

Biofuel Energy

INDUSTRY SUMMARY

COGENT VALUATION identified Biofuel Energy publicly 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 December 31, 2017, the median 52-week share price return of the Biofuel Energy industry was -22.2%. Between December 31, 2016 and December 31, 2018, the median EV/EBITDA multiple decreased from 16.8 to 16.0. Furthermore, the median price-to-earnings multiple decreased from 28.3 to 25.2 over the same period. The median revenue growth and EBITDA margins for the industry for the quarter were 0.5% and -13.2%, respectively.

Public Company Key Statistics

Median 52-Week
Return

-22.2%

Median 3-Year CAGR
Return

-28.3%

Median EV/Revenue
Multiple

1.8x

Median EV/EBITDA
Multiple

16x

Median Price/Earnings
Multiple

25.2x

Median EV/Gross CF
Multiple

15.3x

Comparable Public Company Market Price Returns as of December 31, 2018

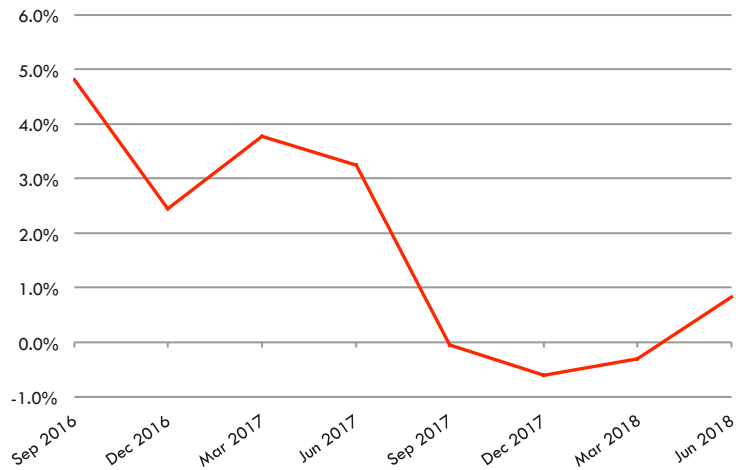
	YTD	3 Month	1 Year	2 Year	3 Year	2016	2015	2014
Amyris, Inc.	-10.9%	78.4%	-15.8%	-36.6%	-42.9%	-54.9%	-21.4%	-61.1%
Codexis, Inc.	100.0%	31.7%	129.2%	88.1%	34.1%	8.7%	67.9%	80.0%
Deinove SA	-20.6%	114.1%	97.9%	1.0%	-19.0%	-46.4%	-45.4%	-56.8%
Gevo, Inc.	-83.4%	-21.9%	-59.6%	-70.8%	-80.3%	-72.1%	-87.1%	-77.6%
Green Plains Inc.	-22.2%	-0.3%	-32.1%	2.6%	-16.2%	21.6%	-7.6%	27.9%
MGP Ingredients, Inc.	-25.8%	16.5%	65.2%	92.2%	88.1%	92.6%	63.6%	205.6%
Pacific Ethanol, Inc.	20.9%	-34.1%	-56.2%	-19.9%	-34.7%	98.7%	-53.7%	102.9%
Median of Industry Public Companies	-22.2%	6.3%	-12.7%	2.7%	-7.2%	-21.7%	-9.4%	-11.8%

Multiple year periods are calculated as the average annual return.

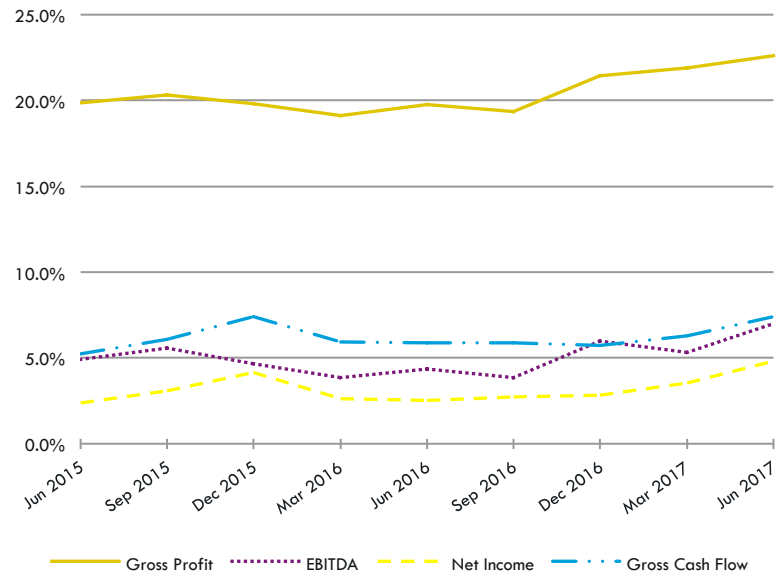
■ Highest Return
 ■ Lowest Return
 ■ Median Return

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

	12/31/18	9/30/18	6/30/18	3/31/18	6/30/17	3/31/17	9/30/16	6/30/16
EV/Revenues Multiple	1.8x	3.2x	2.9x	1.6x	1.7x	1.7x	2.3x	2.1x
EV/EBITDA Multiple	16.0x	15.2x	15.5x	12.4x	11.5x	12.8x	13.9x	15.2x
Price/Earnings Multiple	25.2x	13.6x	21.3x	26.0x	30.7x	26.7x	23.0x	24.0x
EV/Gross Cash Flows Multiple	15.3x	19.7x	22.6x	18.6x	17.1x	20.1x	22.9x	29.1x

 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
5/11/16	Green & Smart Holdings PLC	\$0.13	44.4	\$5.8	\$13.2	\$2.4	\$79.6	\$6.4	\$2.9	\$7.0
1/18/12	Renewable Energy Group, Inc.	\$10.00	7.2	\$72.0	\$484.4	\$85.6	\$491.9	\$142.0	(\$26.1)	\$182.0
6/23/11	KiOR, Inc.	\$15.00	10.0	\$150.0	\$82.2	\$9.2	\$89.3	\$3.3	\$1.4	\$3.4
5/26/11	TerraVia Holdings, Inc.	\$18.00	11.0	\$197.6	\$86.7	\$0.2	\$0.2	(\$3.5)	(\$4.0)	(\$3.3)
2/8/11	Gevo, Inc.	\$15.00	7.2	\$107.3	\$51.6	\$4.1	N/A	N/A	N/A	N/A
9/27/10	Amyris, Inc.	\$16.00	5.3	\$84.8	\$23.3	\$0.0	\$3.4	(\$15.4)	(\$18.8)	(\$14.7)
4/21/10	Codexis, Inc.	\$13.00	6.0	\$70.0	\$78.3	\$39.5	\$82.1	\$15.7	\$5.3	\$18.0
Median of all IPOs		nm	nm	\$90.0	\$83.0	\$11.7	\$80.8	\$4.8	(\$1.3)	\$5.2

Multiple year periods are calculated as the average annual return.

■ Highest Return
 ■ Lowest Return
 ■ Median Return

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

Transaction Date	Target	Acquirer	Transaction Size	% Bought
4/18/17	Bioverda Limited	Nurendale Limited	\$13.0	100%
2/2/17	Syngip BV	Global Bioenergies	\$1.1	100%
1/31/17	Thegra Tracomex Hldg.	Cefetra BV	\$14.9	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	45%
4/18/17	COFCO	Samsung SDI Co. Ltd.	\$120.0	100%

■ USA
 ■ International
 ■ Highest
 ■ Lowest
 ■ Median

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

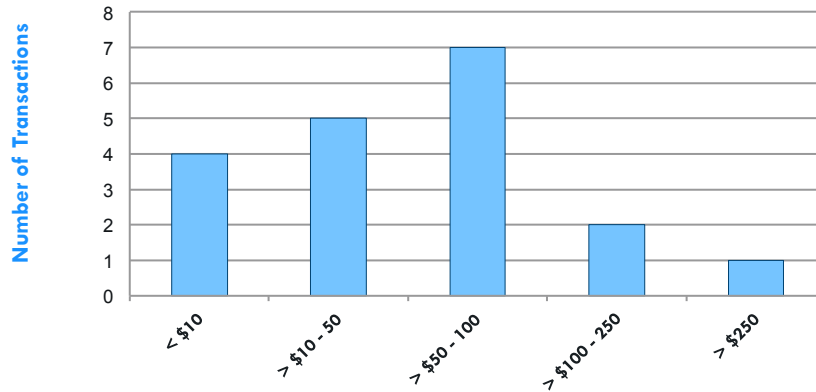
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Transaction Date	Target	Acquirer	Transaction Size	% Bought
12/30/14	SK Continental E-motion	SK Innovation Co., Ltd.	\$14.9	100%
11/24/14	LS9, Inc.	OM Group Inc.	\$24.0	100%
5/16/14	Verenium Corporation	NEC Corporation	\$100.0	100%
12/27/13	Energy Park Sutton Bridge	N/A	\$1.7	100%
11/1/13	Quallion LLC	EnerSys	\$30.0	100%
9/30/13	Eltek Electric Vehicles	Valeo SA	\$20.3	100%
8/23/13	Millennium Power Solutions	Blue Earth Inc.	\$15.2	100%
Median of the 28 M&A Transaction Targets			\$14.9	100%

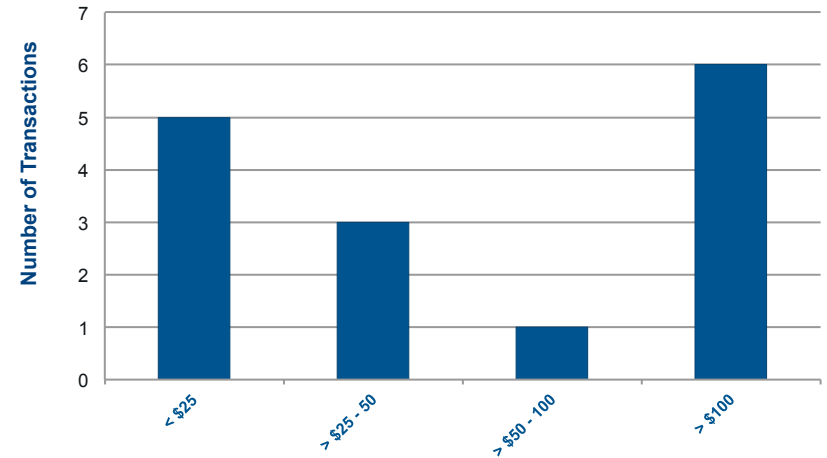
USA
 International
 Highest
 Lowest
 Median

Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions) as of December 31, 2018

Size of M&A Transactions



LTM Revenues Reported from M&A Transactions



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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.

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