE POSITIONING

The keys to success for operators within the nitrogen industry are managing the assets to maximize on-stream time, managing the relationship between NG feedstock costs and revenue-side N-Product prices, and maintaining and improving both in-place assets and processes.

Ammonia

In the nitrogen-product lineup, ammonia is the precursor to other value-added products, such as ammonium nitrate, nitric acid, or urea ammonium nitrate. It is itself formed through the combination of atmospheric nitrogen and hydrogen commonly stripped from a natural gas feedstock; coal gasification, which only plants in the U.S. market use (Coffeyville Resources Nitrogen Fertilizer, LLC); or from the breakdown of H_2O into its constituent parts. The use of NG as a feedstock causes a high correlation between international natural gas and ammonia markets.

There is a growing "Green-Ammonia" and "Blue-Ammonia" market, as political forces generate economic carrots and regulatory sticks around carbon sequestration and production. This production method is projected to have a high rate of growth as a method to decarbonize the ammonia industry which is primarily used for agricultural fertilizer as well as a method to decarbonize other industries such as maritime shipping, where we see the European Union rolling out a Cap and Trade system that imposes economic costs of emitting Green House Gases (GHG); or as a high energy-density storage system on land that would reduce the necessity of critical minerals that are in short supply.

In the United States, seventy-five percent of Ammonia production capacity is concentrated in five corporations: CF Industries Inc., Nutrien, Koch Industries Inc., Dyno Nobel Inc., and LSB Industries, Inc. (). The total ammonia production of the United States, according to the EIA, ii satiates around eighty-five percent of the domestic demand; With the gap between domestic production and consumption of ammonia decreasing over the period of 2012-2021 from thirty-seven percent to fourteen percent and net imports

14.68 9.68	33% 17%
9.68	17%
7.44	33%
9.43	17%
10.56	
	+36%

Input	Rate	Source
Risk Free Rate	4.03%	10y Treasury
Beta .	1.20	Team Analysis, 5 - Year & 6 Month Betas
Equity Risk Premium	5.95%	Damodaran, USA
Cost of Equity	11.17%	CAPM
% Equity	57.48%	Bloomberg Q3
Cost of Debt	7.68%	Bloomberg Corporate Bond Bid-Ask Yield
% Debt	42.52%	Bloomberg Q3
Tax Rate	14.60%	LSB 10K 2022

Figure 8: Sensitivity Analysis

1.50% 2.00% 2 50% 9% 14.40 15.19 16.11 12% 9.57 9.91 10.28 15% 6.89 7.07 7.25 10.74 Average

Terminal Growth Rate

Source: Team Analysis

making up around eight percent of consumption according to Statista for 2022. With the current trend of the reduction of net imports of ammonia and expansion in production capacity, as well as government incentives for investment into and commercialization of carbon capture technologies, we could see blue ammonia as a prime way to continue using the United States abundant and inexpensive NG in an environmentally sustainable manner.

Industry Forces

The Porter's Five Forces tool reveals key elements of LXU's strategic implication segment. For the competition, the chemical products market is competitive, with price, product quality, and supply reliability being key differentiators. An opportunity they have for their chemical products could be expansion into low-carbon and clean energy products, such as advancement in clean ammonia production. For new entrants, the primary threat is the chemical manufacturing industry requires significant capital investment in plants, equipment, and technology. Their opportunity is that they are entrenched in their area so any new entrants would face an uphill battle getting established. For buyers, long-term relationships and product quality are crucial for maintaining buyer loyalty. The opportunity is the lack of product diversification for the industry. For suppliers, the primary threat is fluctuations in natural gas prices can significantly impact LXU's production costs. Their opportunity is to enhance energy efficiency and optimize raw material usage. For substitutes, the primary threat is the effectiveness, cost, and availability of substitutes can influence customer choices (Figure 5).

INVESTMENT SUMMARY

We issue a **HOLD** recommendation for LXU with a one-year target price of \$10.56, offering a 36.4% upside from its February 9, 2024, \$7.74 closing price. Our analysis utilizes Multiples (relative value) Analysis, Discounted Cash Flow, Multi-Stage Free Cash Flow, Free Cash Flow to Firm, and Free Cash Flow to Equity Holders models. We further developed a Monte Carlo Simulation model to simulate likely ranges of share price. Furthermore, we recognized LXU's qualitative strengths of infrastructure build and innovative approaches. Offsetting these strengths, LXU faces the challenge of relying on volatile ammonia-based product prices for revenue and natural gas prices for expenses. Refer to our Investment risk section for further discussion. Overall, this recommendation is based upon LXU's expansionary projects, unattractive financials, and volatile market.

Expansionary Projects

As discussed in the business description, LXU plans to join a significant number of partnerships and build on its capacity to produce their products. By 2028, the company plans to nearly double their size, which signals a potential to heavily increase their market cap, share value, and revenue. LXU has delivered on their promised success from past and recent projects (e.g., El Dorado expansions), increasing their capacity one expansion at a time. Despite these expansions, we do not expect LXU to come close to the size of its domestic competitors by 2028. There is a risk that LXU may be bought out by a larger company in the long term, as LXU is not a monopoly and relatively small; however, LXU would be able to hold for a premium price over book.

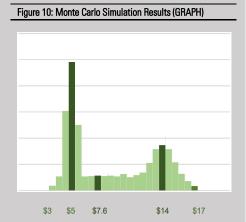
Unattractive Financials

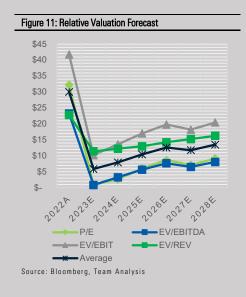
For LXU's expansionary projects to become successful, the projects have to be financed efficiently; however, the company has leveraged significantly, focusing on debt to finance themselves currently. Operating income is expected to level out around \$155 million after 2026, but the cash the company stores is growing each year, with an unattractive amount of cash flows from operations. The cash is growing but not being reinvested into infrastructure for many years. This hoarding is also seen in the company's

Figure 9: Monte Carlo Simula	tion Results	
Mean	\$ 9.43	
Standard Deviation	\$ 4.24	
Minimum	\$ 0.00	
First Quartile	\$ 5.36	
Median	\$ 8.77	
Third Quartile	\$ 13.73	
Max	\$ 20.28	Probability
Bear Case	\$ 5.82	36.60%
Bull Case	\$ 9.70	46.20%

Source: Team Analysis

Source: Team Analysis





current ratio, which is currently 3.98 in 2022 and expected to be above 4.0 from 2023 to 2028; this is unattractive as this suggests a low utilization rate.

Volatile Market

LXU is heavily reliant on the commodity prices for their products and raw materials to produce their chemicals. As seen in 2022, commodity prices for nitrates and ammonia jumped, inflating LXU's financials and revenue. Since the company sells their products on a case by case basis, they constantly need to adjust and reevaluate expense costs and selling prices. The risk lies in the potential of not being able to offset the expenses by raising prices in a timely manner. Also, the market prices of chemicals and natural gas are not aligned and are volatile separately.

VALUATION

We determined our price target of \$10.56 based on three quantitative models and related Monte Carlo Simulations (Figure 9 + 10). We gave the heaviest weight to the discounted cash flow and relative value models. We tested our models under various scenarios to analyze the differences between optimistic and conservative assumptions, while also utilizing Monte Carlo simulations to generate likely price ranges.

Unique Characteristics:

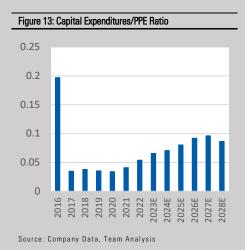
- No dividends | An important factor in our analysis was the absence of dividends, and LXU's stated intention to not issue dividends.
- Volatile Cash Flows | Due to the nature of the company's business, net income
 is heavily impacted by commodity prices. Prices can impact revenue through the
 demand for fertilizer from farmers, the demand for ammonia from industrial
 companies, and expenses through the price of natural gas. This makes LXU
 riskier and more volatile, which we attempt to account for in our analysis.
- High Financial Leverage | The market value of the LXU corporate bonds equals roughly 95% of their Market Capitalization. This lowers LXU's WACC but also consumes a portion of already volatile cashflows.

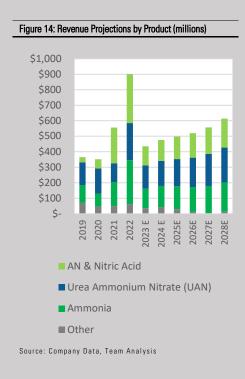
Figure 19: Assur	nption Table		
Assumption	Range Tested	Impact	Range of Share Price
Terminal Growth Rate	0 %- 3%	Significantly impacts valuation models. We selected a 2.0% Terminal Growth Rate in our DCF Model.	\$12.20 - \$16.52
Capex Growth	(10%) - 10%	We selected a 10% Capex Growth following growth expectations. An optimistic -10 was also calculated to compare to our conservative case.	\$14.68 – \$22.33
Revenue Growth	(10%) - 5%	Similar to our methodology for Capex Growth. Because of Volatile inputs and outputs, and 2022's significant revenue, this figure is the most impactful in forecasting cash flows and the DCF model.	\$12.40 — \$35.57
EBIT % of Sales	5% - 25%	Due to debt impacting enterprise value, they need to produce sufficient income and cashflows to cover fixed costs and debt obligations. This measure was meaningful and impactful.	\$2.14 – \$16.65
WACC	8% - 14%	We selected a 9.21% WACC for use in our valuation models. Should LXU prove to be more volatile than expected such that its cost of capital exceeds its current by even a few percent, it could considerably impair its stock value.	\$7.86 — \$18.13
TGR & WACC	1.5% - 2.5% 9% - 15%	Combining TGR & WACC, we saw that assuming a higher WACC with slower growth indicates a near market price. See figure 8.	\$6.89 - \$16.11

Source: Team Analysis

25% 20% 15% 10% 5% 0% 0% 0% 0% 0% 0% 0% 0%

Source: U.S. Census Bureau, Team Analysis





Discounted Cash Flow Model (DCF)

The discounted cash flow model calculates the intrinsic value of the firm's stock based on the discounted cash flow to the firm. The discounted cashflows provide an Enterprise Value we use to derive the Equity Value. This Equity Value is influenced by assumptions about the Market Value of Debt and Cash. Using historical data and our projections of future cashflows we arrive at a calculated stock price of \$14.68.

Free Cash Flow to Equity Model (FCFE)

The free cash flow to equity model discounts the cash flows of the firm. This model is substantially impacted by the firm's debt issuance and net income. Using our free cash flow to equity projections, we calculated a stock price of \$9.68.

Enterprise Value

The Enterprise Value, useful for determining the cost to acquire, calculation is the market capitalization of the stock plus debt minus cash. The Enterprise Value of LXU is greatly affected by LXU's large amount of outstanding debt. The Enterprise Value is \$803 million. The Enterprise Value was calculated using the Market Capitalization of \$576 million plus the market value of long-term debt of \$544 million minus cash, equivalents, and short-term investments of \$317 million.

Weighted Average Cost of Capital (WACC)

Our Weighted Average Cost of Capital calculation is based on the cost of equity, the cost of debt, and the ratio of debt to equity in the company's capital structure. We used sources such as FRED, Damodaran, Bloomberg, and Mergent Online. We arrived at a WACC of 9.21%, derived from a cost of equity of 11.17%, cost of debt of 7.68%, equity weight of 55.62%, and debt weight of 44.38%. Due to carry-forward tax benefits, we settled for a 14.6% tax rate. See figure 7.

Scenario Analysis

Utilizing Excel, historical prices, and our projections, we simulated 1,000 iterations of cashflows and revenues to arrive at possible intrinsic values for LXU's stock using Monte Carlo Simulations. We used the median value for our estimation of LXU's stock price. We assumed a steady state growth rate of 2% as our mean for growth and the historical standard deviation of ammonium prices as our standard deviation for growth. Then we randomly simulated the changes and predicted the expected outcome from 1000 iterations. For our simulation using revenue and expense projections, we arrived at an indicated value of \$7.44. The free cash flow simulations provided an indicated value of \$14.33 for Free Cash Flow to the Firm and \$5.28 for Free Cash Flow to Equity. The average of these values is \$9.43.

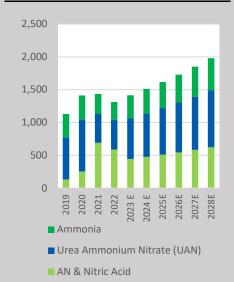
Relative Valuation

Using comparable companies from the agricultural and chemical industries we estimated the price of the firm's stock. Such comparative metrics included Price-to-Earnings (P/E) ratio, Enterprise-Value-to-Earnings-Before-Interest-Tax-Depreciation-Amortization (EV/EBITDA) ratio, Enterprise-Value-to-Earnings-Before-Interest-Tax (EV/EBIT) ratio, Enterprise-Value-to-Revenue (EV/R) ratio, and Price-to-Book-Value (P/BV) ratio. The analysis of historical, current, and blended forward comparative metrics provided by Bloomberg indicates a current price range of \$5.21 to \$9.61. The average price estimate is \$7.44. The most varied period is the 2-year average historical premium, with historical premiums for the 1-year converging to ~\$7 and the 6 months converging to ~\$8. Our independent forecasts corroborate this analysis (figure 11).

FINANCIAL ANALYSIS

can be found in Appendices C1, C2, C3, and C4.

Figure 15: Total Product Sold (Thousand Tons Sold)



Source: Company Data, Team Analysis

Revenue Projections & Growth

The company's revenue is driven by the demand for fertilizer for crops, such as corn and grains. The essential components of fertilizer include AN & Nitric acid (ANN), Urea Ammonium Nitrate (UAN), and Ammonia, which are LSB's primary products produced. Crop growth is also driven by demand, directly stemming from the need of food for a growing U.S. population. See Figure 12 for a decreasing percent change in population in the United States. iv Based on the U.S. census and this analysis, we use the assumption of a 1% growth in gross selling price of ANN, UAN, Ammonium. Although conservative, the 1% base growth allows for a randomizer element in price growth, as it is known the chemical and agricultural segment is volatile; this is seen in the high prices of chemicals in 2022 due to market changes. On the other hand, the growth of products sold is estimated from the proportion of capital expenditures (CapEx) to Property, Plant, & Equipment (PPE). This ratio is important since it shows what percentage of PPE is being invested in from the company's investment funds; PPE is projected to grow due to LXU's recent El Dorado Facility, which is the largest ammonia plant with a production capacity of 493,000 tons, and increased service to the mining market in 2022 and 2023. See Figure 13 to see the average CapEx/PPE ratio normalize to 7% in the projected years. This analysis leads the team to assume each products' amount produced and sold will have a

The financial forecast over the next six years is based on the company's average product selling prices, with base average prices calculated from the years 2019 through 2021,

excluding 2022 due to its deviation of standard pricing; these prices were available on the company's 10-K financial statements. The company's forecasted financial statements

Due to the growth of the U.S. population, increase in PPE investments, and broader market base LXU is selling their products to, it is estimated that total operating revenue will increase at an average rate of 5% starting in 2023. The total revenue projections are listed in Figure 14. There is a 49% decrease in projected revenue for 2023 due to a "normalization" of prices from supply chain/demand reliefs from COVID-19 disruptions.

growth of 6.96%; this is the average CapEx/PPE for the years 2017-2022 plus an

additional 3% to mimic the projected 7% ratio found in Figure 13.

Figure 16: Key Financial Figures, Actual and Estimated

Source: Bloomberg, Company Data, and Team Analysis

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KEY FINANCIALS		2019	20	ZU	2021	2022	2023E		2024E	2025E		2026E		2027E		2028E
PROFITABILITY RATIOS																
Gross Margin (%)		1%	5	%	25%	39%	23%		27%	30%		32%		28%		29%
EBITDA Margin (%)		-5%	1	%	22%	36%	16%		18%	22%		24%		20%		21%
EBIT Margin (%)		-8%	-2	.%	18%	34%	17%		21%	25%		26%		22%		23%
Net Income Margin (%)	-	-18%	-18	%	12%	24%	1%		3%	7%		9%		7%		9%
LIQUIDITY RATIOS																
Current Ratio		1.27	1.	21	2.32	3.98	5.05		5.11	5.21		5.21		4.65		4.53
Quick Ratio		1.04	1.	03	2.16	3.76	4.84		4.90	5.01		5.01		4.45		4.32
Debt to Equity		0.98	1.	19	1.20	1.42	0.85		0.87	0.82		0.76		0.81		0.81
Debt to Assets		0.43	0.	48	0.49	0.51	0.41		0.42	0.40		0.39		0.40		0.40
OPERATING REVENUE (in millions)																
AN & Nitric Acid (ANN)	\$	33	\$	59	\$ 229	\$ 316	\$ 123	\$	134	\$ 145	\$	158	\$	171	\$	186
Urea Ammonium Nitrate (UAN)	\$	146	\$ 1	62	\$ 124	\$ 239	\$ 150	\$	162	\$ 175	\$	191	\$	207	\$	225
Ammonia	\$	116	\$	84	\$ 155	\$ 284	\$ 126	\$	136	\$ 148	\$	160	\$	174	\$	189
Other	\$	70	\$	46	\$ 49	\$ 62	\$ 36	\$	43	\$ 29	\$	12	\$	4	\$	13
Total Operating Revenues	\$	365	\$ 3	51	\$ 556	\$ 901	\$ 435	\$	475	\$ 498	\$	521	\$	558	\$	614
Cost of Goods Sold	\$	360	\$ 3	34	\$ 417	\$ 553	\$ 333	\$	347	\$ 347	\$	356	\$	400	\$	434
Gross Profit	\$	5	\$	17	\$ 139	\$ 348	\$ 102	\$	128	\$ 151	\$	164	\$	158	\$	180

Figure 17: Investment Risks Summary

ENVIRONMENTAL FACTORS

Weather Conditions

Probability MODERATE

Impact HIGH

Affiliates Control

Probability MODERATE

Impact HIGH

OPERATIONAL DISRUPTIONS

Debt Agreements

Probability HIGH *Impact* HIGH

Unplanned Improvements

Probability MODERATE

Impact

ATE HIGH

Important Personnel
Probability In

Impact

LOW

MODERATE

ECONOMIC IMPACTS

Raw Materials

Probability
MODERATE

Impact HIGH

Regulations

Probability
MODERATE

Impact HIGH

Costs and Net Income

The company's cost of sales and expenses are based on manufacturing, storage, and raw material costs. On average, the total cost of sales has been 85% in the last 5 years, from 2018 to 2022. The ratio has been decreasing since 2021, with an expected average ratio of 64% in the next six years. The price of raw materials to manufacture the company's chemicals increased in 2022, with an average natural gas per MMBtu for materials price of \$8.05 and for production of \$7.65. By September 30, 2023, the costs of these raw materials decrease by 56% and 53%, respectively. These natural gas prices, along with increased selling prices of ANN, UAN, and Ammonia, explain the relatively low cost of goods sold to revenue ratio of 61%. Due to the high ratio of the cost of goods sold to revenue, it was estimated that the cost of goods sold will continue to be a rolling five-year average of the ratio of the expected year's revenue. This allows for a normalization of the cost of goods sold by 2025, averaging \$403 million with a ratio of 72%. The reason for this normalization is due to an expected, stable economic outlook with normal levels of inflation (2%) since the inflation hike in 2022 and improved supply chains, increasing reliability in received raw materials.

Other expenses such as selling, general, and administrative expenses are expected to normalize to 6% of the total revenue by 2028, estimated by taking a five-year rolling average of the ratio between these expenses and total revenue. Interest expense is expected to increase year by year as the company is expected to take on future, greater debt financing. Overall, the company will see a dramatic decrease in net income for 2023, as chemical and raw material prices decrease and LXU refinances. The net income increases by 578% from 2023 to 2026, and it is expected it will remain relatively flat to 2028.

As an additional note, the net operating loss (NOL) of LXU carries forward for another 20 years, beginning to expire in 2034. As of December 31, 2022, LXU has federal and state tax NOL carryforwards of \$352 and \$440 million, respectively. Because of LXU's consistent use of NOL carryforwards to reduce tax liabilities, we assume the company tax rate of 14.6% for our model predictions, as it was the effective tax rate of 2022, rather than the standard corporate tax rate of 21%.

Balance Sheet

As seen in Figure 16, the key financials outline the liquidity ratios derived from the company's predicted balance sheet. From 2022, the current and quick ratios are expected to be extremely high, averaging 4.61 and 4.51, respectively. At first glance, this sets the company apart in its high working capital quantity, demonstrating its ability to pay off short-term debt. However, the high ratios are worrying, as it indicates the company is not efficiently using its resources. The lack of optimization is unattractive, especially with an industry average current ratio of 1.34. The debt-to-equity ratio of the company suggests a preference for investment from the company's equity rather than debt. The years from 2020 to 2022 have a ratio greater than one, when the company relied more so on debt to invest in its projects. In general, this ratio demonstrates the company is not risky compared to competitors. This is another concern as the company has an abundance of working capital but is financially not showing aggressive investments to optimize their leftover assets and inventory.

INVESTMENT RISKS

In evaluation of LSB Industries, Inc., based on LXU's and competitors' filed quarterly and annual reports, the three main types of risks that impact the business are environmental factors, liability allocation, and operational disruptions (Figure 17).

Figure 18: Bloomberg ESG Model

Environmental Component

Energy Management

Lagging

Measures the company's energy consumption, renewable energy use, and efficiency.

GHG Emissions Management

Median

Assesses the company's efforts in managing greenhouse gas emissions.

Climate Exposure

Above Median Evaluates the company's exposure and response to climate transition and physical risks.

Waste Management

Lagging

Reviews the company's waste generation, recycling practices, and hazardous waste management.

Water Management

Lagging

Focuses on the company's water use, wastewater practices, and efforts to improve water efficiency.

Ecological Impact

Lagging

Concerns environmental incidents, fines, and ecosystem protection efforts.

Air Quality

Median

Looks at air emissions and air quality policies.

Sustainable Product

Leading

Highlights opportunities related to green products and services.

Social Component

Occupational Health & Safety

Median

Evaluates safety incidents, fatalities, and health policies.

Operational Risk Management

Lagging

Reviews preparedness and incidents impacting operations.

Product Quality Management

Lagging

Assesses management of product quality and safety.

Environmental Factors

Weather Conditions - MODERATE probability, HIGH impact

The effect of the weather conditions on business performance is highly impactful. Because a substantial portion of the business relies on the distribution of fertilizer for farming, it is important for the weather to be cooperative with the seasons of crop growth. Specifically, the growth of corn is intrinsically linked to the use of ammonia nitrate due to the crop's high nitrogen requirements and the fertilizer's effectiveness in meeting these needs. In addition, weather can cause an interruption to the operations of chemical facilities. Unhelpful weather conditions are moderately possible throughout the year because it is not certain how the year will perform.

Affiliates Control – MODERATE probability, HIGH impact

As of December 31, 2022, LXU Funding and SBT Investors, both affiliates of Eldridge, collectively hold approximately 26% of outstanding common stock. Also, under an amended Board Representation and Standstill Agreement, SBT Investors are granted the right to nominate board members, depending on the size of the Board and the holdings of both SBT Investors and LXU Funding. Given a substantial portion of common stock's voting power beneficially owned by stockholders affiliated with Eldridge, Eldridge and its related entities will maintain a significant influence over operations.

Operational Disruptions

Debt Agreements - HIGH Probability, HIGH Impact

The debt agreements, including the Exchange Agreement, impose various covenants and restrictions that limit operational flexibility. Violating any of these covenants or restrictions could lead to a considerable portion of the debt becoming immediately due or could trigger significant contractual liabilities. Specifically, these stipulations restrict capacity to undertake actions such as incurring further debt or issuing preferred shares; distributing dividends, repurchasing, or making distributions on capital stock; executing other restricted payments; undertaking investments or certain capital expenditures; selling or transferring assets; securing debt with liens on assets; undergoing significant corporate transformations or altering the business operations; conducting substantial acquisitions; consolidating, merging, selling, or disposing of most or all assets; classifying subsidiaries as unrestricted; and repaying, repurchasing, or amending terms of certain subordinate and other significant debt.

Unplanned Improvements — MODERATE Probability, HIGH Impact

LBS Industries, Inc. consists of operational divisions with varying ages and degrees of automation. Despite ongoing substantial capital enhancements annually, they have encountered and may face in the future, issues related to age or automation that could lead to equipment and associated facility damage. The machinery essential for producing critical products is highly specialized, meaning that replacing such equipment could take a considerable amount of time, thereby prolonging downtime for the impacted division.

Important Personnel – LOW Probability, MODERATE Impact

Success is significantly reliant on the contributions of key executive officers, and their continued presence is not guaranteed. While LXU have secured employment agreements with some senior executives, such as Mark T. Behrman and Cheryl A. Maguire, not all essential staff are bound by such contracts. The departure of any principal executive officers could negatively impact on operations. Moving forward, the ability to sustain and grow will largely depend on the capacity to attract and keep highly skilled and qualified professionals. In recent years, with rising competition for talent within the industry, LXU might face employee attrition rates higher than expected. The turnover of staff and the subsequent costs of recruiting replacements, coupled with the loss of valuable human

Community Rights & Relations

Lagging

Looks at community and human rights, and community relations management.

Ethics & Compliance

Leading

Considers business ethics, competitive behavior, and legal compliance.

Social Components Score

Below Median Aggregate score reflecting the company's overall social performance.

Governance Component

Board Composition

Leading

Measures diversity, independence, and effectiveness of the board.

Executive Compensation

Leading

Assesses the alignment of executive pay with company performance and governance.

Shareholder Rights

Below Median Evaluates policies protecting shareholder interests and responsiveness to shareholder concerns.

Audit

Above Median Reviews audit outcomes, committee effectiveness, and external auditor performance.

capital and expertise due to attrition, and challenges in attracting new talent, could hinder operational efficiency.

Economic Impacts

Raw Materials – MODERATE Probability, HIGH Impact

The costs and availability of key raw materials significantly influence revenue and profitability. These materials often experience substantial price fluctuations, and recent disruptions in the global supply chain, coupled with rising inflation in the United States, have intensified this volatility. In the past, sharp rises in the cost of these materials have sometimes prevented adjusting selling prices quickly enough to offset the increased expenses. Natural gas, as the main raw material in producing many chemical products, poses challenges. While contracts with some customers allow LXU to pass on raw material cost increases, a significant portion of sales lack such provisions. Moreover, the market prices of agricultural products do not always align with natural gas costs but are influenced by the market dynamics for nitrogen-based alternatives. This disconnect can hinder the ability to fully recoup production costs in this segment. Therefore, LXU may not always manage to transfer the entirety of raw material cost increases to customers in the future. Price shifts in raw materials could negatively impact the business's financial health, liquidity, and operational outcomes.

Regulations - MODERATE Probability, HIGH Impact

The costs for manufacturing and facility equipment could be influenced by changes in regulatory policies (including tariffs) of foreign governments, as well as the U.S. laws and policies affecting foreign trade and investment. Operations are governed by a wide array of health, safety, security, and environmental regulations. The production and distribution of chemical products carry inherent risks related to health, safety, and the environment, necessitating adherence to relevant laws and regulations that can impose significant fines and potential criminal penalties for non-compliance. While LXU strives to maintain rigorous processes for monitoring, reviewing, and ensuring compliance with these laws and regulations, they have faced, and may in the future face, fines, penalties, and sanctions for any infringements. Additionally, we may incur considerable expenses for remediation and other liabilities associated with the management, production, usage, emission, release, or disposal of pollutants at or from chemical plants.

ENVIRONMENTAL, SOCIAL, GOVERNANCE

Based on careful analysis of their governing documents, corporate structure, and initiatives geared towards environmental stewardship, LSB Industries, Inc. demonstrates a strong commitment to governance controls and minimizing environmental impact. The governance framework is backed by various controls and initiatives. In terms of compensation, they have established quidelines within the Incentive Compensation Recoupment Policy. This mandates the recoupment of incentive-based compensation from executives in the occurrence of financial restatements resulting from noncompliance with reporting requirements. Additionally, the controls offered within the detailed charter of the Audit Committee ensure consistent oversight of accounting, financial reporting, and compliance with legal and regulatory standards. The Audit Committee is delegated, with the appointment and oversight of independent auditors that increase the effectiveness of internal controls and risk management processes through impartial monitoring. Additionally, LSB maintains an independent board through the maintenance of directors with minimal vested and conflicted interests and establishing policies that do not allow the Chief Executive Officer to serve as its chairman.

On the environmental front, LSB Industries is actively pursuing initiatives to minimize their impact. Their indicated goal to reduce CO2 equivalent emissions per ton of ammonia

production by 25% by 2030 is supported by several undertaken initiatives. They have implemented different technological controls such as flare systems for ammonia storage tanks adopted carbon capture and sequestration (CCS) technologies. Notably, their CCS project in Arkansas is projected to reduce CO2 emissions by approximately 450 thousand metric tons annually at their El Dorado facility. Their move towards the development of "green" ammonia production utilizing renewable energy sources for hydrogen extraction presents additional support for their sustainable patronage efforts. Although, as water management becomes an increasing concern control restrictions surrounding their source of water and its sustainability could be expected.

Also, we measure the company's ESG profile mainly using Bloomberg's Environmental, Social, and Governance scoring model, described in Figure 18. Considering this ESG model, LSB's reduction plan, and their governance, it is evident that LSB demonstrates a commitment to improving its performance in this area; however, there is a lack of tangible, measurable targets to hold LSB accountable. In comparison to the industry median, LSB continuously falls short. These factors further emphasize our hold recommendation.

ENDNOTES

- i https://investors.lsbindustries.com/news-releases/news-release-details/lsb-industries-launches-green-ammonia-project
- ii https://www.eia.gov/todayinenergy/detail.php?id=52358 Published Q2 '22
- ii https://www.statista.com/statistics/1266392/ammonia-plant-capacities-united-states 2022 Statista Data from Nutrien. Sorted by Production Volume Highest to Lowest
- iv https://www.census.gov/data/tables/time-series/dec/popchange-data-text.html

Global impact of COVID-19 on agriculture: role of sustainable agriculture and digital farming - PMC (nih.gov)

ADDITIONAL RESOURCES

- https://www.mergentonline.com/
- https://investors.lsbindustries.com/financial-information/sec-filings
- https://fred.stlouisfed.org/
- https://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html
- Bloomberg Finance L.P.



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Appendix A1—Industry Peers

Company	Ticker	Last	Price	Mk	t Cap (USD)	P/E	Beta 5Y	Dvd Yld	EP	S
Corteva Inc	CTVA US	\$	53.60	\$	36,657,284,400	41.23	0.73	1.19%	\$	1.30
Nutrien Ltd	NTR CN	\$	49.11	\$	24,784,338,557	11.16	0.97	4.32%	\$	4.40
CF Industries Holdings Inc	CF US	\$	78.08	\$	14,592,895,546	7.26	1.01	2.56%	\$	10.76
Mosaic Co/The	MOS US	\$	29.92	\$	9,837,747,196	7.57	1.5	2.81%	\$	3.95
FMC Corp	FMC US	\$	51.75	\$	6,818,073,175	4.58	0.88	4.48%	\$	11.31
CVR Partners LP	UANUS	\$	72.33	\$	747,590,425	2.97	1.35	36.80%	\$	24.38
AdvanSix Inc	ASIX US	\$	26.00	\$	682,197,641	7.88	1.72	2.46%	\$	3.30
Cibus Inc	CBUS US	\$	18.28	\$	411,769,831	-	1.93	-	\$	(9.27)
American Vanguard Corp	AVDUS	\$	10.52	\$	301,592,105	65.72	1.00	1.14%	\$	65.75

Appendix A2—Porter's Five Forces Analysis

compete

Competition	New Entrants	Buyers	Suppliers	Substitutes
•HIGH IMPACT	•LOW IMPACT	•MEDIUM IMPACT	•HIGH IMPACT	•LOW IMPACT
•Domestic competitors ten times the size of LXU directly hinder LXU's success	 New chemical manufacturing industry companies require significant capital investments to 	 LXU has long-term customers with pre-built loyalty Opportunity to diversify products for various 	•Fluctuations in natural gas prices affect LXU's expenses	 Effectiveness and costs of competitors' products Customer loyalty helps limit the

markets

Appendix A3-SWOT Analysis

Appendix AS—SWOT And			
Strengths	Weaknesses	Opportunities	Threats
•Established Infrastructure	Market Volatility - Natural Gas prices for	•Expansion in Clean Energy	•Intense Competition
 In multiple market segments (e.g., agricultural, mining, and 	expenses & Commodity prices for revenue	•Technology Innovation	•Environmental Regulations
industrial)	• Cash hoarding	StrategicPartnerships/Expansions	 Aquired by a monopoly in the long-term
 Sustainability Initiatives - Working on green and blue ammonia 	•Stopped hedging recently		G The state of the

threat of

substitutes

Appendix B1—Discounted Cash Flow Model

In Milllions	201	.7A	2018A	2019A	2020A	2021A		2022	2A	2023E	2024E	2025E	2026E	2027E	2028E
Revenue	\$	427.50	\$378.16	\$ 365.17	\$ 351.23	\$	555.96	\$	900.75	\$ 462.47	\$ 499.79	\$519.28	\$ 551.87	\$ 585.70	\$ 629.81
% of Growth			-11.5%	-3.4%	-3.8%		58.3%		62.0%	-48.7%	8.1%	3.9%	6.3%	6.1%	7.5%
FDIT	Ś	(24.00)	¢ (22.02)	ć (20.40\	Ć /4F F4\	۸.	100.05	۲	200.04	ċ 77.70	ć 102 00	¢ 12C 04	ć 142 O2	ć 120 11	ć 147 20
EBIT	Þ	• •	\$ (23.03)				100.95		308.94	•	\$ 103.98				· ·
% of Sales		-8.0%	-6.1%	-8.0%	-4.4%		18.2%		34.3%	16.8%	20.8%	24.4%	25.9%	22.2%	23.4%
Taxes	\$	(40.76)	\$ 1.74	\$ (20.92)	\$ (4.75)	\$	(4.56)	\$	39.17	\$ 1.35	\$ 3.60	\$ 7.25	\$ 9.63	\$ 7.66	\$ 10.13
% of EBIT		119.6%	-7.6%	71.7%	30.6%		-4.5%		12.7%	1.7%	3.5%	5.7%	6.7%	5.9%	6.9%
EBIAT	\$	6.67	\$ (24.77)	\$ (8.26)	\$ (10.79)	\$	105.51	\$	269.77	\$ 76.43	\$ 100.38	\$ 119.69	\$ 133.40	\$ 122.45	\$ 137.07
D&A	\$	67.00	\$ 70.27	\$ 68.33	\$ 69.58	\$	68.69	\$	66.94	\$ 66.94	\$ 66.94	\$ 66.94	\$ 66.94	\$ 66.94	\$ 66.94
% of CapEX		-189.1%	-189.7%	-206.5%	-228.4%		-195.5%		-146.0%	-132.8%	-120.7%	-109.7%	-99.8%	-90.7%	-82.4%
% of Sales		15.7%	18.6%	18.7%	19.8%		12.4%		7.4%	14.5%	13.4%	12.9%	12.1%	11.4%	10.6%
										-					
Capital Expenditures	\$	(35.43)	\$ (37.05)	\$ (33.08)	\$ (30.47)	\$	(35.13)	\$	(45.83)	\$ (50.42)	\$ (55.46)	\$ (61.00)	\$ (67.10)	\$ (73.81)	\$ (81.20)
% of Sales		-8.3%	-9.8%	-9.1%	-8.7%		-6.3%		-5.1%	-10.9%	-11.1%	-11.7%	-12.2%	-12.6%	-12.9%
											4 ()	4 4	4 />		4
Change in NWC	\$	6.46	\$ 13.84	\$ 13.03	\$ 5.29	\$	(115.92)	Ş	(286.08)	\$ 31.01	\$ (7.65)	\$ (6.75)	\$ (6.49)	\$ 11.45	\$ (18.91)
% of Sales		1.5%	3.7%	3.6%	1.5%		-20.9%		-31.8%	6.7%	-1.5%	-1.3%	-1.2%	2.0%	-3.0%
Unlevered FCF	Ś	44.70	\$ 22.30	\$ 40.01	\$ 33.61	\$	23.15	¢	4.78	\$ 123.96	\$ 104.21	\$ 118.87	\$ 126.74	\$ 127.02	\$ 103.90
	ې	 .70	22.30	→ - 0.01	7 33.01	Ţ	25.15	٧	4.70			•			·
Present Value of UFCF										\$ 113.51	\$ 87.38	\$ 91.27	\$ 89.10	\$ 81.77	\$ 61.25

Target Price									
Terminal Value	\$1,430								
Present Value of Terminal Value	\$ 794								
Enterprise Value	\$1,318								
Cash	\$318								
Debt	\$544								
Equity Value	\$1,092								
Shares Outstanding	74.34								
Implied Share Price	\$14.68								

Exit Multiple

The terminal value \$1,470 gives an implied EV/EBITDA multiple of 9.11x.

			Tei	rminal	Gr	owth F	Rate	Э	
		0.0%		1.5%		2.0%		2.5%	3.0%
	6%	\$ 20.22	\$	25.69	\$	28.43	\$	31.95	\$ 36.64
	8%	\$ 14.46	\$	17.00	\$	18.13	\$	19.46	\$ 21.06
MAC	10%	\$ 11.02	\$	12.41	\$	12.99	\$	13.64	\$ 14.40
۹ ا	12%	\$ 8.73	\$	9.57	\$	9.91	\$	10.28	\$ 10.69
	14%	\$ 7.10	\$	7.64	\$	7.86	\$	8.09	\$ 8.34
	16%	\$ 5.88	\$	6.25	\$	6.39	\$	6.54	\$ 6.70
	18%	\$ 4.93	\$	5.19	\$	5.29	\$	5.39	\$ 5.50

Average \$ 13.71
Average \$ 12.68

Appendix B2—Free Cash Flow to Equity Model

Inputs	
Steady State Growth Rate	

Steady State Growth Rate	2% Ed	quity Risk Premium	5.95%	Ke	11.17%
Beta	1.20 Ri	isk Free Rate	4.03%	Shares Outstanding	74.34

FCF Equity	Yea	Year 0		Year 1		Year 2		ır 3	Yea	ır 4	Yea	r 5
FCF for equity holders/share	\$	(1.75)	\$	0.68	\$	0.85	\$	0.99	\$	0.78	\$	0.76
Terminal Value	\$	8.45										
NPV	\$	9.68										

Appendix B3—Sensitivity Tables

FCF to equity holders													
Beta		0.50		1.00		1.50	2.00		2.50				
Ke		7.0%		10.0%		13.0%		15.9%		18.9%			
Steady Growth Rate													
0.50%	\$	13.31	\$	9.38	\$	7.23	\$	5.85	\$	4.87			
2.50%	\$	18.86	\$	11.74	\$	8.55	\$	6.70	\$	5.47			
4.50%	\$	33.28	\$	15.81	\$	10.49	\$	7.85	\$	6.24			

	Disc	cou	ınted C	as	sh Flov	v M	odel	
		Tei	rminal	Gr	owth F	Rat	е	
	0.0%		1.5%		2.0%		2.5%	3.0%
6%	\$ 20.22	\$	25.69	\$	28.43	\$	31.95	\$ 36.64
8%	\$ 14.46	\$	17.00	\$	18.13	\$	19.46	\$ 21.06
10%	\$ 11.02	\$	12.41	\$	12.99	\$	13.64	\$ 14.40
\$ 12%	\$ 8.73	\$	9.57	\$	9.91	\$	10.28	\$ 10.69
14%	\$ 7.10	\$	7.64	\$	7.86	\$	8.09	\$ 8.34
16%	\$ 5.88	\$	6.25	\$	6.39	\$	6.54	\$ 6.70
18%	\$ 4.93	\$	5.19	\$	5.29	\$	5.39	\$ 5.50
		Α١	/erage	\$	13.71			
		A۱	/erage	\$	12.68			

We conducted a sensitive analysis of our models to see the impact of changes in key assumptions. This allowed us to gauge the robustness of our models and provided a deeper understanding of potential risks in the valuation. We chose to use a riskier measure of beta justified by historical analysis and Damodaran research; this analysis considers cases of lower/higher costs of capital and lower/higher risks associated with LXU. This sensitivity analysis provided stock price figures that range from \$4.87 to 33.28 for our Free Cash Flow to Equity Holders Model and \$4.93 to \$36.64 for the Discounted Cash Flow Model. The high sensitivity of the stock due to factors such as volatile revenues and cashflows, high financial leverage, and the connection to volatile commodity prices for both inputs and outputs. The demand for nitrogen-based fertilizers and ammonia products can be influenced by market conditions.

Appendix B4—Weighted Average Cost of Capital

Input	Rate	Source								
Risk-Free Rate	4.03%	10y Treasury								
Beta	1.2	Team Analysis, 5 - Year & 6 Month Betas								
Equity Risk Premium	5.95%	Damodaran, USA								
Cost of Equity	11.17%	CAPM								
% Equity	57.48%	Bloomberg Q3								
Cost of Debt	7.68%	Bloomberg Corporate Bond Bid-Ask Yield								
Weight of Debt	42.52%	Bloomberg Q3								
Tax Rate	14.60%	Effective Tax Rate								
WACC 9.21%										

Cost of debt: Using Bloomberg to pull the current bid-ask Yield for LXU's outstanding corporate bond. We arrived at a 7.68% cost of debt. The current \$575 million outstanding 6.25% corporate bonds trading at a 94.59 discount.

Cost of equity: Using our Beta, derived from select Bloomberg periods, the risk-free rate of U.S. 10-year treasury, and Damodaran's research on equity risk premium in the United States, we arrive at 11.17% cost of equity using the Capital Asset Pricing Model.

WACC: This gives an overall WACC of 9.21% for LSB Industries.

Appendix B5—Relative Valuation

Company	Ticker	2Y Corr	Mk	t Cap (USD)	BF P/E	BF EV/EBITDA	BF EV/EBIT	BF EV/Rev	LF P/BV
Corteva Inc	CTVA US	0.36	\$:	36,657,284,400	17.62	10.02	14.33	2.07	1.46
Nutrien Ltd	NTR CN	0.55	\$:	24,784,338,557	11.21	6.80	10.74	1.45	0.99
CF Industries Holdings Inc	CF US	0.58	\$	14,592,895,546	11.98	6.84	9.30	2.76	2.55
Mosaic Co/The	MOS US	0.58	\$	9,837,747,196	9.28	5.36	8.85	1.09	0.82
FMC Corp	FMC US	0.34	\$	6,818,073,175	12.31	9.57	11.33	2.23	1.54
CVR Partners LP	UAN US	0.48	\$	747,590,425					2.42
AdvanSix Inc	ASIX US	0.43	\$	682,197,641	12.88	5.37	10.65	0.62	0.91
Cibus Inc	CBUS US	0.08	\$	411,769,831				180.61	0.63
American Vanguard Corp	AVD US	0.26	\$	301,592,105	14.14	7.69	12.36	0.86	0.84
LSB Industries Inc	LXU US		\$	570,592,779	14.59	5.38	9.95	1.53	1.07
Mean (Including LXU US)			\$	9,540,408,165	11.19	7.14	10.06	1.88	1.31
Current Premium to Comps					30.35	-24.71	-1.06	-18.89	-17.99

Current vs 2Y Average His	Current vs 2Y Average Historical Premium												
Metric	Current(%)	Hist Avg(%)	Diff(%)	# SD	Multiple(x)	Price(USD)							
BF P/E	16.63	-15.50	32.13	1.28	10.61	\$ 5.58							
BF EV/EBITDA	-30.19	-33.98	3.79	0.30	5.10	\$ 6.76							
BF EV/EBIT	-8.65	-26.14	17.49	1.02	8.06	\$ 5.21							
BF EV/Rev	-10.18	4.62	-14.80	-0.66	1.78	\$ 9.61							
LF P/BV	-18.72	-5.29	-13.43	-0.39	1.25	\$ 8.97							
Subject Ticker: LXU US Equ	ity												

	in millions	202	022A 20		2023E 20		2024E		2025E		26E	2027E		20	28E
Shares Outstanding			74.34		74.34		74.34		74.34		74.34		74.34		74.34
Book Value		\$	515.87	\$	521.77	\$	539.30	\$	579.41	\$	636.94	\$	684.13	\$	744.83
Total Revenue		\$	900.75	\$	450.29	\$	482.97	\$	512.82	\$	562.61	\$	602.22	\$	643.19
EBITDA		\$	242.00	\$	8.79	\$	33.65	\$	58.78	\$	79.47	\$	67.51	\$	84.04
EBIT		\$	308.94	\$	75.73	\$	100.58	\$	125.72	\$	146.41	\$	134.44	\$	150.97
Net Income		\$	214.41	\$	5.90	\$	17.52	\$	40.11	\$	57.53	\$	47.19	\$	60.70

Multiples	Industry Average	2022A 2		2A 202		2024E		202	25E	2026E		2027E		202	8E
P/E	11.19	\$	32.28	\$	0.89	\$	2.64	\$	6.04	\$	8.66	\$	7.11	\$	9.14
EV/EBITDA	7.14	\$	23.25	\$	0.84	\$	3.23	\$	5.65	\$	7.64	\$	6.49	\$	8.08
EV/EBIT	10.06	\$	41.79	\$	10.24	\$	13.60	\$	17.00	\$	19.80	\$	18.18	\$	20.42
EV/REV	1.88	\$	22.81	\$	11.40	\$	12.23	\$	12.99	\$	14.25	\$	15.25	\$	16.29
Average	1.31	\$	30.03	\$	5.84	\$	7.93	\$	10.42	\$	12.59	\$	11.76	\$	13.48

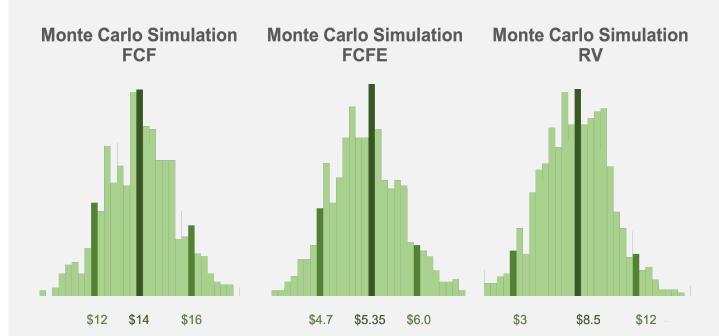
Appendix B6—Monte Carlo Simulation

Monte Carlo simulation was used for the following models: FCFF, FCFE, and RV. We wanted to assess how the stock price would be affected by uncertainty.

Simulation Statistic	s Tab	le
Trials		1000 X 3
Target Price FCFF	\$	14.33
Target Price FCFE	\$	5.28
Target Price RV	\$	8.69
All Models		
Mean all models	\$	9.43
1st Quartile	\$	5.36
Median all Models	\$	8.77
3rd Quartile	\$	13.74
Price Below 25% Market		36.60%
Price Above 25% Market		46.20%

FCF	F		FCF	E		RV	
Mean		14.33				Mean	\$ 8.69
Median	\$		Median	\$		Median	\$ 9.11
StDeviation		1.12	StDeviation		0.42	StDeviation	3.30

Results: We observe that \sim 46% of all outcomes yield a share price less than the current market price of \$7.74. and \sim 53% below the average indicated value of 10.22. Furthermore, we observe that only 17.20% falls between our bull +25% and -25% bear cases supporting our assessment of high volatility and our HOLD recommendation.



Appendix C1—Balance Sheet

Year Ended December 31 (in millions)		2020A		2021A		2022A		2023E		2024E		2025E	2026E		2027E		2028E
ASSETS							П										
CURRENT ASSETS							l										
Cash and Equivalents	\$	16	\$	82	\$	64	\$	37	\$	42	\$	46	\$ 54	\$	52	\$	59
Accounts Receivable - Trade	\$	43	\$	86	\$	75	\$	55	\$	56	\$	60	\$ 66	\$	67	\$	77
Inventories	\$	20	\$	17	\$	31	\$	21	\$	21	\$	21	\$ 22	\$	25	\$	28
Prepaid Expenses (Short-Term)	\$	19	\$	14	\$	17	\$	13	\$	14	\$	15	\$ 15	\$	16	\$	18
Other Current Assets	\$	7	\$	17	\$	22	\$	11	\$	12	\$	13	\$ 15	\$	16	\$	17
Raw Materials	\$	2	\$	2	\$	2	\$	2	\$	2	\$	2	\$ 2	\$	2	\$	2
Finished Goods	\$	18	\$	15	\$	29	\$	20	\$	19	\$	19	\$ 20	\$	23	\$	26
Supplies and Materials	\$	25	\$	27	\$	28	\$	23	\$	24	\$	24	\$ 25	\$	26	\$	31
Allowance For Doubtful Accounts	\$	0	\$	0	\$	1	\$	0	\$	0	\$	0	\$ 1	\$	1	\$	0
Short-Term Investments		_		_	\$	331	\$	331	\$	331	\$	331	\$ 331	\$	331	\$	331
Accounts and Notes Receivable	\$	43	\$	87	\$	75	\$	54	\$	56	\$	61	\$ 66	\$	67	\$	77
NONCURRENT ASSETS							l										
Property Plant & Equipment - Net	\$	891	\$	858	\$	849	\$	794	\$	812	\$	808	\$ 819	\$	879	\$	1,042
Total Intangible Assets - Net	\$	6	\$	4	\$	2	\$	4	\$	4	\$	4	\$ 4	\$	4	\$	5
Total Assets Balanced	S	1,053	S	1,133	S	1,440	S	1,107	S	1,152	S	1,213	\$ 1,314	S	1,468	S	1,581
Year Ended December 31 (in millions)																	
Accounts Payable - Trade	\$	47	\$	49	\$	78	\$	50	\$	51	\$	50	\$ 54	\$	64	\$	67
Current Portion of Long-Term Debt	\$	17	\$	9	\$	10	\$	10	\$	10	\$	10	\$ 10	\$	10	\$	11
Short-Term Borrowings	\$	14	\$	13	\$	16	\$	10	\$	11	\$	12	\$ 12	\$	14	\$	15
Accrued Expenses and Other	\$	30	\$	33	\$	38	\$	29	\$	28	\$	29	\$ 31	\$	35	\$	38
Total Current Liabilities	\$	107	\$	105	\$	142	\$	99	\$	100	\$	101	\$ 107	\$	123	\$	131
Long Term Debt	\$	467	\$	518	\$	703	\$	433	\$	460	\$	474	\$ 505	\$	580	\$	612
Deferred Income Taxes (Liabilities)	\$	31	\$	27	\$	63	\$	36	\$	34	\$	35	\$ 38	\$	47	\$	48
Other Noncurrent Liabilities	\$	6	\$	3	\$	1	\$	4	\$	4	\$	3	\$ 3	\$	3	\$	4
Long Term Operating Lease Liabilities	\$	20	\$	20	\$	15	\$	14	\$	14	\$	15	\$ 15	\$	17	\$	19
Total Non-Current Liabilities	\$	524	\$	567	\$	782	\$	487	\$	512	\$	527	\$ 561	\$	646	\$	683
TOTAL Liabilities	\$	632	\$	672	\$	924	\$	586	\$	611	\$	629	\$ 668	\$	769	\$	814
Retained Earnings (Accumulated Deficit)	\$	(41)	\$	(31)	\$	199	\$	205	\$	224	\$	267	\$ 329	\$	383	\$	451
Common Stockholder's Equity	\$	463	\$	492	\$	317	\$	317	\$	317	\$	317	\$ 317	\$	317	\$	317
Total Shareholders Equity	\$	422	\$	460	\$	516	\$	522	\$	541	\$	584	\$ 646	\$	699	\$	768
Total Liabilities and Shareholders Equity	\$	1,053	\$	1,133	\$	1,440	\$	1,107	\$	1,152	\$	1,213	\$ 1,314	\$	1,468	\$	1,581

Appendix C2—Income Statement

Year Ended December 31 (in millions)	2020	A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E
Total Revenue	\$ 35	1 8	556	\$ 902	\$ 449	\$ 492	\$ 528	\$ 581	\$ 636	\$ 681
Cost of Goods Sold	\$ 33	1 8	\$ 417	\$ 553	\$ 344	\$ 359	\$ 369	\$ 398	\$ 456	\$ 481
Gross Profit	\$ 1	7 \$	139	\$ 348	\$ 105	\$ 133	\$ 160	\$ 183	\$ 180	\$ 199
Selling General and Administrative Expenses	\$ 3	2 8	38	\$ 39	\$ 30	\$ 30	\$ 30	\$ 32	\$ 38	\$ 40
Operating Income	\$ (1	5) \$	101	\$ 309	\$ 76	\$ 102	\$ 129	\$ 151	\$ 142	\$ 160
Other Operating (Income)/Expense - Net	_	- \$	(0)	\$ 1	\$ (10)	\$ 0	\$ (2)	\$ (2)	\$ (3)	\$ (3)
Equity In Earnings of Affiliate/Joint Ventures	_	-	_	_	\$ 29	\$ 29	\$ 29	\$ 29	\$ 29	\$ 29
Interest Expense	\$ 5	1 8	\$ 49	\$ 47	\$ 50	\$ 51	\$ 52	\$ 52	\$ 53	\$ 54
Income Before Income Taxes	\$ (6	7) \$	52	\$ 262	\$ 7	\$ 22	\$ 51	\$ 72	\$ 63	\$ 80
Income Tax Expense (Benefit)	\$ (5) \$	(5)	\$ 39	\$ 1	\$ 3	\$ 8	\$ 11	\$ 9	\$ 12
Income Before XO Items	\$ (6:	2) \$	56	\$ 222	\$ 6	\$ 19	\$ 43	\$ 62	\$ 54	\$ 68
Net Income	\$ (62)	\$ 69	\$ 214	\$ 6	\$ 19	\$ 43	\$ 62	\$ 54	\$ 68

Appendix C3—Statement of Cash Flows

Year Ended December 31 (in millions)	2020A	2021A	2022A	2023E	2024E	20	25E	202	6E	2027E		2028E
CASH FLOWS FROM OPERATING ACTIVITIES												
Net Income	\$ (62)	\$ 44	\$ 230	\$ 6	\$ 19	\$	43	\$	62	\$ 54	\$	68
Depreciation	\$ 70	\$ 69	\$ 67	\$ 67	\$ 67	\$	67	\$	67	\$ 67	\$	67
Deferred Income Taxes - CF	\$ (5)	\$ (4)	\$ 37									
Disposal/Sale of Assets	\$ 1	_	_	_	_		_	-	_	_		_
Stock Based Compensation	\$ 2	\$ 6	\$ 4	\$ 4	\$ 4	\$	4	\$	4	\$ 4	\$	4
Change in Inventories	\$ 4	\$ 3	\$ (14)	\$ (6)	\$ (4)	\$	1	\$	0	\$ 1	\$	(2)
Change in Accounts Payable	\$ (7)	\$ 1	\$ 19	\$ 37	\$ 3	\$	(1)	\$	(3)	\$ 4	\$	8
Change in Accounts Receivable	\$ (5)	\$ (43)	\$ 10	\$ (61)	\$ 9	\$	3	\$	4	\$ (2)	\$	(10)
Amortization of Intangibles	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	\$	1	\$	1	\$ 1	\$	1
Other Amortization of Non-Cash Expenses/Gains	_	\$ 6	\$ 2	\$ 2	\$ 2	\$	2	\$	2	\$ 2	\$	2
Net Cash	\$ (3)	\$ 77	\$ 343	\$ 51	\$ 100	\$	21	\$ 13	37	\$ 131	\$	138
CASH FLOWS FROM INVESTING ACTIVITIES												
Capital Expenditures	\$ (30)	\$ (35)	\$ (46)	\$ (50)	\$ (55)	\$	(61)	\$ (67)	\$ (74)	\$	(81)
Proceeds From Short-Term Investments	_	_	\$ 159	\$ 324	\$ 162		_		_	_		_
Purchases of Short-Term Investments	_	_	\$ (486)	_	_		_	-	_	_	8	_
Other Investing Activities	\$ 0	\$ 0	\$ 3	_	_		_	-	_			_
Net Cash	\$ (28)	\$ (24)	\$ (367)	\$ 274	\$ 107	\$	(61)	\$ (6	67)	\$ (74)	\$	(81)
CASH FLOWS FROM FINANCING ACTIVITIES												
Increase (Decrease) Short-Term Borrowings	\$ 4	\$ (1)	\$ 3	\$ (6)	\$ (5)	\$	(0)	\$ -		\$ -	\$	-
Increase (Decrease) Long-Term Borrowings	\$ 21	\$ 55	\$ 186	\$ (127)	\$ -	\$	-	\$ -		\$ -	\$	-
Debt Financing/Issuance Costs	\$ (0)	\$ (36)	\$ (5)	\$ (5)	\$ (5)	\$	(5)	\$	(5)	\$ (5	\$	(5)
Other Financing Activities	\$ (0)	\$ (4)	\$ (4)	\$ (3)	\$ (3)	\$	(2)	\$	(3)	\$ (3)	\$	(3)
Cash Paid For Taxes	\$ (0)	\$ (0)	\$ 2	\$ (0)	\$ 0	\$	0	\$	0	\$ 0	\$	0
Cash Paid For Interest	\$ 46	\$ 44	\$ 42	\$ 41	\$ 42	\$	43	\$	43	\$ 42	\$	42
Net Cash	\$ 49	\$ 67	\$ 196	\$ (369)	\$ (18)	\$	(7)	\$	(7)	\$ (8)	\$	(8)

Appendix C4 – Statement of Retained Earnings

Year Ended December 31 (in millions)	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E
Retained Earnings - Starting Balance	\$ 20	\$ (100)	\$ (15)	\$ 199	\$ 205	\$ 224	\$ 267	\$ 267	\$ 383
Net Income	\$ (62)	\$ 69	\$ 214	\$ 6	\$ 19	\$ 43	\$ 62	\$ 54	\$ 68
Retained Earnings - Ending Balance	\$ (41)	\$ (31)	\$ 199	\$ 205	\$ 224	\$ 267	\$ 329	\$ 383	\$ 451

^{*}Beginning Retained Earnings for 2021/2022 altered due to (1) dividends accrued on redeemable preferred stock, (2) accretion of redeemable preferred stock, and (3) dividend paid on non-redeemable preferred stock.

Source: LXU 2022 10K - Consolidated Statements of Stockholders' Equity

Appendix D1—Executive Leadership

Name	Position	Appointed	Education	Work Experience	Share Hold
Mark T. Behrman	President, Chief Executive Officer	2018	-BS Accounting -MBA	- Executive Vice President, Chief Financial Officer, Senior Vice President of Corporate Development at LSB - Managing Director at Sterne, Agee and Leach, Inc	1,710,661
Cheryl Maguire	Executive Vice President, Chief Financial Officer	2015	-BBA -CPA	- Vice President of Financial Planning and Accounting at LSB - Senior Manager of Financial Planning and Analysis with LyondellBasell - Head of External Reporting, Corporate Accounting, Accounting Policy, and Financial Analysis at Petroplus	291,277
Michael J. Foster	Executive Vice President, General Counsel and Secretary	2016	-BS, Agriculture -JD	- Senior Vice President, General Counsel and Secretary for Tronox	432,849
John Burns	Executive Vice President, Manufacturing	2020	-BS, Engineering -MBA	-30 years of operating experience in petroleum refining and chemical manufacturing industries -8 years of experience in the nitrogen-based fertilizers and industrial feedstocks sector	197,771
Damien Renwick	Executive Vice President, Chief Commercial Officer	2021	-Bachelor of Engineering (Honors) -Bachelor of Commerce	- President of Cyanco International, Chief Commercial Officer - Chemicals, Energy and Fertilizers division, Director, and General Manager of Australian Gold Reagents - Commercial Manager, Ammonium Nitrate at Perth	99,297
Ashley McKee	Executive Vice President, Chief Human Resources Officer	2023	- Minor in Business Administration - BS, Psychology - Master's degree in industrial and organizational psychology	- Director of Human Resources Operations at Williams Companies	0
Kristy Carver	Senior Vice President, Treasurer	2019	-BS, Accounting	-Senior Vice President at IBC Bank -CPA at Arthur Andersen LLP	95,847

Appendix D2—Board of Directors

Name	Position	Appointed	Education	Work Experience	Shares Held
Richard W. Roedel	Chairman, Director		-BS Accounting and Economics -CPA	-Director of IHS Markit, Inc. since 2004 -Director of Six Flags Entertainment Corporation since 2010 -Director of Luna Innovations Incorporated since 2005	98,927
Mark T. Behrman	President, Chief Executive Officer	2018	- BS Accounting -MBA	Retail/consumer products, transportation, manufacturing, and contract drilling industries- Executive Vice President, Chief Financial Officer, Senior Vice President of Corporate Development at LSB - Managing Director at Sterne, Agee and Leach, Inc	1,710,661
Jonathan S. Bobb	Director		-BA Economics -MBA	-Director of the investment team at Eldridge Industries -Senior member of the investment banking division at Goldman Sachs & Co. from 2007 to 2013	0

Barry H. Golsen	Director	1978	-Cornell University College of Engineering -BA -JD	-President of GOL Capital LLC -Executive Vice President of IEC in 1979 and IEC's President in 1980	677,080
Kanna Kitamura	Director		-BS -JD	-Senior Director and Chief Talent Officer at Eldridge Industries -Vice President and Head of Legal Operations for Guggenheim Investments	0
Steven L. Packebush	Director		-BA Agricultural Economics	-Founder and Principal in Elevar Resources, LLC -President of Koch Ag & Energy Solutions	33,050
Diana M. Peninger	Director		-BS Chemical Engineering	-CEO of Geneva Lake Partners LLC -Serves on the board of Rogers Group, Inc.	37,228
Richard S. Sanders Jr.	Director		-BS Chemical Engineering	-Interim Executive Vice President, Chemical Manufacturing at LSB. -Sole owner of Circle S. Consulting LLC.	176,907
Lynn F. White	Director		-BA History (Highest Honors) -MBA Finance and Multinational Enterprise	-Managing Director of Twemlow Group LLC. -National Association of Corporate Directors (NACD) Board Leadership Fellow	205,653

Appendix D3—Holdings Summary

Total Insiders	56
Total Historis	30
Total Direct Shares	26,661,287
Total Indirect Shares	45,331,447
% Held By Insiders	35.86%

Source: Mergent Online

