

# Q4: Quarterly Industry Update

AS OF December 31, 2023



## Biofuel Industry Summary

**COGENT VALUATION** identified **Biofuel** publicly traded companies, IPOs, and recent M&A transactions within the Biofuel industry, which provides a basis for market and transaction pricing that can be used by your firm in estimating market sentiment and its impact on your firm's value. Over the last year since December 31, 2022, the median 52-week share price return of the Biofuel industry decreased from 8.6% to 6.8%, and the median year to date return increased from -7.6% to -5.6%. Between December 31, 2022 and December 31, 2023, the median EV/Revenue multiple decreased from 5.4 to 4.2 and the median EV/EBITDA multiple decreased from 21.8 to 20. The median Price/Earnings multiple increased from 33.2 to 34.9 and the median EV/Gross Profit multiple increased from 13.4 to 16.8 over the same period. The median MVIC/Earnings multiple decreased from 1.2 to .7. The median Price/Revenue multiple increased from -13.7 to -13.2 over the same period.

### Public Company Key Statistics

Median 52-Week Return	Median YTD Return	Median EV/Revenue Multiple	Median EV/EBITDA Multiple
6.8%	-5.6%	4.2x	20x
Median Price/Earnings Multiple	Median EV/Gross Profit Multiple	Median MVIC/Earnings Multiple	Median Price/Revenue Multiple
34.9x	16.8x	.7x	-13.2x

## Public Company Median Multiples by Quarter

	12/31/23	9/30/23	6/30/23	3/31/23	12/31/22	9/30/22	6/30/22	3/31/22
<b>Median EV/Revenue Multiple</b>	4.2x	3.2x	3.4x	1.7x	3.1x	3.2x	2.5x	3.0x
<b>Median EV/EBITDA Multiple</b>	20x	28.0x	17.6x	13.4x	14.6x	14.6x	29.4x	10.7x
<b>Median Price/Earnings Multiple</b>	34.9x	30.9x	20.3x	21.2x	20.8x	19.4x	17.9x	17.7x
<b>Median EV/Gross Profit Multiple</b>	16.8x	22.2x	21.3x	13.6x	24.5x	23.3x	20.4x	25.0x
<b>Median MVIC/Earnings Multiple</b>	.7x	11.6x	12.7x	13.7x	15.4x	15.5x	12.2x	13.2x
<b>Median Price/ Revenue Multiple</b>	-13.2x	3.2x	3.4x	2.7x	10.6x	2.5x	3.2x	3.2x

■ Highest Multiple    
 ■ Median Multiple    
 ■ Lowest Multiple

## Comparable Public Company Market Price Returns as of December 31, 2023

Company Name	Q4 2023	12-months 2023	Two Year <sup>1</sup>	Three Year <sup>1</sup>	2022	2021	2020
Amyris, Inc.	70.4%	28.2%	-36.6%	-42.9%	-4.7%	-10.9%	-21.4%
Codexis, Inc.	72.5%	-9.1%	88.1%	34.1%	-20.1%	100.0%	67.9%
Deinove SA	50.5%	-23.0%	1.0%	-19.0%	-44.5%	-20.6%	-45.4%
Gevo, Inc.	-5.6%	-4.1%	-70.8%	-80.3%	16.2%	-83.4%	-87.1%
Green Plains Inc.	8.6%	7.3%	2.6%	-16.2%	28.3%	-22.2%	-7.6%
MGP Ingredients, Inc.	15.5%	6.8%	92.2%	88.1%	-25.9%	92.6%	63.6%
Pacific Ethanol, Inc.	-42.9%	8.3%	-19.9%	-34.7%	15.4%	98.7%	-53.7%
<b>Median of Industry Public Companies</b>	<b>-5.6%</b>	<b>6.8%</b>	<b>1.0%</b>	<b>-19.0%</b>	<b>-4.7%</b>	<b>-10.9%</b>	<b>-21.4%</b>

[1] Calculated as the average annual return.

## Industry Initial Public Offerings—Biofuel Energy

(dollars in millions, except share prices)

Effective Date	Company Name	Offer Price	Shares Offered	Amount Raised	Total Assets <sup>1</sup>	Debt <sup>1</sup>	LTM Revenue <sup>1</sup>	LTM EBITDA <sup>1</sup>	LTM Net Income <sup>1</sup>	LTM Cash Flows <sup>1</sup>
11/30/23	Green & Smart Holdings plc	\$0.13	44.4	\$5.8	\$13.2	\$2.4	\$10.4	\$2.3	\$2.9	\$7.0
9/28/23	Renewable Energy Group, Inc.	\$10.00	7.2	\$72.0	\$484.4	\$85.6	\$824.0	\$102.2	(\$26.1)	\$182.0
1/23/23	KiOR, Inc.	\$15.00	10.0	\$150.0	\$82.2	\$9.2	\$0.0	(\$36.0)	\$1.4	\$3.4
10/26/22	TerraVia Holdings, Inc.	\$18.00	11.0	\$197.6	\$86.7	\$0.2	\$40.0	(\$16.7)	(\$4.0)	(\$3.3)
2/8/22	Gevo, Inc.	\$15.00	7.2	\$107.3	\$51.6	\$4.1	\$16.4	(\$32.3)	N/A	N/A
12/27/21	Amyris, Inc.	\$16.00	5.3	\$84.8	\$23.3	\$0.0	\$3.4	(\$62.7)	(\$18.8)	(\$14.7)
9/21/20	Codexis, Inc.	\$13.00	6.0	\$70.0	\$78.3	\$39.5	\$82.1	(\$11.1)	\$5.3	\$18.0
<b>Median of all IPOs</b>		<b>nm</b>	<b>nm</b>	<b>\$90.0</b>	<b>\$83.0</b>	<b>\$11.7</b>	<b>\$10.3</b>	<b>\$4.8</b>	<b>(\$1.3)</b>	<b>\$5.2</b>

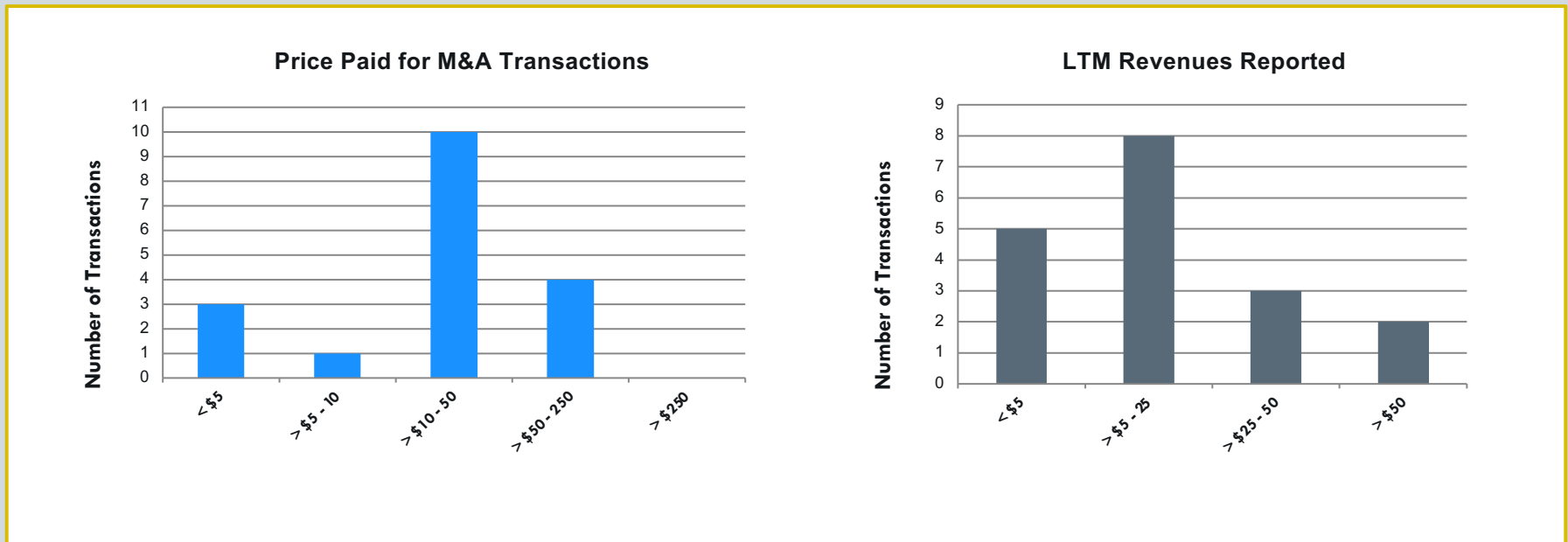
[1] As of the effective date of the IPO

## Size of Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

Transaction Date	Target	Acquirer	Transaction Size	% Bought
11/1/23	<b>Bioverda Limited</b>	Nurendale Limited	\$13.0	100%
10/21/23	<b>Syngip BV</b>	Global Bioenergies	\$1.1	100%
8/1/23	<b>Thegra Tracomex Hldg.</b>	Cefetra BV	\$14.9	100%
3/18/23	<b>COFCO</b>	Samsung SDI Co. Ltd.	\$120.0	100%
12/28/22	<b>Sun Green Power Energy</b>	Sun Capital Management	\$7.8	51%
7/31/22	<b>Bio-Oils Huelva, S.L.U.</b>	Verdant Palms sl	\$50.1	100%
7/25/22	<b>H2 Logic A/S</b>	Nel ASA	\$38.7	100%
6/16/22	<b>Biomethanol Chemie</b>	OCI N.V.	\$16.9	100%
6/5/22	<b>Red Shield Acquisition LLC</b>	Nurendale Limited	\$2.2	100%
3/24/22	<b>Biofuel Energy Research Pte. Ltd.</b>	Shenzhen Selen Science	\$86.4	100%
12/14/21	<b>Nidera B.V.</b>	Oakridge Global Energy Solutions, Inc.	\$46.1	51%
11/30/21	<b>SK Continental E-motion</b>	SK Innovation Co., Ltd.	\$14.9	100%
11/24/21	<b>LS9, Inc.</b>	OM Group Inc.	\$24.0	100%
5/16/21	<b>Verenium Corporation</b>	NEC Corporation	\$100.0	100%
12/27/20	<b>Energy Park Sutton Bridge</b>	N/A	\$1.7	100%
11/1/20	<b>Quallion LLC</b>	EnerSys	\$30.0	100%
10/2/20	<b>Eltek Electric Vehicles</b>	Valeo SA	\$20.3	100%
9/23/20	<b>Millennium Power Solutions</b>	Blue Earth Inc.	\$15.2	100%
	<b>Median of the M&amp;A Transaction Targets</b>		<b>\$18.6</b>	<b>100%</b>

■ USA ■ International

## Size of Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)



**Definitions of Financial Terms Used in this Quarterly Industry Update:**

**Enterprise Value (EV):** Market Value of Equity + Market Value of Debt - Cash

**Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA):** Profitability metric sometimes also referred to as operating profit or operating earnings.

**Gross Cash Flows:** Net Income + Depreciation and Amortization Expense

**Latest Twelve Months (LTM):** Financial information is as of the latest twelve months through the date of this Quarterly Industry Update.

**Market Value of Invested Capital (MVIC):** Market Value of Equity + Market Value of Debt

**Disclosures and Limitations:** This research report is for informational and discussion purposes only. Information presented herein is not investment advice of any kind to any person and does not constitute a recommendation as to the purchase or sale of any interests or as to any other course of action. General, financial, and statistical information concerning the details of this report and related industry are from sources Cogent Valuation believes to be reliable. Cogent Valuation has accurately reflected such information in this research report; however, Cogent Valuation makes no representation as to the sources' accuracy or completeness and has accepted this information without further verification. Neither all nor any part of the content of this report may be conveyed to the public through advertising, public relations, news, sales, mail, direct transmittal, or other media without the prior written consent of Cogent Valuation. Cogent Valuation's research is as of the date reported herein. Cogent Valuation has no affiliation with any of the companies comprising the industry used as a basis for research in this report, nor does Cogent Valuation hold any investments in the companies listed herein. The content of this report may be used, in part, as a basis for any work that Cogent Valuation performs for you in the future at the sole discretion of Cogent Valuation. THIS REPORT IS NOT TO BE USED OR CONSIDERED UNDER ANY CIRCUMSTANCE BY ANYONE AS INVESTMENT ADVICE.

COGENT VALUATION is a nationally recognized full service business valuation firm that has provided independent valuation and financial advisory opinions in thousands of situations since 1991. These assignments include the valuation of companies and pass-through entities, their securities, and their intangible assets ranging in size from small, closely-held businesses and start-ups, to corporations with market values over a billion dollars, covering almost every industry and all types of transactions. With the collective backgrounds of our managing directors and professional staff, Cogent Valuation brings substantial large deal experience to bear on our middle market transaction opinions. Cogent Valuation utilizes proprietary research, intensive due diligence, and the experience and insights of its professionals to produce thoughtful, well-documented opinions that have consistently withstood the scrutiny of clients and their advisors, investors, regulators, and courts.

This industry research is provided at no charge. Further research or detailed information not covered in this report can be obtained for a fee. **Contact Steven Kam at 415-392-0888 or [kam@cogentvaluation.com](mailto:kam@cogentvaluation.com)** for additional information or questions in connection with this report.