LSB Industries, Inc. (NYSE: LXU)

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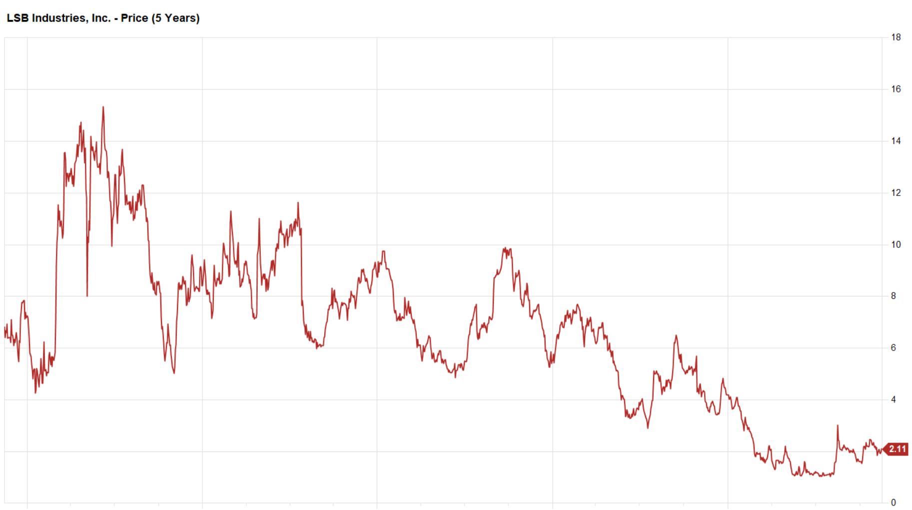
GLOBAL
VALUE RESEARCH COMPANY
A Division Of Global Value Investment Corp

RESEARCH REPORT **PRICE TARGET: $10.10**

COVID-19 SLUMP EXPECTED TO GIVE WAY TO STRONGER 2021

This report should be read in conjunction with GVRC's initiation report, dated 8/13/2020 and LSB Industries, Inc.'s regulatory filings with the U.S. Securities and Exchange Commission.

- Weak product pricing has persisted through FQ3 2020, and while there are signs of price recovery, GVRC expects prices to remain below normalized mid-cycle levels well into FY 2021. Unfortunately, there is limited insight into forward pricing as exogenous unpredictable events can have profound and lasting impacts.
- However, LSB has mitigated some pricing risk by significantly improving operational reliability. Additionally, FY 2021 revenue growth will likely be concentrated in industrial and mining products, where pricing is increasingly indexed to natural gas. Adjusted EBITDA margins for industrial and mining products have historically ranged from 30% to 40%.
- Using conservative price inputs, GVRC estimates FY 2021 EBITDA of $103.9 million and mid-term normalized EBITDA of about $120 million. GVRC therefore reiterates its target EV of 9.0x mid-term normalized EBITDA of $120 million, which equates to a target price of $10.10. The realization of this target price depends heavily on LSB lowering its cost of capital; GVRC expects a refinancing transaction as early as FQ2 2021.
- In the long term, improved capacity utilization and production efficiency could lead to meaningfully higher EBITDA.



Five-year price performance of LXU common stock. Source: FactSet; data as of 11/16/2020.

PLEASE SEE ANALYST CERTIFICATION AND IMPORTANT DISCLOSURES ON PAGE 15.

Stock Information

Current Price:	$2.11
52-Week Range:	$1.00-$5.14
Avg Daily Volume:	394,135
Dividend Yield:	-
Shares Out (MM):	29.3
Float %:	84.8%
Market Cap (MM):	$61.9
Total Debt (MM):	$486.0
Cash (MM):	$42.1
Enterprise Value (MM):	$771.5

Financial Metrics

TTM Revenue (MM):	$336.3
TTM EBITDA (Adj., MM):	$62.2
EV/EBITDA:	12.4x
Tangible BV/Share:	$5.44
P/TBV:	0.39x

Company Description

LSB Industries, Inc. engages in the manufacture, marketing, and sale of chemical products for use in agriculture, mining, and industrial markets. It owns and operates three chemical manufacturing facilities, located in El Dorado, Arkansas; Cherokee, Alabama; and Pryor, Oklahoma; and operates a chemical manufacturing facility in Baytown, Texas on behalf of Covestro AG. The company's products include anhydrous ammonia, urea ammonium nitrate solutions, and high-density ammonium nitrate for agricultural applications; anhydrous ammonia, nitric acid commercial blends, concentrated nitric acid, mixed acid, diesel exhaust fluid, and sulfuric acid for industrial applications; and ammonium nitrate solutions, ammonium nitrate-ammonia solutions, and low-density ammonium nitrate for mining applications. The majority of the company's sales are conducted in North America. LSB Industries, Inc. was founded by Jack Golsen in 1968 and is headquartered in Oklahoma City, Oklahoma.

Summary of Recent Developments

LSB Industries, Inc. ("LSB") reported financial results for the quarter ended September 30, 2020 (FQ3 2020) reflecting strong production volumes but weak product price realization. Several factors have dampened what was expected to be an exceptionally strong FY 2020, although most of these factors – including, notably, the COVID-19 pandemic and general product oversupply – are out of LSB's control.

LSB's ongoing efforts to improve the operational reliability of its production facilities continues to bear fruit. Several initiatives have combined to improve results, such as extensive turnarounds in FY 2019 at the El Dorado Facility and the Pryor Facility, the commissioning of a new urea reactor at the Pryor Facility, and the implementation of a new maintenance management system over the past several years. The results are evident in recent record production volumes, and there has been no material unplanned downtime in FY 2020 to date.

Additionally, LSB has announced several commercial contract wins during FY 2020, including:

- a seven-year nitric acid supply contract under which LSB will supply between 70,000 and 100,000 tons of nitric acid per year (sales will begin during FQ1 2021);
- two contracts for the sale of LDAN, representing a production increase of 40,000 to 50,000 tons annually (sales under these contracts began in FQ2 2020); and
- a 20-year agreement to sell approximately 100,000 tons per year of carbon dioxide from the El Dorado Facility to a customer building a guest plant on that property (sales under the agreement will begin in FQ4 2021).

Importantly, these contracts involve industrial and mining products, which generally carry adjusted EBITDA margins of over 30% (and often approaching 40%). The attractive economics and earnings stability of these arrangement should not be overlooked. The financial benefit of these new arrangements will be incrementally realized as contracts ramp-up through FY 2021, with the full implementation expected by year-end.

These contract wins, combined with a favorable outlook for LSB's agricultural market, provide reasons for optimism going into FY 2021. However, the expected slow recovery of product pricing will continue to weigh on results. Insight into product pricing is limited; pricing has historically been affected by exogenous events, such as the unusually wet and cold spring FY 2019 planting season that resulted in product oversupply that has persisted through FY 2020 or the effect of the COVID-19 pandemic on demand for industrial and mining products. Absent additional unforeseen events, strong forward corn pricing, recovering industrial and mining end market demand, and a normalizing production environment is expected to lead to modest price improvement in FY 2021.

LSB's capital structure remains a significant consideration for equity investors. The majority of the company's $486.0 million of debt is represented by $435.0 million of senior secured notes due 2023 bearing an interest rate of 9.625%. LSB also carries $262.3 million of preferred stock that accrues dividends at 14% and is redeemable beginning in 2023. While LSB's ability to support this capital structure is not a near-term concern, refinancing these two issuances well in advance of 2023 would meaningfully decrease the company's cost of capital.

Global Value Research Company ("GVRC") assumes modest near-term price improvement coupled with ongoing operational reliability and production volume increases will lead to FY 2021 EBITDA of roughly $103.9 million. GVRC believes that normalized mid-cycle pricing implies moderately higher EBITDA levels, and premises its valuation on normalized mid-cycle EBITDA of $120 million. GVRC's target price of $10.10 represents 9.0x normalized EBITDA of $120 million and 10.4x FY 2021 EBITDA of $103.9 million.

Financial Assessment

LSB manufactures and sells chemical products for use in agriculture, industrial, and mining markets. The company owns and operates three production facilities in El Dorado, Arkansas ("El Dorado Facility"); Cherokee, Alabama ("Cherokee Facility"); and Pryor, Oklahoma ("Pryor Facility"); and operates a non-owned production facility in Baytown, Texas ("Baytown Facility"). The majority of LSB's products are ammonia-based chemicals, including anhydrous ammonia, urea ammonium nitrate solutions (UAN), high-density ammonium nitrate prills (HDAN), low-density ammonium nitrate (LDAN), and nitric acid.

LSB manufactures products for two primary markets: the agriculture market and the industrial and mining market.

Balance Sheet

As of FQ3 2020, LSB's current assets were $138.0 million, which consisted of $42.1 million of cash and cash equivalents, $39.6 million of accounts receivable, and $56.4 million of inventory, supplies, and other current assets. FQ3 2020 current assets were lower than FQ2 2020 current assets of $152.8 million (consistent with seasonal trends) and FQ3 2019 current assets of $157.2 million. FQ3 2020 long-term assets of $931.9 million consisted principally of $899.6 million of net property, plant, and equipment.

Current liabilities were $98.1 million, which consisted of $41.2 million of accounts payable, $41.0 million of accrued and other liabilities, and $16.0 million of borrowings. FQ3 2020 current liabilities were slightly higher than FQ2 2020 current liabilities of $88.3 million and FQ3 2019 current liabilities of $103.1 million. Non-current liabilities of $790.6 million included $470.8 million of long-term debt, $262.3 million of redeemable preferred stock, and $57.5 million of other liabilities.

Current assets compared favorably to current liabilities (current ratio of 1.41). As of FQ3 2020, LSB's revolving credit facility had a limit of $65.0 million, no outstanding balance, and availability of $36.3 million (based on eligible collateral, less outstanding letters of credit and loan balance). Between cash and availability on its revolving credit facility, LSB had approximately $78.4 million of liquidity. GVRC does not anticipate near-term liquidity issues.

Income Statement

In FQ3 2020, LSB generated $74.0 million in revenue (compared to $75.5 million in FQ3 2019): $32.0 million from the agriculture market and $42.0 million from the industrial and mining market (compared to $35.5 million from the agriculture market and $40.0 million from the industrial and mining market in FQ3 2019). Revenue was negatively impacted by exceptionally low product selling prices, which were partially offset by a marked increase in sales volumes due to all three of LSB's owned facilities operating well during the period and facility improvements made during FY 2019 turnarounds.

Agriculture Market	FQ3 2019	FQ3 2020	% Change
Product Volumes			
Ammonia	19,420	20,181	3.9%
UAN	105,847	140,524	32.8%
HDAN	32,248	27,800	-13.8%
Selling Prices			
Ammonia	$252	$182	-27.8%
UAN	$163	$130	-20.2%
HDAN	$263	$201	-23.6%

Industrial and Mining Market	FQ3 2019	FQ3 2020	% Change
Product Volumes			
Ammonia	56,854	68,366	20.2%
Nitric Acid	25,304	20,254	-20.0%
LDAN/HDAN/AN Solution	39,305	41,469	5.5%
Tampa Ammonia Index	$221	$207	-6.3%

Volume increases from FQ3 2019 to FQ3 2020, particularly in UAN, are enduring as they reflect physical plant upgrades and fundamentally improved operating procedures. GVRC expects similar volume increases in LDAN and nitric acid through FY 2021 as production under new sales contracts ramp up.

FQ3 2020 gross profit was -$1.1 million (-1.4% gross margin), compared to FQ3 2019 gross profit of -$9.7 million (-12.9% gross margin). Adjusted gross profit, which excludes depreciation and turnaround expenses, was $16.3 million (22.1% adjusted gross margin) in FQ3 2020, compared to $15.1 million (20.1% adjusted gross margin) in FQ3 2019. LSB's adjusted gross margin for the agriculture market varies seasonally and is highly sensitive to selling prices and sales volumes. Adjusted gross margin in the industrial and mining market is less variable as sales are minimally seasonal and products are typically sold under long-term contracts and cost-plus pricing models.

	Adjusted Gross Profit		Adjusted Gross Margin	
	FQ3 2019	*FQ3 2020*	*FQ3 2019*	*FQ3 2020*
Agriculture Segment	$3.2	$2.9	8.9%	9.1%
Industrial and Mining Segments	$12.0	$13.4	30.0%	32.0%

Selling, general, and administrative expenses were $7.1 million in FQ3 2020, including $1.3 million of legal fees ($0.9 million of which is excluded from adjusted EBITDA). Selling, general, and administrative expenses, excluding legal fees, have generally fallen between $6 million and $7 million quarterly, and while LSB has sought to control costs, GVRC believes this range to be reasonable and does not forecast significant deviations in the future.

FQ3 2020 operating income was -$9.0 million (compared to -$19.2 million in FQ3 2019) and net income was -$20.4 million (compared to -$30.8 million in FQ3 2019).

LSB's quarterly depreciation expense of roughly $17 million to $18 million is commensurate with the company's substantial capital assets. Interest expense in FQ3 2020 was $12.6 million and dividends on preferred stock (which are accrued and do not represent a cash expense in the current period) totaled $9.0 million.

Because LSB's agriculture business is seasonal, the spring (March through June) and fall (September through November) periods are expected to produce stronger results than the summer and winter seasons. This corresponds to fertilizer applications: anhydrous ammonia is applied to soil shortly after fall crop harvests conclude and prior to spring planting to replenish nutrients; UAN is applied to crops shortly after spring planting. Historically, financial results are strongest in the second quarter, followed by the first, fourth, and third quarters. The company's industrial and mining market is significantly less seasonal. In addition to seasonality, short-term fluctuations in revenue and profitability are affected by cyclicality (in both product pricing and demand) and temporarily decreased production capacity due to planned maintenance and plant turnarounds.

Cash Flow

In FQ3 2020, LSB generated cash from operations of $5.3 million, which included net income of -$20.4 million, depreciation and amortization of $17.4 million, and an adjustment for accrued and unpaid interest of $10.4 million. Cash from investing was -$2.6 million, which included capital expenditures of $4.3 million offset by proceeds from an insurance recovery of $1.6 million. Cash from financing was -$17.2 million, which included the repayment of $30.0 million outstanding on LSB's revolving credit facility and $14.0 million of long-term debt, offset by $30.0 million in new borrowings under a refinanced secured loan.

FY 2020 year-to-date capital expenditures total $22.2 million, and management expects between $25 million and $30 million in capital expenditures for the full year. For several years, LSB has invested heavily in its physical assets in order to achieve improved operational reliability. GVRC believes the company has reached a point at which ongoing maintenance capital expenditures will be more modest and primarily reflect plant maintenance requirements, which GVRC estimates to be between $20 million and $25 million annually (excluding non-capitalized turnaround costs). An additional $5 million to $10 million of growth capital expenditures will likely be realized for at least the next several years as marginal production improvement projects are undertaken.

Capitalization

As of FQ3 2020, LSB's capitalization included 29.3 million shares of common stock (with 2.7 million potentially dilutive shares), $486.0 million of debt ($15.2 million of current portion of long-term debt and $470.8 million of long-term debt), and four issues of preferred stock.

LSB's long-term debt is presented below. This consists primarily of $435 million of Senior Secured Notes due May 2023, which carry a 9.625% coupon ("Senior Secured Notes due 2023"). The Senior Secured Notes due 2023 are currently callable at 107.219%, which decreases to 103.609% in May 2021 and to par in May 2022. During FQ3 2020, LSB refinanced its Secured Promissory Note due 2023, which bore an interest rate of 4.43%, with Secured Financing due

2023, which bears an interest rate of 8.75%; net cash proceeds were approximately $18 million. During FQ2 2020, LSB received $10.0 million under the U.S. Small Business Administration Paycheck Protection Program (“PPP Loan”), which the company expects to be forgiven in full.

	Interest Rate	*Outstanding (thousands)*
Working Capital Revolver Loan	4.000%*	-
Senior Secured Notes due 2023	9.625%	$435,000
Secured Promissory Note due 2021	5.250%	$2,119
Secured Loan Agreement due 2022 (PPP Loan)	1.000%	$10,000
Secured Promissory Note due 2023	8.320%	$11,425
Secured Loan Agreement due 2025	8.750%	$7,162
Secured Financing due 2025	8.750%	$29,642
Other		$172
Unamortized Discount and Debt Issuance Costs		(9,566)
		$485,954

**Interest rate as of September 30, 2020. Working Capital Revolver Loan accrues interest at LIBOR plus 1.50% to 1.75% or prime plus 0.50% to 0.75% and matures on February 26, 2024.*

LSB carries several issues of preferred stock. The amounts outstanding under the company’s Series B 12% cumulative, convertible preferred stock and Series D 6% cumulative, convertible preferred stock are $2.0 million and $1.0 million, respectively. Both issues are wholly owned by LSB’s founder, Jack Golsen, his immediate family, and entities controlled by the family. Since late 2015, dividend payments have accumulated rather than been paid in cash. Together, the annual dividend on these issues is 10% of the aggregate par value of $3.0 million, and as of FQ3 2020, accumulated dividends were $1.5 million. Neither is redeemable at the preference of the holder.

As of FQ3 2020, 139,768 shares of Series E 14% cumulative, redeemable preferred stock (“Series E Preferred”) were outstanding, with participation rights equal to 303,646 shares of common stock (these participation rights do not entitle the holder to voting rights). LSB carried a liability of $262.3 million related to the Series E Preferred. The participation rights, which are bifurcated from the Series E Preferred for accounting purposes and recorded as a separate liability, were carried at $0.5 million. Since late 2016, dividends on the Series E Preferred have accumulated rather than been paid in cash; the aggregate liquidation preference of the Series E Preferred as of FQ3 2020 was $268.7 million. The Series E Preferred is redeemable by the holder beginning in October 2023. LSB, at its option, may redeem the Series E Preferred at any time at a redemption price per share equal to liquidation value. Alternatively, with certain consents, LSB can redeem the Series E Preferred via the issuance of common stock equal in value to the liquidation preference of shares being redeemed.

The one issued and outstanding share of Series F redeemable preferred stock (“Series F Preferred") has no par value and an aggregate liquidation preference of $100. It entitles the holder to a number of votes equal to 456,225 shares of common stock. Eldridge Industries, through its subsidiary, Security Benefit Corporation (collectively, “Security Benefit”), holds all the issued and outstanding Series E Preferred and Series F Preferred. Security Benefit is also the largest holder of common stock and a debt holder. The investment firm’s position in LSB’s common stock is reported under the name LSB Funding LLC.

LSB is currently involved in litigation against Leidos Constructors, LLC regarding cost overruns in the expansion of the ammonia plant at the El Dorado Facility from 2013 to 2016 (“Leidos Litigation”). LSB is seeking more than $100 million in damages as compensation for breach of contract, fraud, gross negligence, professional negligence, and negligence. The case is styled *Global Industrial, Inc. d/b/a Global Turnaround vs. Leidos Constructors, LLC et al.* and the case ID is 70CV-16-76; the case docket is available through the CourtConnect Website of the State of Arkansas’s Administrative Office of the Courts. The case is expected to be heard in early 2021, although the COVID-19 pandemic has delayed the trial date several times. A favorable outcome could catalyze the transformation of LSB’s capital structure.

Refinancing Scenarios
GVRC expects that any refinancing transaction would target the Senior Secured Notes due 2023 and the Series E Preferred, which are carried at $435.0 million and $262.3 million, respectively, as of FQ3 2020. Considering that the call premium on the Senior Secured Notes due 2023 declines from 107.219% to 103.609% in May 2021, GVRC believes any refinancing transaction would not be executed until then. Assuming a transaction occurs in FQ2 2021, approximately $450.7 million would be required to retire the Senior Secured Notes due 2023 and about $295 million to retire the Series E Preferred.

Management has expressed comfort with a net leverage ratio of 5.00x to 5.25x, which GVRC believes is reasonable. Using a 5.25x leverage ratio, GVRC's FY 2021 EBITDA estimate of $103.9 million, and assumed FQ2 2021 balance sheet cash of $33.4 million, LSB could support $578.7 million in debt. LSB's three term loans are expected to have an aggregate balance of about $43.8 million as of FQ2 2021, leaving $534.9 million of borrowing capacity. If the entirety of the Senior Secured Notes due 2023 are to be retired ($450.7 million), this leaves $84.2 million for allocation to the reduction of the outstanding Series E Preferred, bringing the Series E Preferred pro forma balance to about $210.8 million.

The following table presents approximate annual cash interest expense at various interest rates. In addition to the hypothetical issuance amount of $534.9 million, scenarios for $500 million and $600 million are presented. An interest rate of 8.0% or below, which GVRC believes is reasonable, would result in a pro forma interest expense comparable to LSB's current interest expense.

	$500 Million	*$534.9 Million*	*$600 Million*
New Debt - Interest Expense			
9.0%	$45.0	$48.1	$54.0
8.5%	$42.5	$45.5	$51.0
8.0%	$40.0	$42.8	$48.0
7.5%	$37.5	$40.1	$45.0
7.0%	$35.0	$37.4	$42.0
Existing Term Debt - Interest Expense	$0.9	$0.9	$0.9

The availability of credit under the terms presented will depend on market conditions at the time of issuance, LSB's interim financial results, and LSB's credit rating. Management is in active discussions with rating agencies and has suggested that a credit rating upgrade from CCC to B would improve the prospects of a refinancing transaction, but an upgrade may be dependent on TTM EBITDA reaching $100 million – which GVRC does not expect until the end of FY 2021.

The above scenario leaves LSB with $210.8 million of Series E Preferred, which is an expensive source of capital. As previously mentioned, LSB is litigation against Leidos Constructors, LLC with an expected trial date of early 2021. While management has only disclosed that it is seeking more than $100 million in damages in this litigation, GVRC believes this number could very well be higher, and a favorable and timely outcome could provide the additional capital required to retire the Series E Preferred.

Plant Operations

Efficient operation of LSB's physical plant assets is critical to the company's financial performance. On-stream rates, or the percent of time that the ammonia reactor at a plant operates, are referenced as a measurement of operational reliability. Because ammonia is the precursor for nearly every other product produced by LSB, on-stream rates are a critical measure of performance. On-stream rates do not consider planned downtime for scheduled repairs, modifications, or turnarounds (a comprehensive planned maintenance event that occurs every two to three years, depending on plant condition), but account for unplanned downtime for unscheduled repairs.

LSB has invested heavily in initiatives to improve the operational reliability of its plants, including undertaking extensive physical plant improvements, engaging consultants to accelerate the creation and implementation of a comprehensive preventative maintenance program, hiring qualified and experienced plant-level management, and expanding employee training on procedures and workflows. Consistent with these efforts, LSB has steadily increased its average company-wide annual on-stream rate from 80% in FY 2016 to 91% in FY 2019. Management has targeted an average on-stream rate of 94% in FY 2020, which GVRC believes is achievable.

Management sees opportunities for additional production optimization without substantial capital investment. Enhanced production efficiency would most likely be the result of minor modifications made during plant turnarounds or subtle improvements in operating practices. Many of these opportunities represent only marginal additional production when considered in isolation, but in totality could results in material earnings growth.

During FQ2 2019, LSB undertook a $35 million tack-on offering to the Senior Secured Notes due 2023. The company is planning or currently executing select capital projects, representing an aggregate investment of between $15 million and $20 million. These projects are expected to generate $10 million to $15 million in incremental EBITDA when completed. Between $5 million and $10 million of investment is expected in FY 2020, with the remainder in FY 2021. Publicly disclosed projects include the following:

- Construction of new storage capacity enabling the storage of product during seasonally weak pricing periods (generally the second half of the year) for sale in strong pricing periods (usually beginning in mid-FQ1 and lasting through midyear). This storage capacity could allow LSB to produce an additional 20,000 tons of HDAN out-of-season for sale in-season during the first half of FY 2021; this would enable both increased production and improved price realization. GVRC expects the financial benefits of this project to manifest in FQ1 2021 and FQ2 2021 as HDAN sales volumes increase.
- In FQ1 2020, LSB secured a 20-year agreement with a customer to sell approximately 100,000 tons of carbon dioxide at the El Dorado Facility. The customer is constructing a guest plant on LSB's property, and LSB is adding infrastructure to facilitate the delivery of carbon dioxide to this guest plant. Capital spending on this project is expected to be concentrated in the first half of FY 2021 and sales are expected to begin in FQ4 2021.
- Also in FQ1 2020, LSB won two new contracts to supply LDAN, a key product in mining end markets, representing a production increase of 40,000 to 50,000 tons annually. Sales under these contracts began in FQ2 2020. While no specific capital spending requirements were disclosed, GVRC believes modest investments were made to facilitate product shipment.
- In October 2020, LSB announced a new nitric acid supply contract with a customer for a term of seven years. Under the contract, LSB will supply between 70,000 and 100,000 tons of nitric acid per year, with sales beginning in FQ1 2021. The addition of this contract alone could double LSB's production of nitric acid, a product that carries attractive EBITDA margins and exhibits minimal cyclicality.
- During the turnaround at the Pryor Facility in the second half of FY 2019, installation of a new urea reactor was completed, resulting in meaningfully higher UAN production volumes.
- A new sulfuric acid converter was installed at the El Dorado Facility in FQ4 2019, which increased sulfuric acid production capacity by about 20,000 tons annually. LSB's sulfuric acid sales volumes have increased markedly, and the company has recently mentioned new contract awards (although few specifics have been provided). GVRC expects sulfuric acid to remain a small but important part of LSB's business.

The El Dorado Facility and Pryor Facility each underwent turnarounds in the second half of FY 2019, while the Cherokee Facility's most recent turnaround occurred in FQ3 2018. Both the Pryor Facility and the Cherokee Facility are scheduled for turnarounds in FQ3 2021, and the El Dorado Facility is scheduled for a turnaround in FQ3 2022. Planning for the FY 2021 turnarounds is underway, but the production disruptions have not yet been quantified. Typical turnarounds last between 30 and 35 days.

Market Analysis

Agriculture Market

Sales of agricultural products constitute between 40% and 60% of LSB's quarterly revenue, depending on the period. Agriculture sales are highly seasonal, with demand peaking in the spring (March through June) and fall (September through November) seasons. In FQ3 2020, 43.2% of LSB's revenue was attributable to the agriculture market. Because fertilizer use is dependent on crop selection, soil conditions, weather patterns, and other environmental factors, almost all agriculture sales are based on spot pricing, which is driven by relatively short-term supply and demand. A confluence of factors has exerted downward pressure on pricing for agricultural fertilizer in North America, including product oversupply following abnormally unfavorable fertilizer application conditions in FY 2019, anti-dumping duties on UAN imposed by the European Union in October 2019, and weak demand for ammonia from industrial consumers causing product to be redirected into the agriculture market.

The USDA's November 10, 2020 World Agricultural Supply and Demand Estimates report estimated that 91.0 million acres of corn were planted in the United States in the spring of 2020 (compared to 89.7 million acres planted in 2019 and 88.9 million acres planted in 2018) and that crop year 2020/21 ending stocks amounted to 1,702 million bushels (compared to 1,995 million bushels in the 2019/20 crop year and 2,221 million bushels in the 2018/19 crop year). While corn prices dropped precipitously during the first few months of FY 2020 on weak demand concerns, an improved outlook has resulted in sharp price recovery, with futures now pointing to corn prices above $4.00 per bushel. If sustained, these demand and pricing expectations should translate into a strong corn planting season in the spring of 2021 and robust demand for agricultural fertilizers.

The degree of price recovery for agricultural ammonia and UAN resulting from increased demand going into FY 2021 remains to be seen. Significant excess inventories exist, and some global and regional supply considerations will continue to weigh on prices. However, the pricing environment in FY 2021 appears likely to strengthen.

Recent trends in selling prices and sales volume (tons sold) are presented below.

	FQ2 2019	*FQ3 2019*	*FQ4 2019*	*FQ1 2020*	*FQ2 2020*	*FQ3 2020*
UAN	$198	$163	$161	$150	$149	$130
HDAN	$248	$ 263	$ 201	$ 198	$232	$201
Ammonia	$357	$ 252	$ 253	$ 235	$250	$182

Source: Reported gross average selling prices (price per ton) are sourced from the appropriate period's 8-K issued in conjunction with that period's earnings announcement. Average selling prices represent net back prices, which are calculated as sales less freight expenses divided by product sales volume in tons.

	FQ2 2019	*FQ3 2019*	*FQ4 2019*	*FQ1 2020*	*FQ2 2020*	*FQ3 2020*
UAN	95,183	105,847	64,298	114,689	111,860	140,524
HDAN	127,124	32,248	58,603	65,874	128,018	27,800
Ammonia	28,228	19,420	17,071	20,510	28,383	20,181
Other Agricultural Products	10,377	3,434	2,516	2,946	9,257	2,824

Source: Product volumes (tons sold) are sourced from the appropriate period's 8-K issued in conjunction with that period's earnings announcement.

Industrial and Mining Market

Sales of industrial and mining products exhibit minimal seasonality, although quarterly results can be affected by the timing of orders and product price fluctuations. In FQ3 2020, 43.8% and 13.0% of LSB's revenue was attributable to the sale of industrial products and mining products, respectively. Demand for LSB's industrial and mining products decreased in the first half of FY 2020 as activity in end markets slowed due to the COVID-19 pandemic. Demand has begun to recover, a trend that GVRC expects to continue through early FY 2021. Production volumes for industrial and mining products should also accelerate substantially as contracts awarded to LSB during FY 2020 ramp up.

Historically, industrial and mining product pricing has been determined by long-term contracts with pricing based on the Tampa Ammonia Index, providing stability of earnings. However, LSB is slowly transitioning its contracts to pricing based on natural gas to more aptly reflect the cost of production.

Because industrial and mining products are generally sold under cost-plus arrangements, sales volumes are the most appropriate proxy for revenue. To a certain extent, production can be shifted between products to capitalize on price movements. Product sales volumes (tons sold) are presented on the following page.

	FQ2 2019	FQ3 2019	FQ4 2019	FQ1 2020	FQ2 2020	FQ3 2020
Industrial Products						
Ammonia	78,697	56,854	64,868	70,528	62,108	68,366
Nitric Acid*	22,271	25,304	29,594	25,823	19,048	20,254
Other Industrial Products	8,948	8,046	9,839	10,888	9,587	13,031
Mining Products						
LDAN/HDAN/AN Solution	47,000	39,305	29,015	30,723	44,354	41,469

**Excluding Baytown Facility*
Source: Product volumes (tons sold) are sourced from the appropriate period's 8-K issued in conjunction with that period's earnings announcement.

Management Assessment

GVRC believes that experienced management at both the corporate level and plant level is crucial to LSB's long-term success. CEO Mark Behrman and CFO Cheryl Maguire both have several years of tenure with the company and have effectively guided LSB through a multi-year transitional period with a focus on efficient and reliable operation of the company's physical plants and enabling the company's workforce through enhanced training initiatives. In FQ1 2020, EVP Manufacturing John Burns was hired to succeed retiring EVP Manufacturing John Diesch. Mr. Burns has extensive experience in chemical manufacturing operations and GVRC believes he is qualified to build upon LSB's substantial progress in operational reliability.

LSB's 10 largest shareholders are presented in the table below. Security Benefit is the largest holder of LSB's common stock (the owner of record is LSB Funding LLC), the holder of all of the issued and outstanding Series E Preferred and Series F Preferred, a significant holder of the Senior Secured Notes due 2023, and the lender for three of LSB's term loans. In aggregate, Security Benefit controls 15.2% of the total common stock voting power, which includes votes to which they are entitled through ownership of the Series F Preferred. GVRC perceives Security Benefit to be a rational and well-capitalized investment group and is encouraged by its continued ownership and financial flexibility. GVRC believes LSB's relationship with Security Benefit is excellent.

Shareholders (from recent 13D, 13F, 13G, or proxy filings):	
LSB Funding LLC	13.9%
Golsen Holders	10.3%
Robotti & Co. Advisors LLC	5.4%
Dimensional Fund Advisors LP	4.3%
The Vanguard Group, Inc.	3.5%
Maple Rock Capital Partners, Inc.	3.3%
Mark Behrman	3.2%
Millennium Management LLC	3.1%
Tontine Associates LLC	2.9%
Eidelman Virant Capital, Inc.	2.2%
Top 10 Holders	**52.1%**

Competitive Positioning Update

LSB operates in a highly competitive industry against many other larger chemical companies with substantial resources. Because ammonia and its derivative products are commodities, competition is based primarily on price. Pricing of delivered ammonia products is a function of proximity to the end customer and access to reasonable means of transportation. CF Industries Holdings, Inc., CVR Partners LP, Dyno Nobel, Koch Industries, Inc., Nutrien Ltd., and Yara International ASA are notable competitors.

Most ammonia plants, including all three of LSB's owned ammonia plants, use natural gas feedstock to produce ammonia; ammonia then serves as the precursor to numerous ammonia-based products. As such, natural gas pricing is an important determinant of the economics of ammonia production. LSB's access to inexpensive natural gas feedstock is a particularly notable competitive advantage. At the El Dorado Facility and Cherokee Facility, natural gas feedstock pricing is approximated by Henry Hub spot pricing plus $0.10 to $0.15 per MMBtu of transportation costs. However, at the Pryor Facility, LSB purchases natural gas feedstock at a discount to Henry Hub pricing.

Low natural gas input prices are generally considered to be beneficial to LSB's production economics. However, other beneficiaries include marginally profitable ammonia producers around the world. In mid-2020, unusually low natural gas prices resulted in an uptick in worldwide ammonia production, particularly from producers in Eastern Europe, where natural gas prices declines were particularly pronounced. This exacerbated oversupply and further pressured product pricing, although the recent normalization of natural gas pricing has reversed this phenomenon.

End-market pricing of ammonia products is typically inclusive of the cost of transportation to those markets. Therefore, access to shipping by truck, rail, barge, or pipeline and proximity to end customers are advantageous. LSB's three plants are strategically located in the South-Central United States, with ready access to corn-producing regions via road or rail. The El Dorado Facility is also connected to an ammonia pipeline, providing efficient access to a distribution network. Additionally, the El Dorado Facility, which produces the bulk of the company's industrial and mining products, offers direct rail access to important mining markets in the western United States.

Several large foreign producers compete for domestic business, but comparatively higher transportation costs to North American markets typically allow domestic production to remain more competitive, and almost all ammonia produced in the United States is consumed domestically. However, a recent uptick in imports of UAN has caused downward pressure on UAN prices. This pressure is partially attributable to the imposition of anti-dumping duties on UAN by the European Union, resulting in additional UAN available for sale in North American markets.

In late FY 2019, Magellan Midstream Partners LP completed decommissioning of its ammonia pipeline system, which stretched from northern Texas and Oklahoma through Kansas, Missouri, Iowa, and into southern Minnesota. LSB distributes ammonia into markets within these geographies and has faced increased competition resulting from the disruption in the regional distribution network. GVRC expects distribution of ammonia in these markets to normalize over time but notes the short-term downward price pressure resulting from the pipeline's decommissioning. This supply disruption has also increased the cost to transport product by truck in the Southern Plains region.

Weak demand for agricultural fertilizers in FY 2019 resulted in excess inventories and depressed prices persisting into FY 2020. The economic slowdown brought on by the COVID-19 pandemic further weakened demand for ammonia products, particularly in industrial and mining end markets. Pricing weakness continues to pervade both LSB's agriculture market and the industrial and mining market. GVRC expects rising product prices in FY 2021 due to favorable demand trends, but sees price normalization progressing slowly.

Valuation Analysis

For much of its existence, LSB operated as a diversified holding company for a collection of manufacturing and industrial entities. This confounds historic results of the company's chemical operations. The last significant non-chemical holding, a subsidiary that manufactured climate control solutions, was divested in mid-2016. Certain ownership interests in natural gas-producing properties were divested in mid-2017 and a small industrial machinery and components business was sold in late 2017. As such, historical comparable financial data is somewhat limited.

LSB's industrial and mining market has historically constituted more than 50% of its revenue. Because the company's relationships with industrial and mining customers typically involve long-term contracts structured as cost-plus arrangements, GVRC believes that growth in this market is less dependent on product pricing than it is on achieving additional commercial penetration and higher production rates. LSB's agriculture market typically involves sales based on variable spot market pricing; therefore, revenue and gross margin vary significantly. Financial results in the agriculture market are largely dependent on selling prices, production volumes, and efficiency.

Expectations for LSB's FY 2020 financial results were high going into the year based on expectations for strengthening pricing off FY 2019 lows and a strong corn planting season. Furthermore, LSB had no plant turnarounds scheduled during the year, and operational reliability had improved throughout FY 2019. However, the COVID-19 pandemic caused a drastic drop in demand for LSB's industrial and mining products. Corn prices also dropped as demand for ethanol plummeted (the production of which accounts for 40% of domestic corn consumption). Many of these factors have abated significantly, but product prices remain low. GVRC forecasts FQ4 2020 adjusted EBITDA of $10.6 million, bringing FY 2020 adjusted EBITDA to $65.6 million.

	FQ1 2020 (A)	FQ2 2020 (A)	FQ3 2020 (A)	FQ4 2020 (E)	2020
Agriculture Revenue	$41.5	$65.0	$32.0	$35.6	$174.1
Industrial and Mining Revenue	$42.0	$40.0	$42.0	$47.6	$171.5
Total Revenue	$83.4	$105.0	$74.0	$83.2	$345.6
SG&A	$10.0	$8.5	$7.1	$7.0	$32.6
Operating Income	$(7.0)	$10.7	$(9.0)	$(8.6)	$(13.9)
Net Income	$(19.5)	$(0.4)	$(20.4)	$(16.2)	$(56.4)
Net Income Attributable to Common Stockholders	$(28.3)	$(9.6)	$(29.9)	$(25.9)	$(93.8)
EPS	$(1.01)	$(0.34)	$(1.06)	$(0.92)	$(3.33)
Adjusted EBITDA	$15.6	$29.2	$10.2	$10.6	$65.6

GVRC expects modest product price improvement in FY 2021, albeit at a tepid pace. LSB's financial results are highly sensitive to product pricing, which is notoriously unpredictable. GVRC believes its FY 2021 product pricing estimates are reasonable and conservative, but deviations from forecasted prices have the potential to result in substantial variations from forecasted earnings.

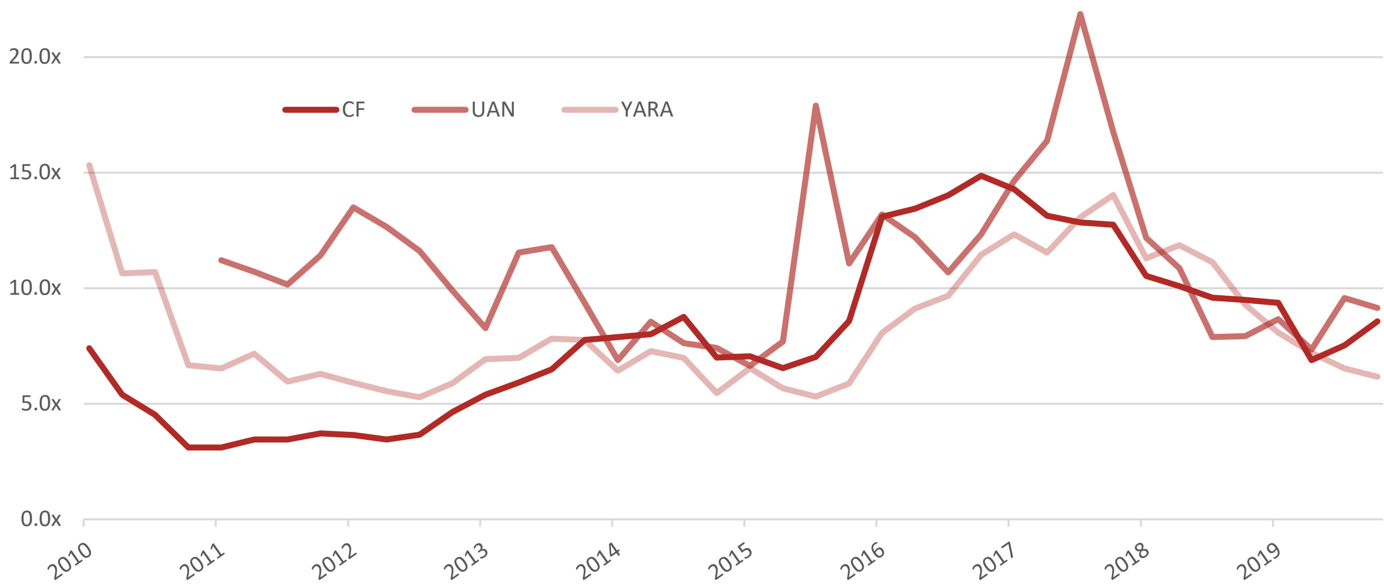
Both the Pryor Facility and the El Dorado Facility will undergo turnarounds in FQ3 2021; lost production is accounted for in earnings estimates. Aside from these turnarounds, GVRC's estimates assume no material unplanned downtime and operating levels similar to those reported in FY 2020. Product volume increases based on publicly announced contracts are incorporated.

	FQ1 2021 (E)	FQ2 2021 (E)	FQ3 2021 (E)	FQ4 2021 (E)	2021
Agriculture Revenue	$47.2	$74.1	$31.3	$37.1	$189.7
Industrial and Mining Revenue	$46.4	$57.2	$61.8	$65.0	$230.4
Total Revenue	$93.5	$131.3	$93.2	$102.1	$420.1
SG&A	$9.0	$8.5	$7.0	$7.0	$31.5
Operating Income	$(4.4)	$16.3	$(3.5)	$(0.9)	$7.5
Net Income	$(5.2)	$3.1	$(12.2)	$(10.1)	$(24.5)
Net Income Attributable to Common Stockholders	$(15.4)	$(7.4)	$(23.0)	$(21.3)	$(67.1)
EPS	$(0.54)	$(0.26)	$(0.81)	$(0.76)	$(2.38)
Adjusted EBITDA	$17.0	$37.8	$29.6	$19.5	$103.9

GVRC's FY 2021 price inputs are below assumed normalized mid-cycle pricing inputs. The table on the following page presents average full-year product price assumptions for FY 2021 and a normalized pricing environment. As can be seen, GVRC's normalized EBITDA assumption of $120 million reflects only modest price improvement over assumed FY 2021 product pricing.

	2021 Expected	*Normalized*
Agriculture Prices		
Ammonia	$265	$275
UAN	$140	$155
HDAN	$210	$225
Industrial and Mining Prices		
Tampa Ammonia Index	$255	$285
Total Revenue	$420.1	$446.4
Adjusted EBITDA	$103.9	$120.0

LSB's publicly traded peer companies have traded at EBITDA multiples roughly between 5.0x and 15.0x over the past five years, and currently trade at an average EV/EBITDA multiple of about 8.0x. While LSB bears many similarities to its peer group and is subject to the same external market forces as its competitors, GVRC notes key differences, including LSB's relatively small size compared to many of its peers, its diversification of end markets for ammonia products, and its concentration on ammonia products versus a larger portfolio of agricultural fertilizer products. GVRC also notes that execution risk has been a significant market concern that has only recently assuaged as LSB demonstrates operational reliability. The EV/EBITDA multiples of CF Industries Holdings, Inc., CVR Partners LP and Yara International ASA over the past 10 years are presented below.



Source: GVRC data and FactSet; data as of 11/16/2020.

Because GVRC values LSB as a long-term going concern, frequent adjustment of a valuation multiple based on short-term market dynamics or sentiment is inappropriate. Long-term fundamental characteristics including quantitative measures, such as the business's operating model and financial leverage, and qualitative measures, such as management effectiveness, are contemplated. Careful consideration of all available information leads GVRC to conclude that 8.0x to 10.0x represents a fair EV/EBITDA multiple for LSB.

Considering LSB's operational characteristics and strategic growth initiatives, as well as the outlook for product pricing and end market demand, GVRC values the enterprise using a normalized mid-cycle EBITDA of $120 million and a mid-point EBITDA multiple of 9.0x. The following table presents the implied value of LSB's common stock using forecasted balance sheet account values as of the end of FY 2021.

EBITDA	$120.0
EBITDA Multiple	9.0x
Enterprise Value	$1,080.0
Net Debt	$438.3
Series E Preferred (Liquidation Value)	$315.4
Other Preferred Stock	$3.0
Common Equity Value	$323.2
Shares Outstanding (Fully Diluted)	32.1
Value/Share	$10.10

The long-term validity of GVRC's target price of $10.10 relies heavily on LSB's ability to lower its cost of capital, particularly the cost of the Series E Preferred. Absent a refinancing transaction, or a substantial increase in EBITDA, the dividend on the Series E Preferred (which is 14% and currently accrues to principle) will continue to erode common equity value.

LSB has a *raison d'etre* due to the longstanding demand for ammonia-based chemical products in numerous agricultural, industrial, and mining applications. Access to both inexpensive natural gas feedstock and important end markets provides the company with a competitive edge over many domestic and nearly all international competitors.

The margin of safety in an investment in LSB lies in its current price relative to the value of its assets. LSB trades at a discount to tangible book value per share of $5.44, which GVRC views as a reasonable baseline in any consideration of valuation. The company's assets are difficult to replace, necessary for the synthesis of ammonia and ammonia-based products, and would likely command substantial value in a private transaction. Considering the replacement value of these assets, GVRC views the sale of the company to a competitor at a price providing sufficient downside protection to shareholders as a worst-case scenario.

GVRC's target price of $10.10 represents a downward revision of GVRC's FQ3 2019 target price of $11.15, attributable to small adjustments in normalized EBITDA assumptions and slightly higher expected net debt on the valuation date (FY 2021 year-end).

Risks, Catalysts, and Expectations

GVRC's comprehensive report dated August 13, 2020 provides a complete list of assessed risks to LSB's business. The following risks are particularly noteworthy:

- LSB's leverage is significant, and in a disorderly disposal of assets or distressed sale of the business, equity value may be partially or entirely impaired. The company's Senior Secured Notes due 2023 carry an interest rate of 9.625%. The Series E Preferred carries a dividend rate of 14%, and dividends are assessed against both principal and accrued and unpaid dividends. The terms of any refinancing transaction may not be favorable. While liquidity is not an immediate concern, overleverage will become an issue if not addressed in a timely manner.
- Pricing for LSB's products has exhibited weakness since early FY 2019. While LSB is able to generate positive EBITDA and free cash flow in depressed price environments, the growth of long-term equity value relies on the company lowering its cost of capital. A continued weak price environment may hamper LSB's ability to do so, eroding equity value.

The most immediate catalyst for stock price improvement is product price appreciation. However, this is entirely out of LSB's control, and while the company may be less exposed to price movements than some peers due to its comparatively large exposure to industrial and mining products, short-term changes in earnings are usually partially explained by product price fluctuations.

A more significant long-term catalyst lies in LSB's ability to leverage its substantial assets and fixed expenses by increasing production. Execution on management's stated intention of optimizing plant productivity through minor modifications and efficiency improvements will contribute to this. Far more importantly, operational leverage will be accomplished through improved capacity utilization. LSB has announced several contract wins in FY 2020 that will aid in achieving this objective; new commercial relationships announced in FY 2020 should be fully implemented by the end of FY 2021.

As earnings improve, a restructuring of the company's balance sheet to reduce the cost of its capital structure is expected and will be accretive to equity holders. Eventually, GVRC expects LSB to consider inorganic growth opportunities enabled by stable cash flow and balance sheet flexibility. As progress towards these goals becomes clear, shares will command a substantially higher valuation.

LSB trades at a 79% discount to GVRC's target price of $10.10. GVRC believes this discount to intrinsic value presents a compelling case for investment and an attractive entry point for patient, opportunistic investors.

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GVRC receives an annual non-contingent flat fee ranging from $10,000 to $75,000 from the Company for the publication of an initial report covering the Company, three quarterly updates, and any interim reports deemed necessary by GVRC. To mitigate the conflict of interest created by the Company compensating GVRC preparing the reports, GVRC requires its fee to be fully paid in advance of the publication of its initial report. GVRC has implemented policies and procedures to promote the objectivity of its analysts. GVRC does not rely on revenues from any single company, including the Company, engaging the firm for its research services. GVRC also prohibits companies from compensating it with stock-based or other forms of variable compensation and only accepts cash (or cash equivalents) for its services. Although GVRC and GVIC employees may own positions in the securities of companies covered by the firm, GVIC has implemented strict procedures that prohibit employees from trading securities, including options, directly related to the subjects of its reports within ten days before and three days after their publication.