

INITIATING COVERAGE REPORT

William C. Dunkelberg Owl Fund
November, 14th 2015

LyondellBasell Industries

Exchange: NYSE Ticker: LYB Target Price: \$104.06

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COMPANY OVERVIEW

LyondellBasell Industries produces and manufactures chemicals; refines and distributes supplies of crude oil; and, develops and licenses technological products to be used for the production of chemicals. Lyondell's products are purchased to build plastics and chemicals to be used in the production of housing and automotive goods, packaging products, and paints. Lyondell's corporate functions are broken down into four segments: Olefins and Polyolefins (56.6% of FY 2014 Revenue), Refining (22.7%), Intermediates and Derivatives (19.7%), and Technology (1.0%). Lyondell derives 51.7% of its revenue from the United States, 25.5% from Europe, 12.8% from Asia, 6.4% from Other Americas, and 3.6% from Africa and the Middle East. Lyondell reports the end of its fiscal year on December 31st.

INVESTMENT THESIS

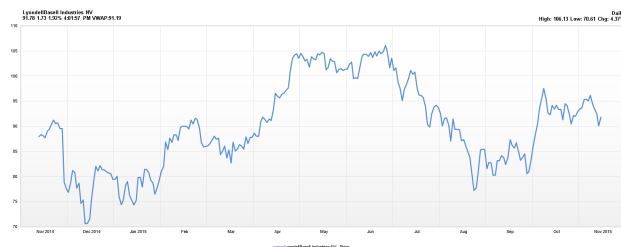
Lyondell is currently trading at an 11.7% discount to its 3-year historical EV/EBITDA multiple, a 1.4% discount to its 3-year historical EV/EBITDA spread against Dow, DuPont, and BASF, and a 6.3% discount to its 3-year historical EV/EBITDA spread against the S&P Chemical Sector. Lyondell first became undervalued during the last quarter of FY 2014 when its price plummeted 39% as a result of the 57% decline of the price of crude oil per barrel. The stock price marginally recovered, but in July of 2015, the price again dropped due to lower crude oil pricing. Looking forward, we believe that Lyondell is the best chemical company in the S&P 500 due to its superior financial metrics, and the price declines provide us with an attractive buying opportunity. Lyondell will benefit from the growing demand of ethylene, Lyondell's most produced chemical, through its ethylene factory expansions. Moreover, the company will continue to possess superior margins due to its use of natural gas as an input. These catalysts, alongside the company's economic moat created by its cost efficient feedstocks and economies of scale, will drive Lyondell's EV/EBITDA multiple from 6.5x to its average 3-year historical EV/EBITDA average multiple of 7.2x, and will trade at our target price of \$104.06, yielding a 16.7% return.

Sector Outperform Recommendation: BUY

Key Statistics:

Price	\$92.05	52 Week Low	\$70.06
Return	16.7%	52 Week High	\$107.32
Shares O/S (mm)	521	Yield	3.39%
Market Cap (mm)	\$41,331	Enterprise Value	\$46,597

1 Year Price Graph



Earnings History:

Quarters	EPS	Δ EPS YoY	Δ Price
4Q14	\$1.57	18%	5.58%
1Q15	\$2.42	56%	3.34%
2Q15	\$2.81	26%	2.90%
3Q15	\$2.55	12%	-0.37%

Earnings Projections:

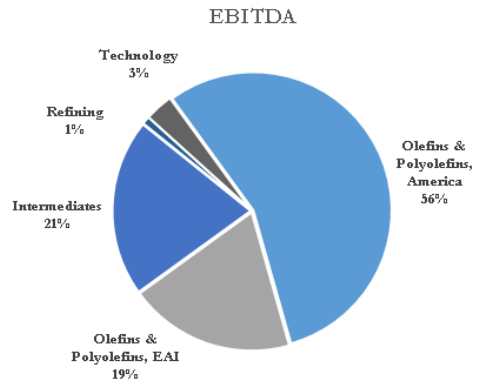
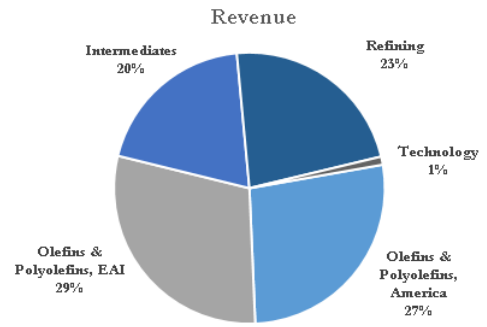
Year	Q1	Q2	Q3	Q4	Total
2014	\$1.63	\$2.22	\$2.51	\$2.48	\$8.92
2015e	\$2.54	\$2.79	\$2.80	\$2.21	\$10.31
2016e	\$2.40	\$2.68	\$2.69	\$2.42	\$10.16
2017e	\$2.56	\$2.81	\$2.69	\$2.48	\$10.57

All prices current at end of previous trading sessions from date of report. Data is sourced from local exchanges via FactSet, Bloomberg and other vendors. The William C. Dunkelberg Owl fund does and seeks to do business with companies covered in its research reports.

SEGMENT OVERVIEW

Olefins and Polyolefins (74.9% of FY 2014 EBITDA)

Lyondell is a leading worldwide producer of olefins, including ethylene, propylene and polyethylene. Lyondell organizes its olefin and polyolefin business in two geographic segments, (1) Americas, and (2) Europe, Asia, and International. To preface, olefins are the most organically basic petrochemicals and are used as “building blocks” for more complex, specific, petrochemicals. The most significant and fundamentally basic petrochemical is ethylene. Ethylene is the world's most used and manufactured petrochemical, because it is essential in creating chemicals that crease basic plastics. To create ethylene, petrochemical companies use one of two inputs, otherwise known as feedstocks. The first possible feedstock used to create ethylene is naphtha, a crude oil based derivative. The second possible feedstock is liquefied natural gas, or ethane. The cost of naphtha is based on current Brent Crude oil prices, while the price of ethane is contingent upon natural gas prices. Due to the recent high supply of natural gas in the Americas, the majority of North American ethylene producers use ethane as their feedstock, while European and Asian companies use naphtha. Lyondell’s Americas segment uses ethane as its feedstock to produce ethylene, giving the company superior margins over competitors using naphtha. Polyethylene is used to create plastics and various other compounds that are used in the manufacturing of products in industries such as consumer goods, automotive, food and beverage packaging, and housewares and construction materials. Important chemicals made from ethylene include high density polyethylene, low density polyethylene, and linear low density polyethylene.



Intermediates and Derivatives (20.7% of FY 2014 EBITDA)

The Intermediates and Derivatives segment produces and markets propylene oxide and its co-products and derivatives, alongside acetlys including methanol, ethylene oxide and its derivatives, ethanol, and oxyfuels. The largest intermediates and derivatives chemicals measured by annual capacity are styrene monomer and tertiary butyl alcohol. Styrene monomer is used to create packaging, foam cups and containers, insulation products and durables and engineering resins. Tertiary butyl alcohol is used in the production of synthetic rubber and lubricant additives.

Refining (0.9% of FY 2014 EBITDA)

Lyondell owns an oil refinery located on the Houston Ship Channel in Houston, Texas. This refinery has a heavy, high-sulfur crude oil processing capacity of approximately 268,000 barrels per day. The Houston refinery is a full conversion refinery designed to refine heavy, high-sulfur crude oil. This type of crude oil is more thick and dense than traditional crude oil and contains higher concentrations of sulfur and heavy metals, making it more difficult to refine into gasoline and other high-value fuel products. However, this crude oil has historically been less costly to purchase than light, low-sulfur crude oil such as Brent. In the recent past, certain crudes such as West Texas Intermediate (WTI) and West Texas Sour (WTS) have been priced lower than normal due to transportation constraints.

Technology (0.2% of FY 2014 EBITDA)

The Technology segment develops and licenses technologies that produce chemicals, polyolefins and other compounds and provides associated engineering and other services. Moreover, the Technology segment also develops, manufactures and sells petrochemical catalysts that quicken various production procedures. Lyondell organizes its Technology segment into two main functions: (1) Process Technology Licensing, and (2) Polyolefin Catalysts. Process Technology Licensing markets chemical manufacturing processes to external customers. Polyolefin Catalysts processes licenses that provide a standard core chemical manufacturing technology, with individual customer needs met by adding customized modules that provide the required capabilities.

INDUSTRY OVERVIEW

Chemical Manufacturing

Global sales of chemicals more than doubled over the last decade, hitting a record \$5.2 trillion by 2013. From 2004 to 2014, U.S. chemical exports grew from \$1.05 Billion to \$191 Billion. Emerging economies drove a large share of these gains, most notably in China, where chemicals sales expanded at a CAGR of 26% over that period. Growth in basic chemicals, which make up nearly two-thirds of the industry, also benefited from the increase in oil and gas prices. China, the US, Japan, and Germany produce the most chemicals and also are among the largest importers of chemicals. Countries in Asia (China, Thailand, India), the Middle East (Saudi Arabia), Eastern Europe (Russia), and South America (Brazil) are being targeted for industry growth. The US chemical manufacturing industry includes about 10,000 companies with combined annual revenue of about \$820 billion.

Products

Major product categories include basic chemicals, resins and synthetic fibers. Basic chemicals include petrochemicals, industrial gases, dyes and pigments, alkalies and chlorine, alcohols, and various other organic and inorganic chemicals. Basic chemicals are made from mined materials such as crude oil, natural gas, and minerals, or from crops and other natural substances. These raw materials are called feedstocks. Chemicals companies use basic chemicals to produce intermediate products like polyethylene; polyethylene oxide (PO); ethylene oxide (EO); and ethylene glycol, or final products like phosphate and nitrogen agricultural fertilizers. Basic and intermediate chemicals are collectively referred to as commodity chemicals. Commodity chemicals are produced mainly by large companies, often as byproducts of petroleum refining. Margins on commodity chemicals are usually low because the chemicals are so widely produced. Commodity chemicals are used to produce more complicated chemicals, known as specialty chemicals, which include resins, plastics, synthetic fibers, pesticides, lubricants, paints, coatings, adhesives, soaps and cleaners, pharmaceuticals, and a huge number of other products with special applications. Margins are generally higher on these products.

Demand

Because chemicals are used to make a wide variety of industrial and consumer products, demand is driven by the overall health of the US economy. The profitability of individual companies is closely tied to efficient operations. Big companies have economies of scale in purchasing and production. Small companies can compete effectively by producing specialty products, of which there are a large number, or by operating a single plant highly efficiently. The US industry is concentrated: the top 50 companies account for about 55% of revenue. Many specialty chemicals are protected by patents, either for the product itself or the manufacturing process, and have no direct competition. Indirect competition comes from products with similar properties. Patents are especially important to smaller manufacturers, which may license their products or technologies to larger companies for manufacture and sale. Because they often have a high value-to-weight ratio, many chemicals are traded internationally, and many US manufacturers have production plants overseas. The largest sources of US chemical imports are Canada, Ireland, and Germany. The biggest export markets for US chemicals are Canada, Mexico, and China.

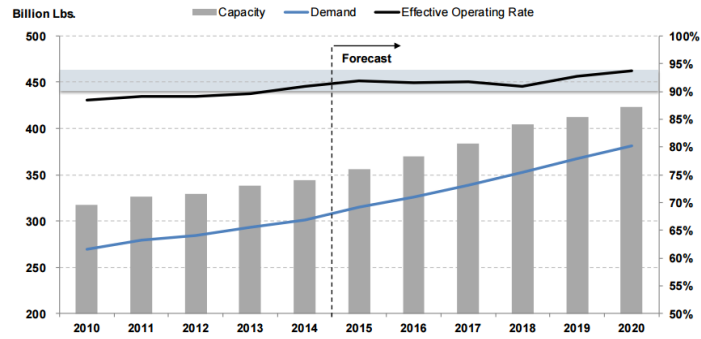
Natural Gas Outlook

The Energy Information Administration's forecast of U.S. natural gas consumption averages 76.3 Bcf/day in 2015 and 76.8 Bcf/day in 2016, increasing from 73.1 Bcf/day in 2014. Natural gas consumption in the power sector is expected to increase by 16.8% in 2015 and then to decrease by 1.2% in 2016. Natural gas spot prices, which are expected to remain below \$3/MMBtu through mid-2016, support a high consumption of natural gas for electricity generation in 2015 and 2016. Industrial sector consumption of natural gas will remain flat in 2015 and increase by 4.2% in 2016, as new industrial projects, particularly in the fertilizer and chemicals sectors, come online in the next few months. Natural gas consumption in the residential and commercial sectors is projected to decline in both 2015 and 2016, which largely reflects lower heating demand due to warmer temperatures this winter compared with last winter. Marketed natural gas production is expected to increase by 6.3% and 2.0% in 2015 and 2016, respectively. Increases in drilling efficiency will continue to support growing natural gas production in the forecast despite low natural gas prices and declining rig activity. Most of the growth is expected to come from the Marcellus Shale, as the backlog of uncompleted wells is reduced and as new pipelines come online to deliver Marcellus natural gas to markets in the Northeast.

CATALYSTS

Increased Demand for Ethylene

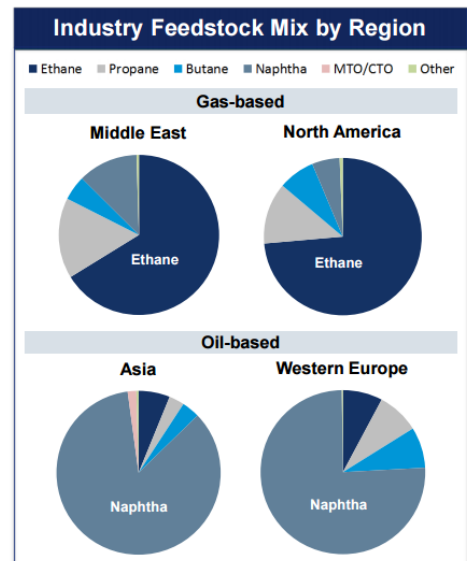
Petrochemical manufacturing in the United States is valued at \$89.3 billion dollars. Ethylene makes up 35% of total petrochemical production, followed by propylene, 21% of petrochemical manufacturing in the United States. LyondellBasell is the second largest United States based petrochemical company and ethylene producer with a market share of 8.2%, behind Exxon Mobile (12.2%). From CY 2015 to CY 2020, industry revenue is projected to



grow at a CAGR of 3.5% from \$89.3 billion to \$106.0 billion. These projected revenue increases are supported by a growing worldwide demand of ethylene and polyethylene products and a growing middle class. At year-end 2014, worldwide demand for ethylene and polyethylene is at 305 billion pounds and 190 billion pounds, respectively. By 2020, demand for ethylene and polyethylene is projected to increase to 380 billion pounds and 245 billion pounds, respectively. Furthermore, though the world’s middle class population rested at only 1.8 billion people in 2009, there are projected to be 3.2 billion individuals in the middle class by 2020. Over the next decade, the middle class is expected to grow to ~40% of the world’s population, increasing from its current standing of 35%. Typical middle class purchases include cars, plastics, housing, and furnishings, all products that are made possible through the production of petrochemicals. Demand for ethylene is forecasted to increase from 360 billion pounds per year to over 400 billion by FY 2018. We believe that, as the global demand for ethylene and ethylene’s end products rises, Lyondell will benefit from increased demand for its ethylene.

Cheaper Ethane Feedstocks

Ethylene can be produced using one of two feedstocks: naphtha (oil derivative), or ethane (natural gas derivative). The wide spread between natural gas and crude oil prices gives ethane-based ethylene producers, such as Lyondell, a significant cost advantage versus offshore naphtha-based producers such as BASF, China Petroleum & Chemical, and Saudi Basic Industries Corporation. Because ethylene prices are set by higher-cost Asian producers that use naphtha, the higher the price of crude oil, the more profitable Lyondell becomes. This is because, as the price of crude oil rises, the price of ethylene rises and Lyondell’s feedstock, ethane, remains constant. In Q3 of FY 2015, ethane cost \$12.2 per pound and naphtha cost \$23.3 per pound. And, in FY 2014, the company possessed an ethylene margin - ethylene minus feedstock cost - of \$34 per pound. Recently, Lyondell has funded its operations with ethane that it has been able to purchase off of \$4-\$5 mmbtu natural gas prices. From 2014 to 2015, natural gas production efficiencies increased across all major shale plays. Shale accounts for approximately one third of the natural gas produced in the United States, and its production is projected to increase by 80% from now until FY 2020. Going forward, the cost of natural gas products will be brought down to \$3-\$4 mmbtu, directly decreasing Lyondell’s costs of production through lower ethane prices. Alongside the increased cost efficiency of shale production, there is projected to be an oversupply of natural gas going forward. By year-end 2015, it is predicted that approximately 24 trillion cubic feet of natural gas will have been produced. This number will jump to 30 trillion by 2020, increasing incrementally until then. Due to the cost efficiencies of producing natural gas and its oversupply, prices will remain compressed, and Lyondell will see continued margin benefits in its low-cost feedstock versus its competitors in North American ethylene manufacturing.



Increased Ethylene Capacity

Lyondell's Olefins & Polyolefins segment produces and markets olefins and olefin byproduct petrochemicals, of which the largest and most significant chemical, in terms of worldwide production volume, is ethylene. Ethylene and its co-products are used to produce goods for a wide variety of industries and business segments, ranging from consumer goods to housing and automotive components. At the end of FY 2014, Lyondell produced 17.2 billion pounds of ethylene. Over the first half of 2015, ethylene production has significantly increased. Through part one of its Channelview Expansion Project, Lyondell increased its Ethylene production capacity by 250 million pounds, at a cost of \$200 million. Using conservative estimates based on EBITDA margins from Q1 2015, part one of the project is expected to generate between \$50-\$70 million in EBITDA per year. Going forward in 2016 and 2017, Lyondell will continue to generate increased EBITDA through two Ethylene production growth projects: The Corpus Christi Expansion, and The Channelview Expansion Part Two. Lyondell's management has echoed that, rather than building an entirely new plant, it will be more advantageous for the company to expand its existing facilities and capitalize on the feedstock advantage quickly and cost-efficiency. By the conclusion of Q2 2016, Lyondell predicts that its Corpus Christi Expansion Project will be completed. Currently, Lyondell's Corpus Christi facility produces 1.7 billion pounds of Ethylene per year. This expansion project will increase Lyondell's ethylene production by 47%, bringing a total of 2.5 billion pounds of ethylene production to the facility at the project's conclusion. The Corpus Christi facility will be shut down in the first half of 2016, and will take approximately 90 days to complete. Lyondell is stockpiling inventories to prepare for this shutdown, and expects this inventory build up to decrease Q4 earnings by \$30 million. The project is expected to be completed by Q2 2016, and its turnaround is projected to cost approximately \$600 million. Going forward, using conservative estimates based on Q1 2015 margins, the Corpus Christi project is expected to generate between \$170-\$230 million in annual EBITDA. Lyondell management has also stressed its willingness to continually grow its productive capacity. In 2017, Lyondell will begin part two of the Channelview Expansion project, which is slated to be completed as early as 2018 and as late as 2019. At a total cost of \$300 million, the project will increase Channelview's Ethylene capacity by 550 million pounds. Using conservative estimates, this project will increase Lyondell's annual EBITDA by \$120-\$160 million. By expanding capacity across its facilities, Lyondell is well positioned to take advantage of an oversupply of feedstock and increased worldwide demand for Ethylene.

Project	Scope (million Lbs.)	Start-up	Cost (\$ million)
Increase Ethane Capability	500	2012	~\$25
Midwest Ethylene / PE	120	2012	~\$25
EU Butadiene Expansion ⁽²⁾	155	Mid 2013	~\$100
Methanol Restart	250 MM Gal.	Dec. 2013	~\$180
PE Debottleneck	220	Early 2014	~\$20
La Porte Expansion	800	Mid 2014	~\$500
Channelview Expansion (I)	250	Mid 2015	~\$200
Corpus Christi Expansion	800	2016	~\$600
Channelview Expansion (II)	550	2017	~\$300
New PO/TBA Plant	1,000 PO 29 MBPD Oxyfuels	2020	TBD
PE / Metathesis Capacity	~1,000	TBD	TBD
Total			~\$1,950

ECONOMIC MOATS

- **Economies of Scale:** Lyondell is the third largest independent chemical producer in the world, the largest producer of ethylene in North America, and eighth largest ethylene producer globally. This strong market-leading position, plus its immense expansion projects, enhances Lyondell's efficiency.

- **Ethylene as a Feedstock:** In 2013, Lyondell possessed operating rates for their processing plants between 106% to 96% capacity, higher than the industry average. Its rates were partially a result of increased demand of ethylene due to ethylene plant malfunctions, but management has stated that the company was going to keep the rates higher for the foreseeable future.

RISKS

- **Feedstock Cost:** The costs of raw materials and energy represent a substantial portion of Lyondell's operating expenses, primarily crude oil and natural gas. These price trends may be highly volatile and cyclical. Significant sustained movement in the price of crude oil or natural gas will adversely affect both top and bottom lines.

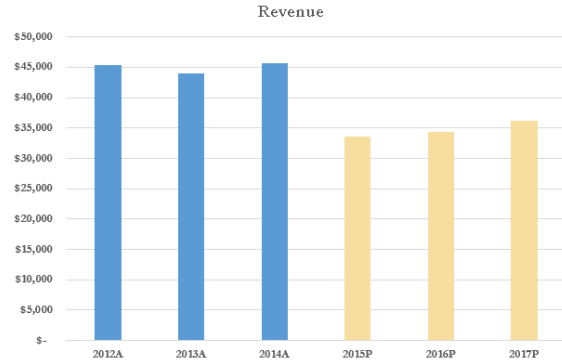
- **Macro Headwinds:** Economic downturns in the businesses and geographic areas in which Lyondell sells its products may substantially reduce demand for its products and result in decreased sales. Reductions in the demand of products can be attributed to recessions seen from customers in the industrial markets as well as the automotive and housing industries.

- **Regulatory or Legislative Changes:** Compliance with regulatory requirements could result in higher operating costs, such as regulatory requirements relating to emissions, the security of Lyondell's facilities, and the transportation, exportation or registration of its products.

FINANCIALS

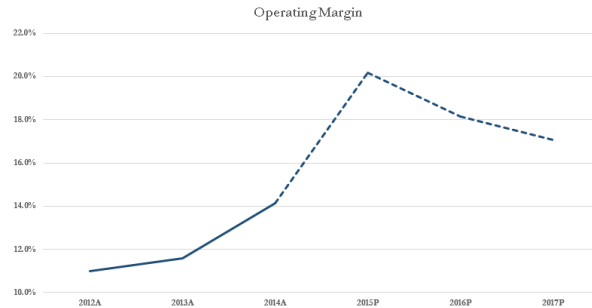
Revenue

Revenue in 2014 was \$45.61 billion. Over the last 5 years, top line has grown at a CAGR of 2.35%. In 2014 revenue increased by 4%. Higher sales volumes for acetyls, styrene, propylene oxide and derivatives and refining products were offset in part by lower volumes for U.S. olefins, ethylene oxide and derivatives. Higher acetyls sales volumes in 2014 benefited from the restart of a Methanol plant at Channelview, Texas in December 2013. Sales volumes for styrene improved in 2014 compared to 2013, which was affected by planned maintenance activities in the U.S. and Europe. Industry outages in Europe and Asia in 2014 led to higher volumes for propylene oxide and derivatives. An increase in sales volumes of refined products in 2014 reflects higher crude processing rates relative to 2013, a year that was negatively impacted by planned outages at the Houston refinery. Sales volumes for U.S. polyethylene were favorably affected by increased firm demand and the completion of an expansion and turnaround of the Matagorda, Texas polyethylene facility. These increases were offset in part by lower U.S. olefin sales volumes, as 2014 volumes were impacted by an expansion-related turnaround at the La Porte, Texas facility. Unplanned outages in 2014 resulted in lower EO and derivative volumes during that period. Increased demand and industry supply issues in 2014 led to an increase in U.S. polyethylene prices. The improvements in polypropylene prices reflected more favorable market conditions.



Margins

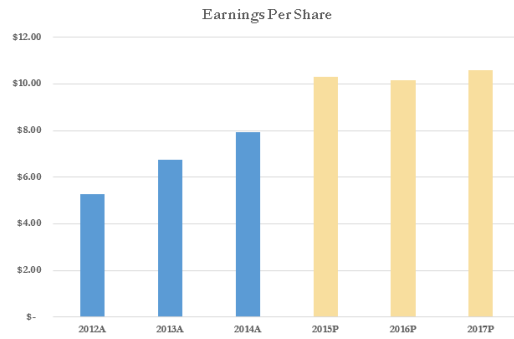
Lyondell's EBIT margin expanded by 250 basis points from FY 2013 to FY 2014, rising from 11.6% to 14.1%. This can be attributed to the fact that, while COGS increased by 2.5%, Sales increased by 3.5%. Lyondell offset its COGS through higher sales volumes for its acetyls, styrene, PO and derivatives and refining products. Additionally, Lyondell spent marginally less money on SG&A and R&D in 2014 compared to 2013. Going forward, we see Lyondell's EBIT margin



expanding dramatically in FY 2015 by 610 basis points to 20.2%, due to a \$10.1 billion reduction in COGS over the last twelve months. This margin will steadily decrease to 18.2% in FY 2016 and to 17.1% in FY 2017. Though Lyondell's EBIT margin will decrease over the next two years, in FY 2017 it will be 300 basis points above its standing in FY 2014. These decreases are representative of the costs associated with Lyondell's expansion projects growing at a higher rate than its revenues. A similar story is told by Lyondell's Net Income Margin, which rose by 50 basis points from FY 2013 to FY 2014, increasing from 8.7% to 9.2%. The Net Income Margin will expand further in FY 2015, rising by 490 basis points to 14.1%. This margin will then decrease to 12.8% in FY 2016 and decrease again to 11.9% in FY 2017. The same rationale for the increases over the past two years and subsequent decreases over the next two years in Lyondell's EBIT Margin can be applied to the changes in its Net Income Margin. Lyondell separates its Olefins and Polyolefins segment into two separate geographies: O&P Americas, and O&P Europe, Asia International. Each segment generates noticeably different results in margins. In FY 2014, Lyondell's O&P Americas segment increased its EBIT margin to 25.8%, from 25.1% in FY 2013. Lyondell's O&P EAI segment also increased its EBIT margin, but only to 7.4% in FY 2014 from 3.8% in FY 2013. As mentioned previously, Ethylene (an Olefin product) can be produced using one of two feedstocks, naphtha (oil derivative), or ethane (natural gas derivative). The wide spread between natural gas and crude oil prices gives ethane-based Ethylene products a substantial cost advantage over naphtha-based Ethylene products. In Q3 of FY 2015, ethane cost \$12.2 per pound and naphtha cost \$23.3 per pound. Though natural gas is in plentiful supply in the Americas, its supply is virtually nonexistent overseas. As a result, Lyondell's EBIT margins are much more favorable in its O&P Americas segment than in its O&P EAI segment.

Earnings

Lyondell has beat earnings 8 of the last 12 quarters with an average surprise of 10.3%. The company was able to grow EPS 28.0% and 17.4% for FY 2013 and FY 2014, respectively. In 2014, EPS benefited from improved Olefins and Polyolefins segment results on higher olefins and olyolefins margins, offset in part by lower North American volumes and supplemented by higher European olefins volumes. Lyondell also saw improved refining margins and achieved higher crude processing rates in 2014. These positives were enough to more than offset lower of cost or market inventory valuation charges that affected all but the Technology segment in the third and fourth quarters of 2014, totaling \$760 million. Overall, recent EPS growth has been aided by share repurchase programs. The first was enacted in 2013 and authorized Lyondell to repurchase 10% of shares outstanding. This program concluded in April 2014, and another program was then authorized to repurchase an additional 10% of shares outstanding, all to be purchased over the next 18 months. In 2014, Lyondell repurchased \$63.3 million worth of shares. Looking forward, EPS is expected to grow at a CAGR of 15.0% over the next 3 years.



Cash Flows and Capital Expenditures

In FY 2014, Lyondell reported Operating Cash Flow of \$6.0 billion and Free Cash Flow of \$4.5 billion. Since 2010, OCF has risen rapidly by \$4.0 billion, increasing at a CAGR of 31.5%. Also, FCF has increased by \$3.2 billion since 2010, increasing over the past four years at a CAGR of 36.0%. At the end of FY 2015, it is expected that Lyondell’s OCF will stay flat at \$6.0 billion, and FCF will marginally increase to \$4.6 billion. OCF will remain flat due to an increase in Net Working Capital Spending despite an equivalent increase in Net Income. Net Working Capital will increase for the purpose of building inventories to compensate for the Corpus Christi shutdown in H1 2016. This shutdown will also impact top line in 2016, as a predicted \$500 million decrease in Net Income and a negative change in Net Working Capital of \$163 million will bring OCF down to \$4.8 billion in 2016. OCF will then rise to \$5.0 billion in 2017, as Net Income will increase by approximately \$200 million when Lyondell’s expansion projects begin to come to fruition. The projected overall changes in OCF will directly impact Lyondell’s FCF in the upcoming years. In 2016, FCF is expected to decrease to \$3.3 billion, and then rise to \$3.5 billion in 2017. These changes are representative of the changes in Net Income and Net Working Capital that will affect OCF. Capital Expenditures are expected to marginally impact FCF from 2015 to 2017. From 2010-2014, CAPEX increased from \$692 to \$1499, representing a CAGR of 21.3%. CAPEX is predicted to decrease by \$100 million by the end of FY 2015, increase by \$100 million in 2016, and remain flat YOY at \$1.5 billion in 2017. The slight increase in 2016 demonstrates the undertaking of Lyondell’s expansion projects, and the lack of a substantial increase from 2015-2017 represents that Lyondell is efficiently managing these projects.

Debt

Lyondell finished Q2 2015 with Total Debt of \$7.8 billion and a fully usable debt revolver of \$1.95 billion that expires in 2020. The company does not have any bond principal due until 2020, at which time it will have \$6.0 billion worth of bonds due. Lyondell will also have \$3.0 billion in bond principal due between 2021 and 2027. Lyondell had an interest coverage ratio of 16.72 in 2014, showing its rapid and effective ability to cover its interest expense. The company has been assigned a good credit rating of BBB+ by Standard and Poor’s.

Shareholder Returns

Lyondell has returned roughly \$17.2 billion to its shareholders through dividends and share repurchases since 2011. Also, it has bought back roughly 110 million shares since the inception of its repurchase program in 2013. In May 2013, Lyondell announced a repurchase program under which it could repurchase up to 10.0% of its outstanding shares. During the second quarter of 2014, the company completed the repurchase of shares authorized under this program. In April 2014, shareholders approved a proposal to authorize LYB to repurchase up to an additional 10.0% of its outstanding ordinary shares through October 2015. Lyondell has increased its dividend payout every year since 2008, with two instances of special dividends. These dividends served to normalize the capital structure while underscoring the company’s confidence in its free cash flow. Lyondell’s payout ratio is considerably higher than the industry average.

VALUATION

Peer Group

We decided to use Dow Chemical Company, E.I. du Pont de Nemours, Westlake Chemical, and BASF SE for LyondellBasell's comparable companies. Dow and DuPont are excellent comparable companies for Lyondell, because all three are large blue chip chemical companies that move in line with one another. Dow derives 26% of its FY 2014 sales from intermediates, 39% from resins, fibers, and rubbers, 13% from agricultural chemicals, and 23% from specialty chemicals. DuPont derives 32% of its latest FY 2014 sales from agricultural chemicals and 67% from other specialty chemicals. Westlake is a North American based olefin manufacturer. Out of all of Lyondell's competitors, Westlake is the most comparable to Lyondell's North American operations. Lastly, BASF is a large diversified chemical company, but unlike Dow and DuPont, BASF derives the majority of its revenue from Europe. Lyondell possesses superior ROE, ROA, and ROIC/WACC ratios when compared to its comparable companies. Only Westlake has superior EBIT and profit margins. This is because Westlake operates entirely out of North America, where it can use LNG's for the entirety of its chemical manufacturing process.

LyondellBasell Comparable Analysis (\$ in millions except per share)															
	Capitalization			P/E	EV EBITDA	Beta	Free Cash Flow	Ratios			Margins			Leverage	
	Stock Price	Equity Market	Enterprise Market					ROE %	ROA %	ROIC/WACC %	Dividend Yield %	EBIT Margin %	Profit Margin %	Intrest Coverage %	Debt/ Equity %
BAS GR EQUITY	\$74.20	\$68,176	\$82,522	13.7X	7.2X	1.08	1,662.0	15.9	7.0	0.9	3.8	10.0	6.9	15.1	55.7
WLK US EQUITY	\$57.55	\$7,497	\$7,308	10.8X	5.5X	1.50	601.3	23.3	13.5	1.6	1.2	25.5	15.4	31.8	26.2
DOW US EQUITY	\$51.06	\$58,950	\$76,006	14.7X	7.8X	1.20	2,930.0	19.2	7.0	1.1	3.3	9.3	6.5	5.2	107.4
DD US EQUITY	\$67.08	\$58,807	\$65,465	22.3X	13.5X	1.04	1,692.0	20.7	6.6	0.7	2.7	11.6	10.4	10.3	81.7
Mean				15.4X	8.5X	1.21	1,721.3	19.8	8.5	1.1	2.7	14.1	9.8	15.6	67.8
Median				14.2X	7.5X	1.14	1,677.0	20.0	7.0	1.0	3.0	10.8	8.7	12.7	68.7
LYB US EQUITY	\$91.46	\$41,030	\$46,296	9.8X	6.5X	1.43	4,549.0	52.1	18.1	2.6	3.2	12.6	9.2	16.7	85.5

Undervaluation

Lyondell is trading at an 11.7% discount to its historical 3-year year historical EV/EBITDA multiple, and a 19.5% discount to its 3-year historical P/E multiple. Furthermore, Lyondell is currently trading at a 6.3% discount to its 3-year historical EV/EBITDA spread relative to the S&P Chemical Index. This discount has been perpetuated by continually depressed oil prices. In late September of 2014, Lyondell's price dropped alongside the oil crash. Lyondell's price compressed further in late November into mid-December alongside a further slip in oil prices. Then, as the price of oil rebounded in the beginning of 2015 into late June, Lyondell's stock began to gradually increase. Since July, however, oil prices have begun to decline again, and the stock price has dropped even further. We see this price depression as an excellent opportunity to buy into a company that has strong fundamentals and an excellent growth and expansion strategy going forward.



Discounted Cash Flow Assumptions

We projected -26% and 5.3% sales growth for FY 2015 and FY 2016, respectively. Overall, our sales projections are very similar to consensus analyst estimates. The negative 26% growth for FY 2015 is due to declining prices of crude oil, which in turn lowers the price of ethylene. Thereafter, we see top line growth in 2016 being derived from increased capacity at Lyondell's new ethylene plants and a modest appreciation in the price of crude oil. We forecast that gross margin will expand from 17.0% in FY 2014 to 19.5% in FY 2015 and 20.5% in FY 2018, and remain constant henceforth. SG&A as a percentage of sales was lowered slightly more than consensus estimates. Remaining projections were forecasted by using the trends of the previous three years and forecasting comparable results.

WACC Calculations

The WACC of 10.6% was calculated by taking the average equity and debt weights for the previous five years along with their current weights. The average equity weight was calculated at 84.1% and the average debt weight was calculated at 15.9%. Cost of equity was calculated to be 12.38% by using an expected market return of 9.36%, a risk free rate of 2.3%, and a beta of 1.43. Cost of debt was found to be 1.67% by using an effective tax rate of 26%, short-term debt total percentage of 4.92%, short-term debt rate of 0.87%, long-term debt percentage of 95.08%, and a long-term debt rate of 2.33%. By adding the product of average debt weighting and the cost of debt, and the product of average equity weighting and the cost of equity, we derived a WACC of 10.6%.

Summary of Financial Projections for - LyondellBasell

	Actuals			Projections						
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Net Sales	45,352	44,062	45,608	37,492	37,872	40,004	41,082	42,067	43,079	44,118
<i>% Growth</i>		-2.8%	3.5%	-17.8%	1.0%	5.6%	2.7%	2.4%	2.4%	2.4%
EBITDA	5,504	5,956	6,601	6,531	6,749	7,329	7,526	7,917	8,107	8,303
<i>Margin</i>	12.1%	13.5%	14.5%	17.4%	17.8%	18.3%	18.3%	18.8%	18.8%	18.8%
EBIT	4,696	5,102	5,736	5,819	6,029	6,569	6,746	7,118	7,289	7,465
<i>Margin</i>	10.4%	11.6%	12.6%	15.5%	15.9%	16.4%	16.4%	16.9%	16.9%	16.9%
Net Income	2,869	3,853	4,166	4,309	4,467	4,867	5,007	5,298	5,449	5,610
<i>Margin</i>	6.3%	8.7%	9.1%	11.5%	11.8%	12.2%	12.2%	12.6%	12.6%	12.7%
EPS	4.97	6.76	8.00	8.35	8.74	9.62	9.99	10.68	11.10	11.54
<i>Growth Rate</i>		35.9%	18.3%	4.4%	4.7%	10.0%	3.9%	6.9%	3.9%	4.0%

APPENDIX

Exhibit I: 3 Year Price



Exhibit II: 3 Year EV/EBITDA

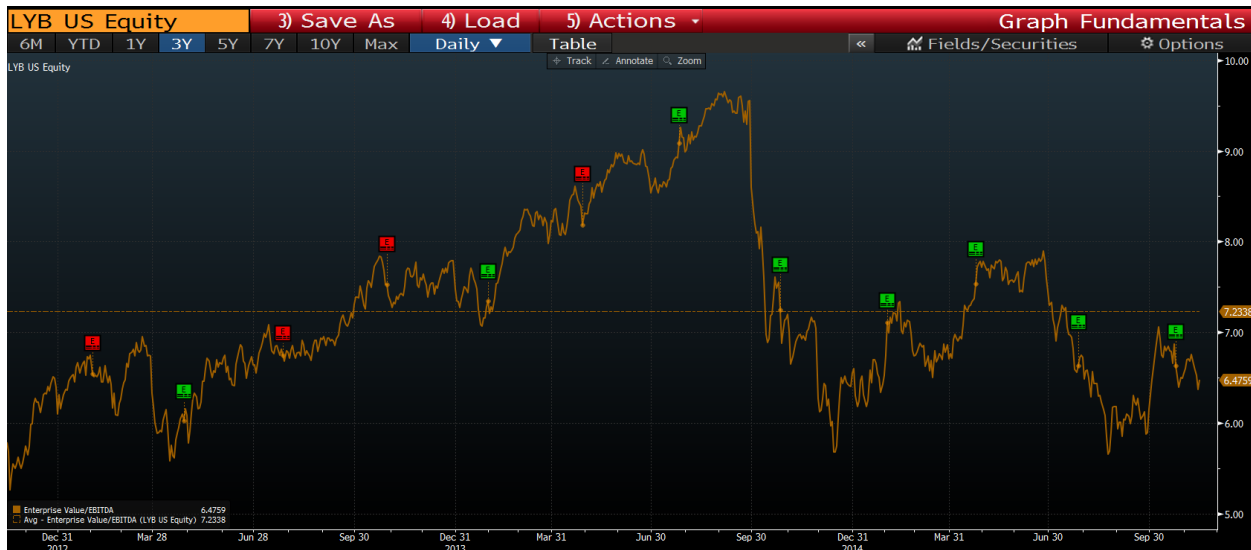


Exhibit III: 3 Year P/E Spread against DOW, DD, and BAS

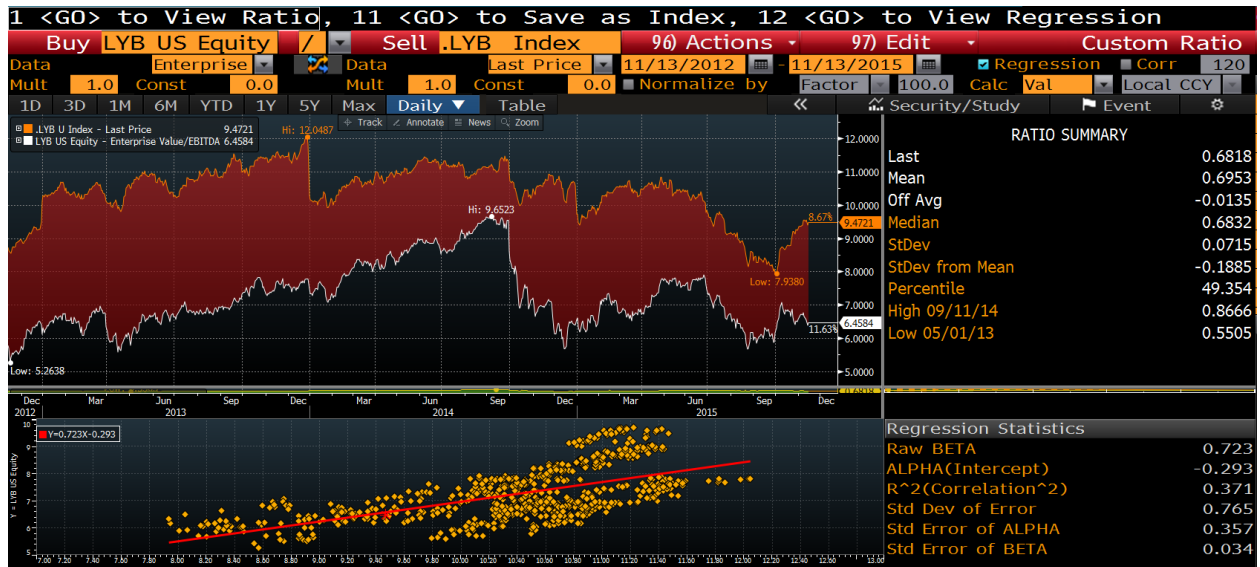


Exhibit IV: Ethane and Naphtha Feedstock Comparison

Table 2: Benchmark Ethylene Production Economics - Ethane and Naphtha-base Production

In Cents per Pound, except Feedstock Prices in Cents per Gallon

	Feedstock Price (¢/Gal)	Cash Costs	Ethylene Price	Ethylene Margin
2015E (Ethane-based)	18.8	12.7	32.17	19.5
2015E (Naphtha-based)	106.0	18.6	32.17	13.6
4Q:15E (Ethane-based)	19.5	13.3	29.50	16.2
4Q:15E (Naphtha-based)	90.7	19.2	29.50	10.3
3Q:15E (Ethane-based)	18.9	12.8	30.25	17.5
3Q:15E (Naphtha-based)	98.9	15.6	30.25	14.8
2Q:15 (Ethane-based)	18.3	12.2	34.17	22.0
2Q:15 (Naphtha-based)	125.5	23.3	34.17	10.8
1Q:15 (Ethane-based)	18.6	12.5	34.75	22.3
1Q:15 (Naphtha-based)	108.9	16.3	34.75	18.5
2014 (Ethane-based)	26.8	14.1	48.02	34.0
2014 (Naphtha-based)	198.0	32.4	48.02	15.6
4Q:14 (Ethane-based)	20.7	12.6	44.75	32.2
4Q:14 (Naphtha-based)	147.8	17.1	44.75	27.7
3Q:14 (Ethane-based)	23.7	12.7	51.83	39.2
3Q:14 (Naphtha-based)	210.5	36.7	51.83	15.2
2Q:14 (Ethane-based)	29.1	13.7	47.17	33.5
2Q:14 (Naphtha-based)	221.5	40.2	47.17	7.0
1Q:14 (Ethane-based)	33.9	17.3	48.33	31.0
1Q:14 (Naphtha-based)	212.2	35.7	48.33	12.7
2013 (Ethane-based)	26.0	12.4	46.67	34.3
2013 (Naphtha-based)	213.5	36.8	46.67	9.9
2012 (Ethane-based)	39.8	17.1	48.27	31.1
2012 (Naphtha-based)	215.2	37.7	48.27	10.6

Source: Chemical Data, Inc. and J.P. Morgan estimates.

DISCLAIMER

This report is prepared strictly for educational purposes and should not be used as an actual investment guide. The forward looking statements contained within are simply the author's opinions. The writer does not own any LyondellBasell Industries stock.

TUIA STATEMENT

Established in honor of Professor William C. Dunkelberg, former Dean of the Fox School of Business, for his tireless dedication to educating students in “real-world” principles of economics and business, the William C. Dunkelberg (WCD) Owl Fund will ensure that future generations of students have exposure to a challenging, practical learning experience. Managed by Fox School of Business graduate and undergraduate students with oversight from its Board of Directors, the WCD Owl Fund's goals are threefold:

- Provide students with hands-on investment management experience
- Enable students to work in a team-based setting in consultation with investment professionals
- Connect student participants with nationally recognized money managers and financial institutions

Earnings from the fund will be reinvested net of fund expenses, which are primarily trading and auditing costs and partial scholarships for student participants.