

## Biofuel Energy

### INDUSTRY SUMMARY

COGENT VALUATION identified Biofuel Energy publicly traded companies, IPOs, and recent M&A transactions within the Biofuel Energy 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, 2016, the median 52-week share price return of the Biofuel Energy Energy industry was -23.4%. Between September 30, 2015 and September 30, 2017, the median EV/EBITDA multiple increased from 6.7 to 11.9. Furthermore, the median price-to-earnings multiple increased from 11.4 to 30.8 over the same period. The median revenue growth and EBITDA margins for the industry for the quarter were 0.0% and -54.5%, respectively.

### Public Company Key Statistics

Median 52-Week  
Return

**-23.4%**

Median 3-Year CAGR  
Return

**-32.8%**

Median EV/Revenue  
Multiple

**2.9x**

Median EV/EBITDA  
Multiple

**11.9x**

Median Price/Earnings  
Multiple

**30.8x**

Median EV/Gross CF  
Multiple

**20.4x**

## Comparable Public Company Market Price Returns as of September 30, 2017

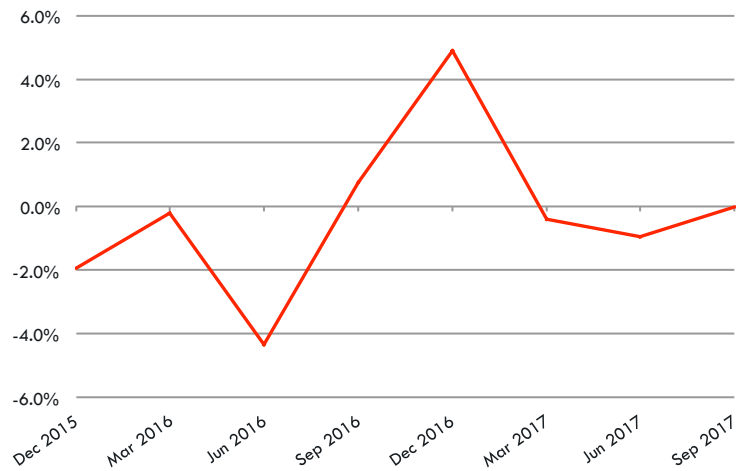
	YTD	3 Month	1 Year	2 Year	3 Year	2016	2015	2014
<b>Amyris, Inc.</b>	-70.8%	0.6%	-63.2%	-67.4%	-61.7%	-54.9%	-21.4%	-61.1%
<b>Codexis, Inc.</b>	44.6%	22.0%	49.8%	40.1%	41.8%	8.7%	67.9%	80.0%
<b>Deinove SA</b>	-4.4%	-4.3%	-23.7%	-43.1%	-39.2%	-46.4%	-45.4%	-56.8%
<b>Gevo, Inc.</b>	-82.0%	-9.4%	-93.5%	-86.5%	-81.8%	-72.1%	-87.1%	-77.6%
<b>Green Plains Inc.</b>	-27.6%	-1.9%	-23.1%	1.8%	-18.6%	21.6%	-7.6%	27.9%
<b>MGP Ingredients, Inc.</b>	21.3%	18.5%	49.6%	94.6%	66.8%	92.6%	63.6%	205.6%
<b>Pacific Ethanol, Inc.</b>	-41.6%	-11.2%	-19.7%	-7.5%	-26.5%	98.7%	-53.7%	102.9%
<b>Median of Industry Public Companies</b>	2.5%	-3.1%	21.8%	-2.6%	-8.6%	-21.7%	-9.4%	-11.8%

Multiple year periods are calculated as the average annual return.

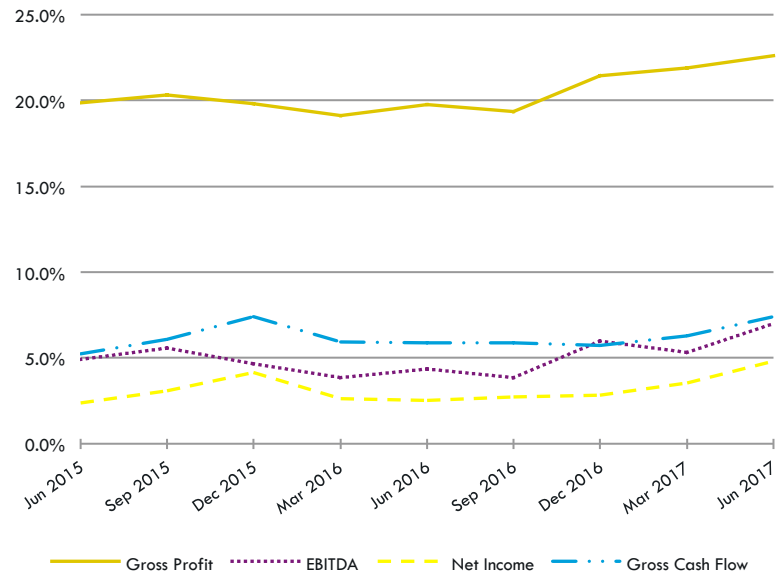
■ Highest Return
 ■ Lowest Return
 ■ Median Return

# 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

	9/30/17	6/30/17	3/31/17	12/31/16	9/30/16	6/30/16	3/31/16	12/31/15
<b>EV/Revenues Multiple</b>	2.9x	3.4x	2.8x	2.8x	2.0x	2.1x	1.1x	1.4x
<b>EV/EBITDA Multiple</b>	11.9x	11.3x	12.0x	16.8x	16.5x	15.2x	10.4x	11.8x
<b>Price/Earnings Multiple</b>	30.8x	26.1x	89.0x	28.3x	25.4x	22.6x	50.5x	15.9x
<b>EV/Gross Cash Flows Multiple</b>	20.4x	15.9x	18.8x	25.9x	34.1x	20.9x	18.7x	11.4x

 Highest Multiple

 Lowest Multiple

 Median Multiple

## Industry Initial Public Offerings—Industry: 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	\$3.25	0.5	\$1.7	\$51.9	\$15.7	\$79.6	\$6.4	\$2.9	\$7.0
1/18/12	Renewable Energy Group, Inc.	\$19.00	15.0	\$285.0	\$1,410.5	\$1,057.1	\$491.9	\$142.0	(\$26.1)	\$182.0
6/23/11	KiOR, Inc.	\$7.00	3.0	\$21.0	\$32.0	\$11.7	\$89.3	\$3.3	\$1.4	\$3.4
5/26/11	TerraVia Holdings, Inc.	\$0.39	12.0	\$4.6	\$8.1	\$4.2	\$0.2	(\$3.5)	(\$4.0)	(\$3.3)
2/8/11	Gevo, Inc.	\$12.00	7.0	\$84.0	\$6.7	\$4.1	N/A	N/A	N/A	N/A
9/27/10	Amyris, Inc.	\$17.00	8.0	\$136.0	\$23.3	\$0.0	\$3.4	(\$15.4)	(\$18.8)	(\$14.7)
4/21/10	Codexis, Inc.	\$14.00	5.0	\$70.0	\$78.3	\$39.5	\$82.1	\$15.7	\$5.3	\$18.0
<b>Median of all IPOs</b>		<b>nm</b>	<b>nm</b>	<b>\$70.0</b>	<b>\$32.0</b>	<b>\$11.7</b>	<b>\$80.8</b>	<b>\$4.8</b>	<b>(\$1.3)</b>	<b>\$5.2</b>

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	<b>Bioverda Limited</b>	Graphitecorp Limited	\$5.3	100%
2/2/17	<b>Syngip BV</b>	Aqua Metals, Inc.	\$2.3	100%
1/31/17	<b>Thegra Tracomex Hldg.</b>	Minebea Co., Ltd.	\$651.5	100%
11/28/16	<b>Sun Green Power Energy</b>	Hitachi Chemical Co.	\$92.2	51%
8/31/16	<b>Bio-Oils Huelva, S.L.U.</b>	VanSpar Mining Inc.	\$3.3	100%
6/25/15	<b>H2 Logic A/S</b>	TOTAL S.A.	\$1,368.3	100%
6/16/15	<b>Biomethanol Chemie</b>	Platypus Minerals Ltd (nka:Lepidico Ltd)	\$11.2	100%
12/5/14	<b>Red Shield Acquisition LLC</b>	Solid State plc	\$2.2	100%
10/24/14	<b>Biofuel Energy Research Pte. Ltd.</b>	Shenzhen Selen Science	\$86.4	100%
10/14/14	<b>Nidera B.V.</b>	Oakridge Global Energy Solutions, Inc.	\$46.1	45%
4/18/17	<b>COFCO</b>	Samsung SDI Co. Ltd.	\$120.0	100%

■ USA
 ■ International
 ■ Highest
 ■ Lowest
 ■ Median

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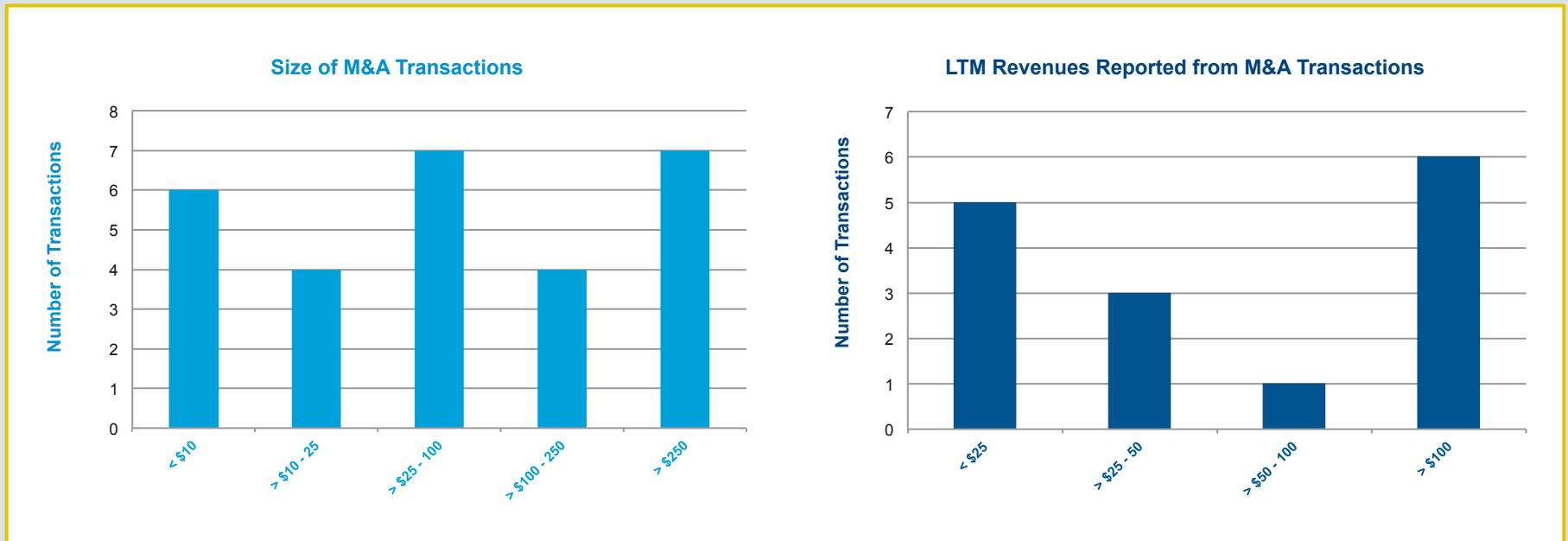
## Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

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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	Ener-tek International, Inc.	OM Group Inc.	\$24.0	100%
5/16/14	A123 Energy Solutions	NEC Corporation	\$100.0	100%
12/27/13	Shenzhen Eyang Energy	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 September 30, 2017





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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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