

Q3: Quarterly Industry Update

AS OF September 30, 2019



Biofuel Energy

INDUSTRY SUMMARY

COGENT VALUATION identified Biofuel traded companies, IPOs, and recent M&A transactions within the Biofuel Energy 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 September 30, 2018, the median 52-week share price return of the Biofuel Energy industry was 9.9%. Between September 30, 2018 and September 30, 2019, the median EV/EBITDA multiple increased from 13.9 to 20.0. Furthermore, the median price-to-earnings multiple increased from 23.0 to 34.9 over the same period. The median revenue growth and EBITDA margins for the industry for the quarter were 0.7% and -13.2%, respectively.

Public Company Key Statistics

Median 52-Week
Return

9.9%

Median 3-Year CAGR
Return

-26.7%

Median EV/Revenue
Multiple

4.2x

Median EV/EBITDA
Multiple

20x

Median Price/Earnings
Multiple

34.9x

Median EV/Gross CF
Multiple

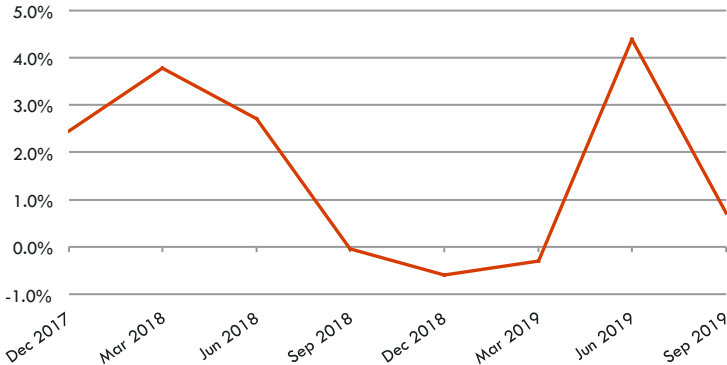
16.8x

Comparable Public Company Market Price Returns as of September 30, 2019

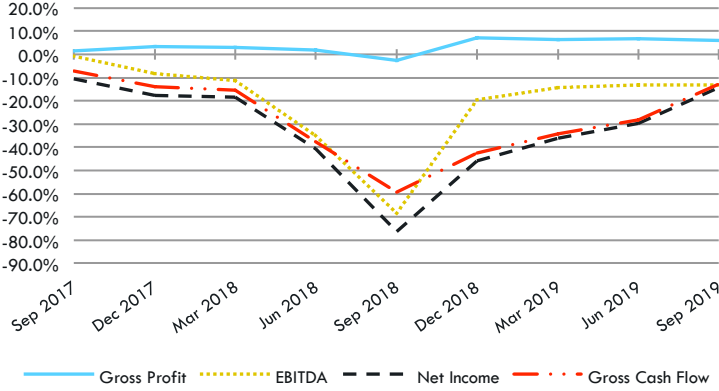
	2019	3 Month	1 Year	2 Year	3 Year	2018	2017	2016
Amyris, Inc.	70.4%	70.4%	-15.8%	-36.6%	-42.9%	-10.9%	-21.4%	-61.1%
Codexis, Inc.	72.5%	72.5%	129.2%	88.1%	34.1%	100.0%	67.9%	80.0%
Deinove SA	50.5%	50.5%	97.9%	1.0%	-19.0%	-20.6%	-45.4%	-56.8%
Gevo, Inc.	-67.8%	-67.8%	-59.6%	-70.8%	-80.3%	-83.4%	-87.1%	-77.6%
Green Plains Inc.	8.6%	8.6%	-32.1%	2.6%	-16.2%	-22.2%	-7.6%	27.9%
MGP Ingredients, Inc.	15.5%	15.5%	65.2%	92.2%	88.1%	92.6%	63.6%	205.6%
Pacific Ethanol, Inc.	-42.9%	-42.9%	-56.2%	-19.9%	-34.7%	98.7%	-53.7%	102.9%
Median of Industry Public Companies	15.5%	15.5%	-15.8%	1.0%	-19.0%	-10.9%	-21.4%	27.9%

Industry Revenue Growth and Profit Margins for the Past Two Years

Median Quarterly Revenue Growth of All Biofuel Energy Companies



Median Gross Profit, EBITDA, Net Income, and Gross Cash Flow Margins



Public Company Median Multiples by Quarter

	9/30/19	6/30/19	3/31/19	12/31/18	9/30/18	6/30/18	3/31/18	12/31/17
EV/Revenues Multiple	4.2x	3.2x	2.9x	1.3x	1.8x	1.6x	1.7x	1.7x
EV/EBITDA Multiple	20.0x	15.2x	15.5x	18.1x	11.2x	12.1x	11.1x	12.8x
Price/Earnings Multiple	34.9x	13.6x	21.3x	20.6x	26.1x	26.0x	30.7x	26.7x
EV/Gross Cash Flows Multiple	16.8x	19.7x	22.6x	12.3x	18.2x	18.6x	17.1x	20.1x

■ Highest Multiple
 ■ Lowest Multiple
 ■ Median Multiple

Industry Initial Public Offerings—Biofuel Energy (dollars in millions, except share prices)

Offer Date	Company Name	Offer Price	Shares Offered	Amount Raised	Total Assets	Debt	LTM Revenues	LTM EBITDA	LTM Net Income	LTM Cash Flows
9/11/19	Green & Smart Holdings plc	\$0.13	44.4	\$5.8	\$13.2	\$2.4	\$10.4	\$2.3	\$2.9	\$7.0
4/8/19	Renewable Energy Group, Inc.	\$10.00	7.2	\$72.0	\$484.4	\$85.6	\$824.0	\$102.2	(\$26.1)	\$182.0
6/23/18	KiOR, Inc.	\$15.00	10.0	\$150.0	\$82.2	\$9.2	\$0.0	(\$36.0)	\$1.4	\$3.4
5/26/18	TerraVia Holdings, Inc.	\$18.00	11.0	\$197.6	\$86.7	\$0.2	\$40.0	(\$16.7)	(\$4.0)	(\$3.3)
2/8/17	Gevo, Inc.	\$15.00	7.2	\$107.3	\$51.6	\$4.1	\$16.4	(\$32.3)	N/A	N/A
9/27/16	Amyris, Inc.	\$16.00	5.3	\$84.8	\$23.3	\$0.0	\$3.4	(\$62.7)	(\$18.8)	(\$14.7)
4/21/10	Codexis, Inc.	\$13.00	6.0	\$70.0	\$78.3	\$39.5	\$82.1	(\$11.1)	\$5.3	\$18.0
	Median of all IPOs	nm	nm	\$90.0	\$83.0	\$11.7	\$10.3	\$4.8	(\$1.3)	\$5.2

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

Transaction Date	Target	Acquirer	Transaction Size	% Bought
9/18/19	Bioverda Limited	Nurendale Limited	\$13.0	100%
7/2/19	Syngip BV	Global Bioenergies	\$1.1	100%
5/31/19	Thegra Tracomex Hldg.	Cefetra BV	\$14.9	100%
4/18/17	COFCO	Samsung SDI Co. Ltd.	\$120.0	100%
11/28/16	Sun Green Power Energy	Sun Capital Management	\$7.8	51%
8/31/16	Bio-Oils Huelva, S.L.U.	Verdant Palms sl	\$50.1	100%
6/25/15	H2 Logic A/S	Nel ASA	\$38.7	100%
6/16/15	Biomethanol Chemie	OCI N.V.	\$16.9	100%
12/5/14	Red Shield Acquisition LLC	Nurendale Limited	\$2.2	100%
10/24/14	Biofuel Energy Research Pte. Ltd.	Shenzhen Selen Science	\$86.4	100%
10/14/14	Nidera B.V.	Oakridge Global Energy Solutions, Inc.	\$46.1	51%

■ USA ■ International

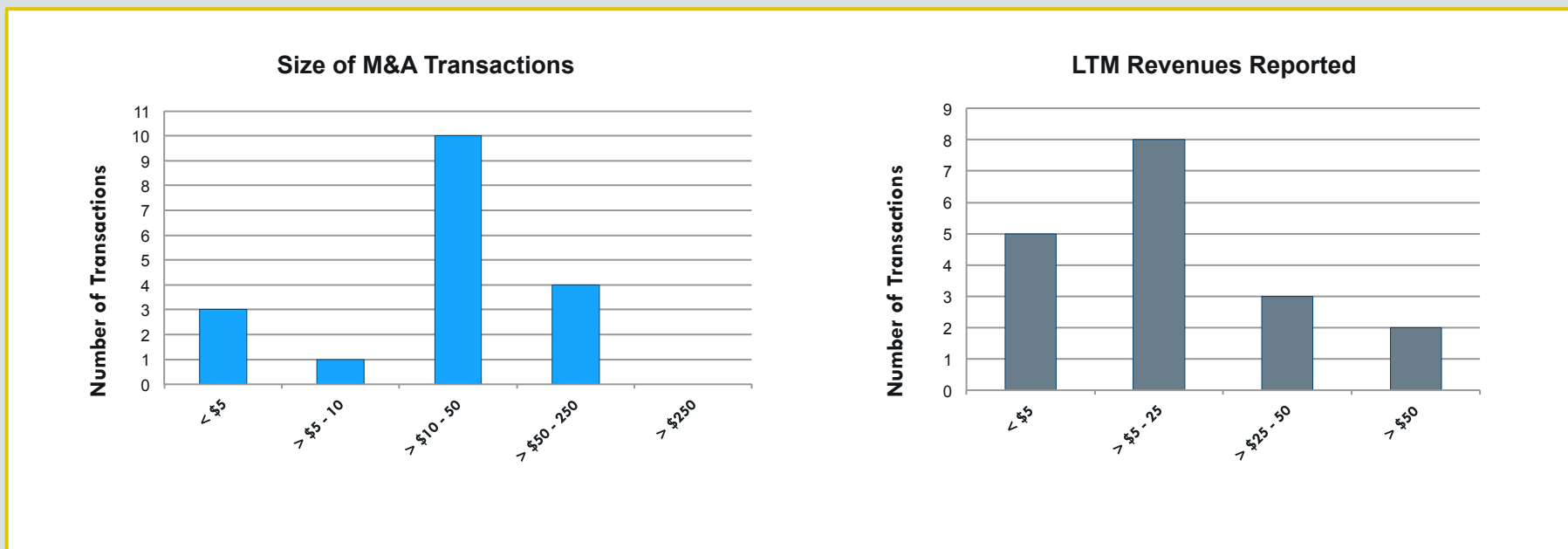
(Continued on next page)

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

Continued from previous page

Transaction Date	Target	Acquirer	Transaction Size	% Bought
12/30/14	SK Continental E-motion	SK Innovation Co., Ltd.	\$14.9	100%
11/24/14	LS9, Inc.	OM Group Inc.	\$24.0	100%
5/16/14	Verenium Corporation	NEC Corporation	\$100.0	100%
12/27/13	Energy Park Sutton Bridge	N/A	\$1.7	100%
11/1/13	Quallion LLC	EnerSys	\$30.0	100%
9/30/13	Eltak Electric Vehicles	Valeo SA	\$20.3	100%
8/23/13	Millennium Power Solutions	Blue Earth Inc.	\$15.2	100%
Median of the 18 M&A Transaction Targets			\$18.6	100%

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): 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.

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 to Cogent Valuation's clients. 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** for additional information or questions in connection with this research report.