

**2018 J.P. Morgan Aviation, Transportation and Industrials Conference**

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**CFO**

March 15, 2018

## Cautionary Statement

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The statements in this presentation relating to matters that are not historical facts are forward-looking statements. These forward-looking statements are based upon assumptions of management which are believed to be reasonable at the time made and are subject to significant risks and uncertainties. Actual results could differ materially based on factors including, but not limited to, the business cyclicality of the chemical, polymers and refining industries; the availability, cost and price volatility of raw materials and utilities, particularly the cost of crude oil, natural gas, and associated natural gas liquids; competitive product and pricing pressures; labor conditions; our ability to attract and retain key personnel; operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failure, unscheduled downtime, supplier disruptions, labor shortages, strikes, work stoppages or other labor difficulties, transportation interruptions, spills and releases and other environmental risks); the supply/demand balances for our and our joint ventures' products, and the related effects of industry production capacities and operating rates; our ability to achieve expected cost savings and other synergies; our ability to successfully execute projects and growth strategies; legal and environmental proceedings; tax rulings, consequences or proceedings; technological developments, and our ability to develop new products and process technologies; potential governmental regulatory actions; political unrest and terrorist acts; risks and uncertainties posed by international operations, including foreign currency fluctuations; and our ability to comply with debt covenants and service our debt. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in the "Risk Factors" section of our Form 10-K for the year ended December 31, 2017, which can be found at [www.lyondellbasell.com](http://www.lyondellbasell.com) on the Investor Relations page and on the Securities and Exchange Commission's website at [www.sec.gov](http://www.sec.gov).

The illustrative results or returns of growth projects are not in any way intended to be, nor should they be taken as, indicators or guarantees of performance. The assumptions on which they are based are not projections and do not necessarily represent the Company's expectations and future performance. You should not rely on illustrated results or returns or these assumptions as being indicative of our future results or returns.

Additionally, this communication includes forward-looking statements relating to the proposed merger between LYB and A. Schulman, Inc. ("Schulman"), including financial estimates and statements as to the expected timing, completion and effects of the proposed merger. These estimates and statements are subject to risks and uncertainties, and actual results might differ materially. Such estimates and statements include, but are not limited to, statements about the benefits of the merger, including future financial and operating results, the combined company's plans, expectations and intentions, and other statements that are not historical facts. Such statements are based upon the current beliefs and expectations of the management of LYB and Schulman and are subject to significant risks and uncertainties outside of our control. Actual results could differ materially based on factors including, but not limited to, the occurrence of any event, change or other circumstances that could give rise to the termination of the Merger Agreement, the risk that Schulman shareholders may not adopt the Merger Agreement, the risk that the necessary regulatory approvals may not be obtained or may be obtained subject to conditions that are not anticipated, failure to realize the benefits expected from the proposed merger and the effect of the announcement of the proposed merger on the ability of LYB and Schulman to retain customers and retain and hire key personnel and maintain relationships with their suppliers, and on their operating results and businesses generally. Discussions of additional risks and uncertainties are contained in LYB's and Schulman's filings with the Securities and Exchange Commission. Neither LYB nor Schulman is under any obligation, and each expressly disclaim any obligation, to update, alter, or otherwise revise any forward-looking statements, whether written or oral, that may be made from time to time, whether as a result of new information, future events, or otherwise. Persons reading this communication are cautioned not to place undue reliance on these forward-looking statements which speak only as of the date hereof.

This presentation contains time sensitive information that is accurate only as of the date hereof. Information contained in this presentation is unaudited and is subject to change. We undertake no obligation to update the information presented herein except as required by law.

Reconciliations for our non-GAAP measures can be found in the Appendix to this presentation or on our website at [www.lyb.com/investorrelations](http://www.lyb.com/investorrelations).

# Additional Information

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## **Additional Information and Where to Find It**

This communication does not constitute an offer to sell or the solicitation of an offer to buy any securities or a solicitation of any vote or approval. This communication may be deemed to be solicitation material in respect of the proposed merger between LYB and Schulman. In connection with the proposed transaction, Schulman plans to file a proxy statement with the SEC. **SHAREHOLDERS OF SCHULMAN ARE URGED TO READ THE PROXY STATEMENT (INCLUDING ANY AMENDMENTS OR SUPPLEMENTS THERETO ANY DOCUMENTS INCORPORATED BY REFERENCE THEREIN) AND OTHER RELEVANT DOCUMENTS IN CONNECTION WITH THE TRANSACTION THAT SCHULMAN WILL FILE WITH THE SEC WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED TRANSACTION AND THE PARTIES TO THE TRANSACTION.** Shareholders and investors will be able to obtain free copies of the proxy statement and other relevant materials (when they become available) and other documents filed by Schulman at the SEC's web site at [www.sec.gov](http://www.sec.gov). Copies of the proxy statement (when they become available) and the filings that will be incorporated by reference therein may also be obtained, without charge, from Schulman's website, [aschulman.com](http://aschulman.com), under the heading "Investors" or by contacting Schulman's Investor Relations at 330-668-7346 or [Jennifer.beeman@aschulman.com](mailto:Jennifer.beeman@aschulman.com).

## **Participants in the Solicitation**

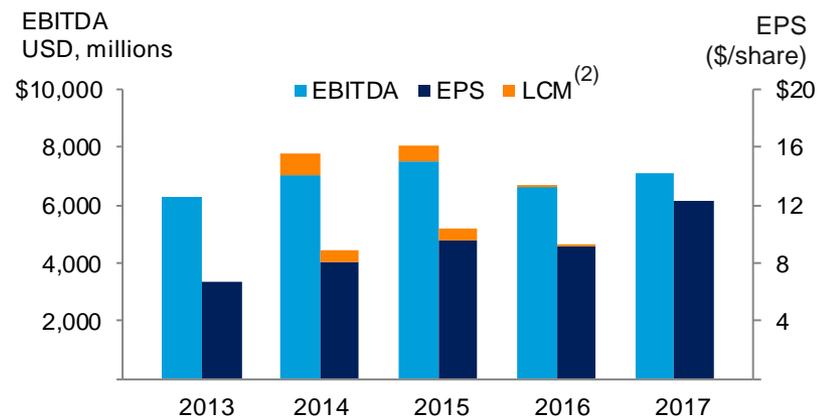
LYB, Schulman, their directors, executive officers and certain employees may be deemed, under SEC rules, to be participants in the solicitation of proxies in respect of the proposed merger. Information regarding LYB's directors and executive officers is available in its proxy statement filed with the SEC on April 6, 2017. Information regarding Schulman's directors and executive officers is available in its proxy statement filed with the SEC on October 27, 2017. Other information regarding the participants in the proxy solicitation and a description of their direct and indirect interests, by security holdings or otherwise, will be contained in the proxy statement and other relevant materials to be filed with the SEC (when they become available). These documents can be obtained free of charge from the sources indicated above.

# World-Class Scale With Leading Positions

## Who We Are

- \$44 billion market capitalization<sup>(1)</sup>
- Global independent chemical company, incorporated under Dutch law
- Executive offices in London, Rotterdam, and Houston
- Products sold in ~100 countries, with 55 manufacturing sites across 17 countries

## EBITDA / Diluted EPS Performance

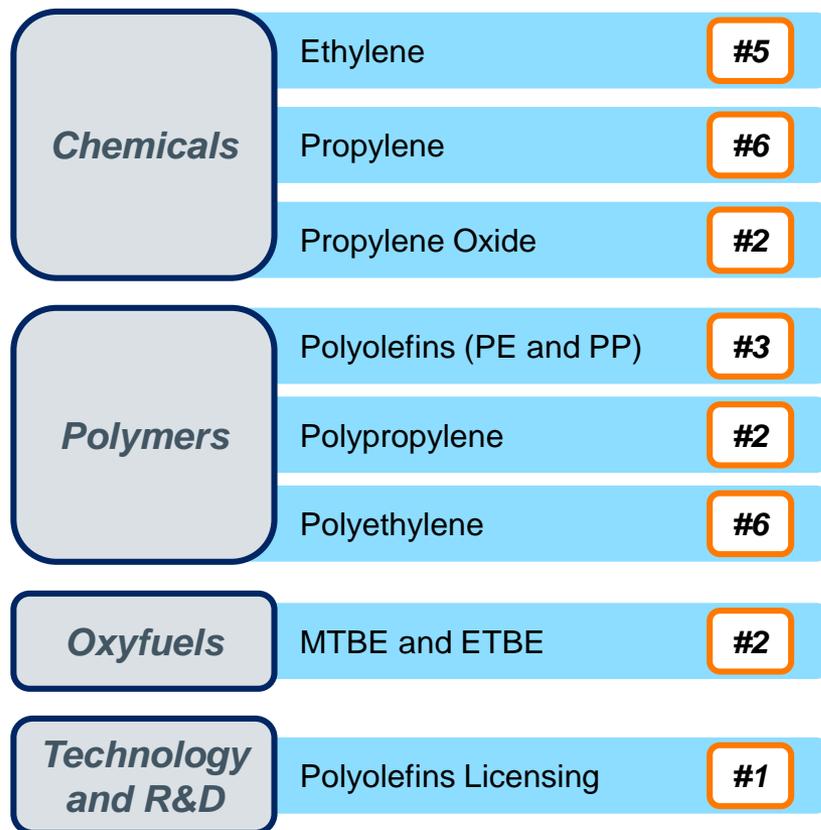


(1) As of December 31, 2017

(2) LCM stands for "lower of cost or market" Further detail regarding LCM adjustments can be found in the Appendix under "Information Related to Financial Measures".

(3) Source: IHS, LYB. Reflects market positions of chemical-grade and polymer-grade propylene (not refinery-grade).

## 2017 Global Capacity Rankings<sup>(3)</sup>



# LyondellBasell in 2017

## Delivering Results

**\$ 4.9 billion**

Income from Continuing Operations

**\$ 7.1 billion**

EBITDA (+8% vs 2016)

**8.4%**

Free Cash Flow Yield

**29%**

Return on Invested Capital

**34%**

Total Shareholder Return<sup>(1)</sup>

## Advancing Growth

Groundbreaking for *Hyperzone* HDPE

**1.1 billion lb**

**Premium Polyolefin Recycling JV with Suez**

Final Investment Decision for World's Largest

**PO/TBA Plant**

**New Compounding Plant**  
Dalian, China

## Capturing Opportunity

**Improving**

Refinery Reliability

**Innovation**

in Technology

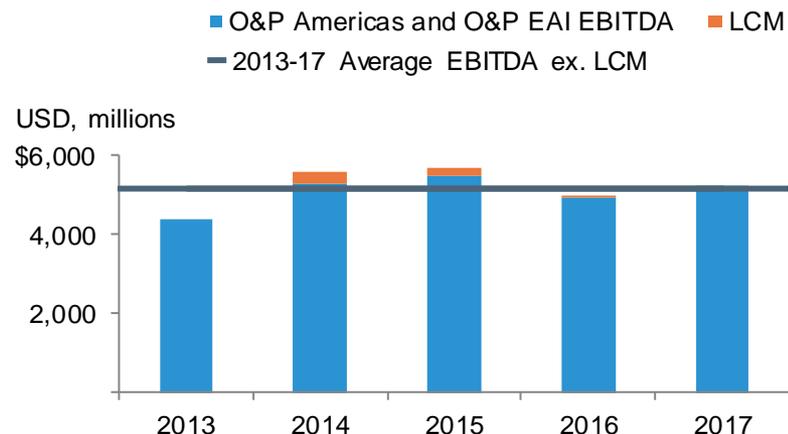
**Investment**

In Project Management & Execution

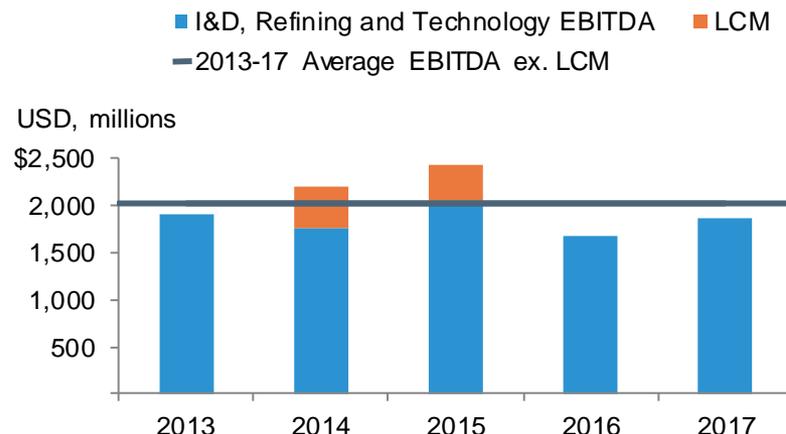
(1) Source: CapitalIQ

# LYB Portfolio Diversity Increases Earnings Resiliency

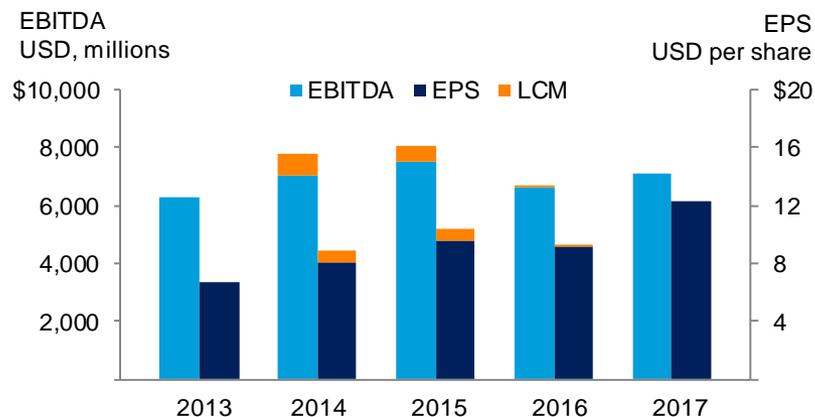
## O&P Americas and O&P EAI EBITDA



## I&D, Refining and Technology EBITDA



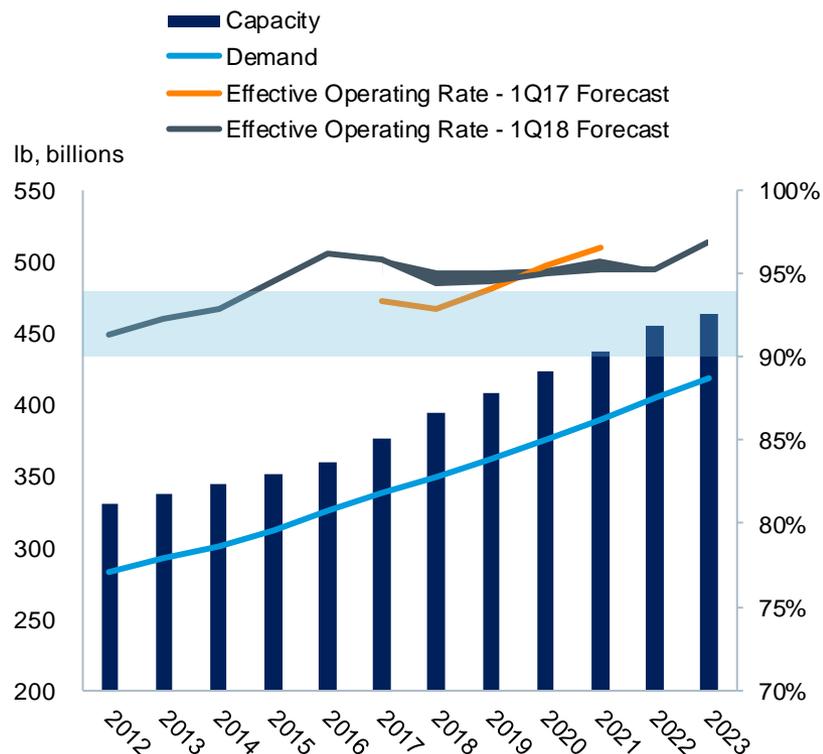
## LyondellBasell Profitability



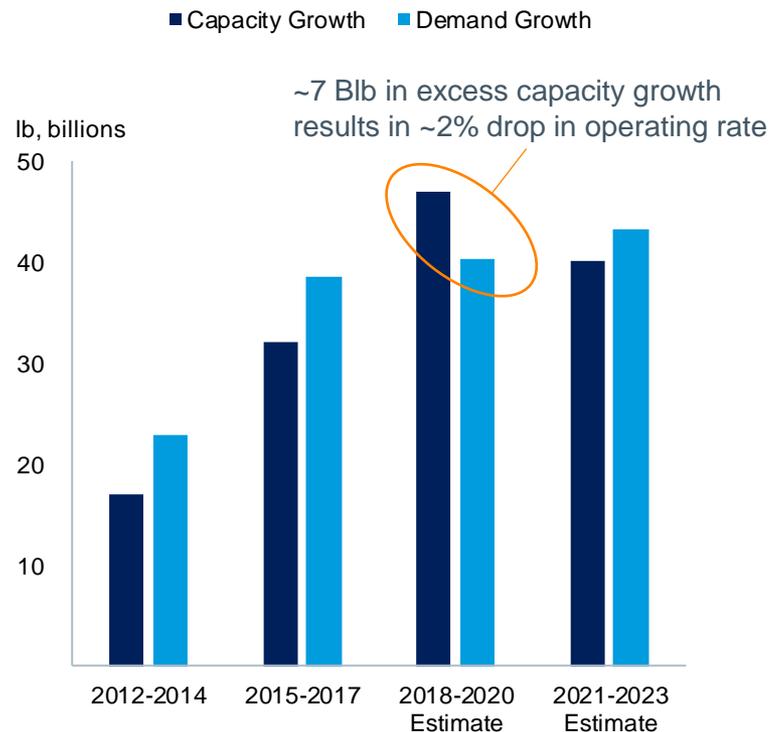
Broad global portfolio improves earnings stability

# Industry Capacity Additions Serving Strong Global Demand Growth

## Global Ethylene Supply & Demand<sup>(1)</sup>



## Global Ethylene Supply & Demand Growth<sup>(1)</sup>

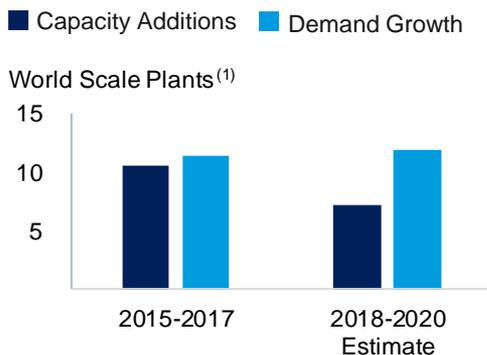


Project delays and constrained supply due to Chinese reforms and Hurricane Harvey support a short and shallow downturn thesis

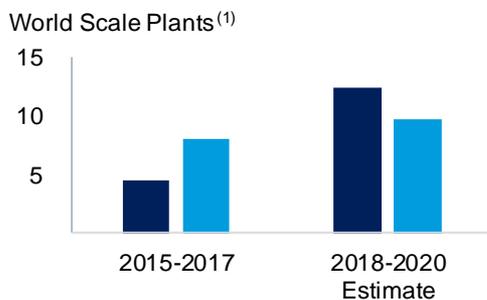
(1) Source: IHS, Wood Mackenzie, LYB estimates, effective operating rate assuming 6% industry downtime. Based on 2017 updated balances.

# LYB's *Hyperzone* PE Technology is Timed to Capture HDPE Demand

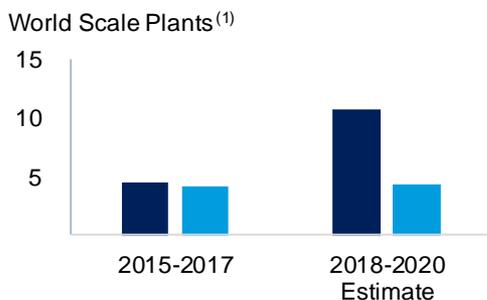
HDPE



LLDPE



LDPE



## La Porte *Hyperzone* HDPE

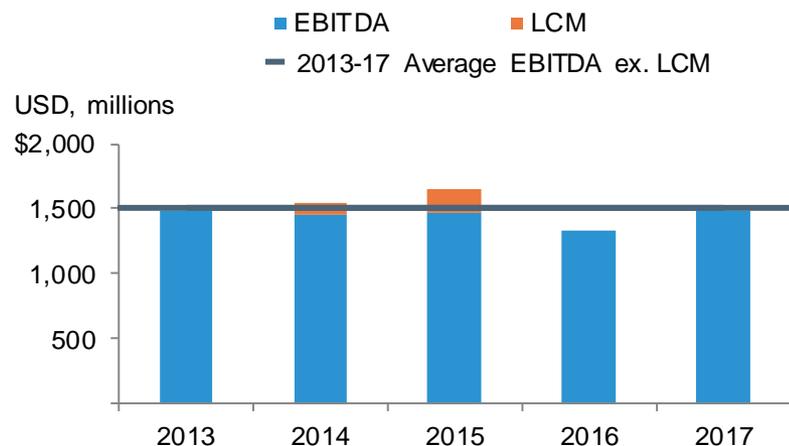
- 1.1 billion pounds per year
- Estimated investment: ~\$725 million
- Startup 2019
- Estimated EBITDA<sup>(2)</sup>: \$150 - \$200 MM/year

(1) Source: IHS polyethylene supply-demand data with an operating rate of 90%. World scale plant equivalents are 1.1 billion pounds.

(2) For the purpose of this slide, estimated EBITDA for *Hyperzone* Polyethylene is volume times average 2015-2017 margins.

# Intermediates and Derivatives: A Platform for Earnings Stability & Growth

## EBITDA (ex. LCM) History



## Key Messages

- Stable earnings and consistent cash generation
- Broad product portfolio with feedstock integration
- Leading market positions and differential technologies
- Strong market outlook and platform for growth

## 2017 Product Capacities and Rankings<sup>(1)</sup>

Product	Capacity	Ranking
Propylene Oxide	5.1 Blbs.	#2
Oxyfuels	75 MBPD	#2
Styrene	5.9 B Lbs.	#3



(1) Source: IHS. Capacity data represents 100% capacity share. Ranking represents LYB capacity and LYB proportionate share of joint ventures' capacity.

# Advancing Our Leading PO / TBA Technology and Market Position

- 1.0 billion pounds Propylene Oxide, 2.2 billion pounds TBA
- Est. cost: ~\$2.4 billion
- Groundbreaking – Mid 2018
- Startup 2021
- Estimated EBITDA<sup>(1)</sup>: \$350 - \$450 MM/year

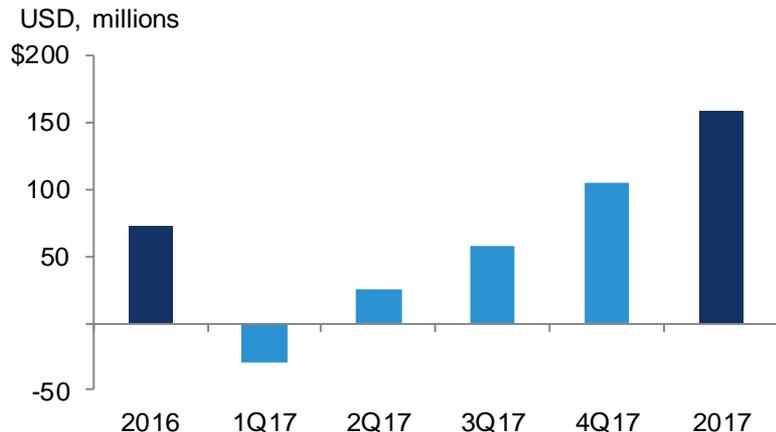


Value-driven growth supported by advantaged feedstocks and technology

(1) For the purpose of this slide, estimated EBITDA for Propylene Oxide / TBA is volume times 2015-2017 average margins.

# Improved Refining Reliability Producing Results

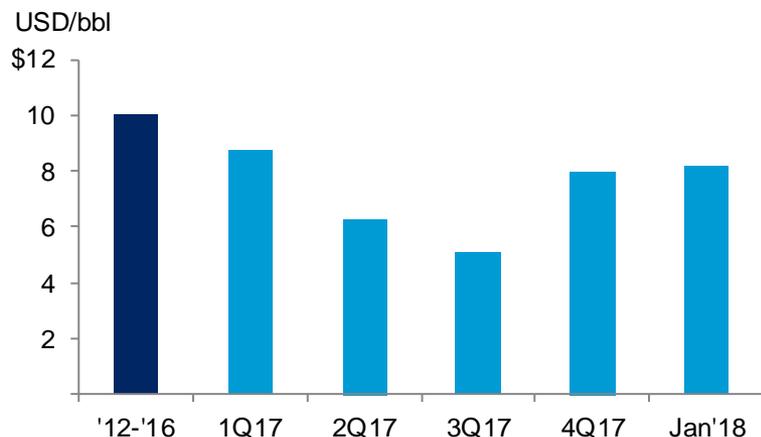
## EBITDA



## Refinery Outlook

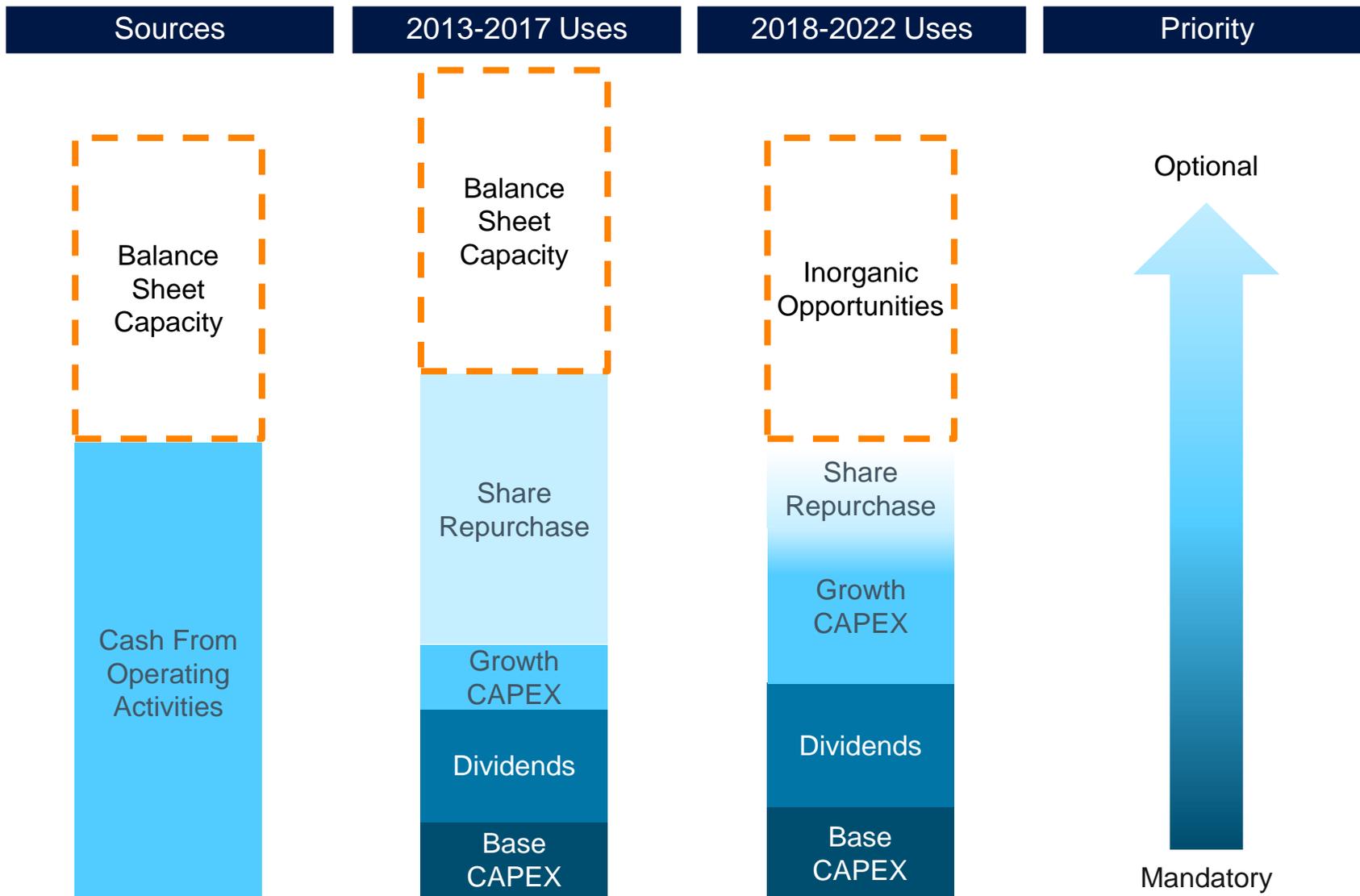
- Improved reliability increased operating rates and throughput during 2017
- Increased profitability driven by strong diesel demand and improved heavy/light crude differentials
- Full capability to meet Tier 3 gasoline sulfur specifications
- Poised to benefit from the January 2020 IMO marine fuel oil sulfur regulations

## Light-Heavy Crude Differential<sup>(1)</sup>



(1) Light Louisiana Sweet (LLS) is the referenced light crude and Maya is the referenced heavy crude. Data represents annual, quarterly and January 29, 2018 month-to-date average per Platts.

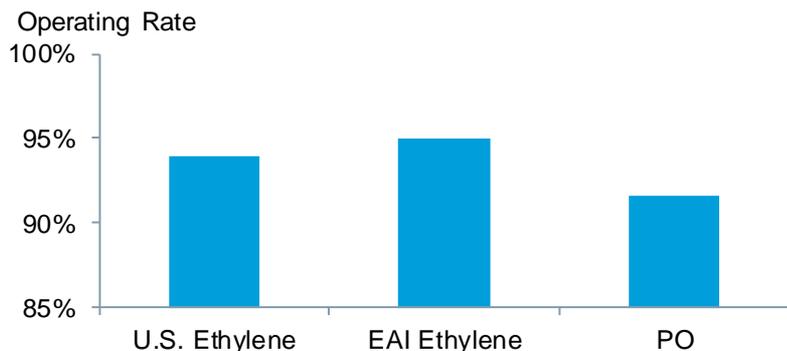
# Profitability Supports Reinvestment for Value-Driven Growth



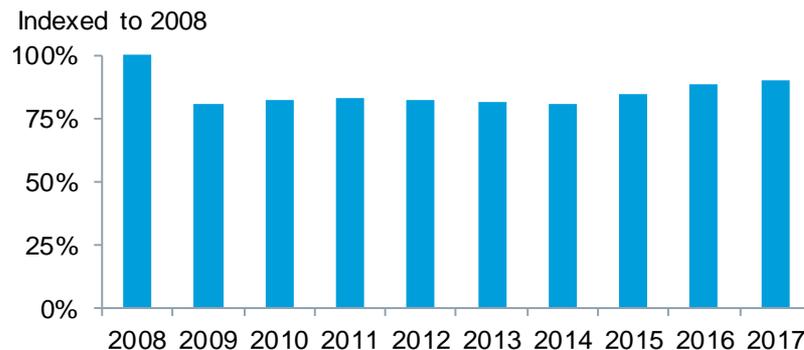
Note: Graphic for illustrative purposes only.

# Investment in Base CAPEX and Disciplined Cost Management Supports Efficient Operations

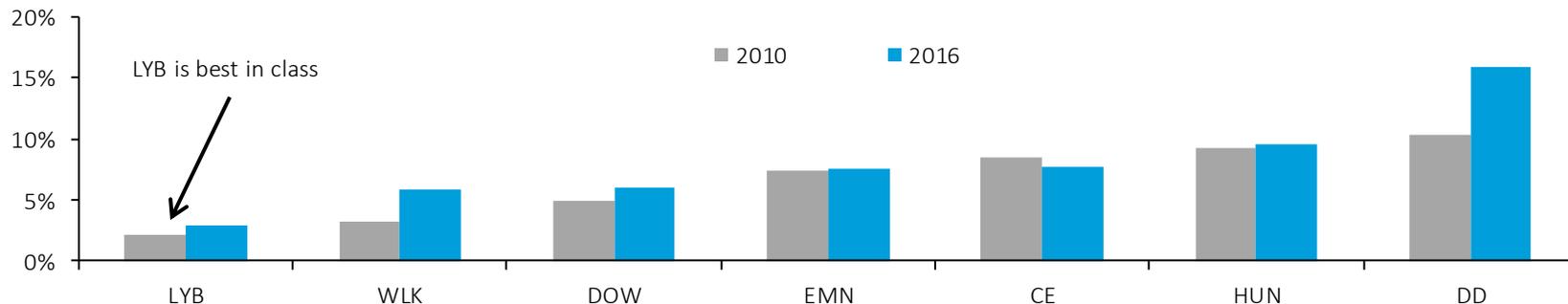
## 2017 LYB Operating Reliability<sup>(1)</sup>



## Fixed Costs<sup>(2)</sup>



## SG&A as Percent of Revenue – LYB vs. Peer Companies



LYB continues to have intense focus on reliability and cost discipline, resulting in industry leading performance

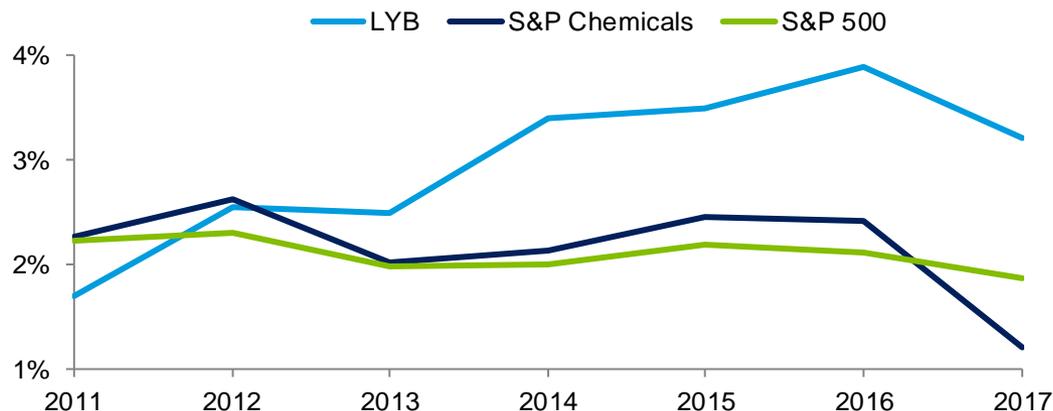
Source: Capital IQ and LYB.

(1) Operating rate based upon nameplate capacity and excludes the impacts of Hurricane Harvey and planned maintenance.

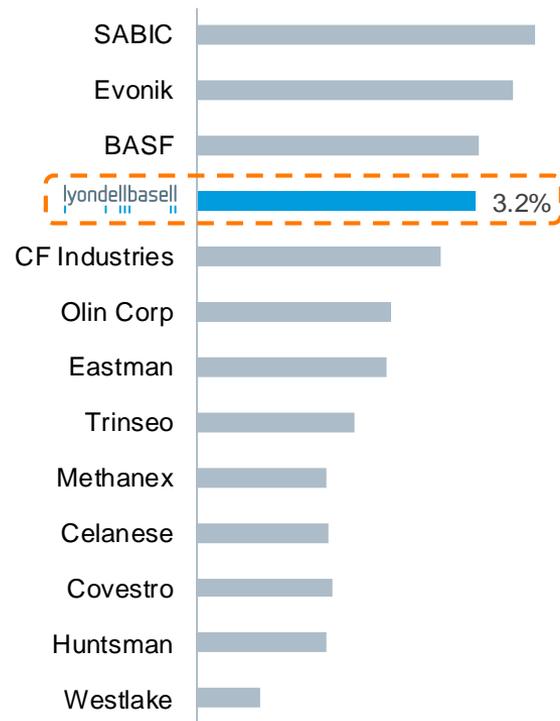
(2) Fixed costs are adjusted for annual bonuses and selected items, and to 2017 FX.

# We Are Committed to a Strong, Growing and Sustainable Dividend

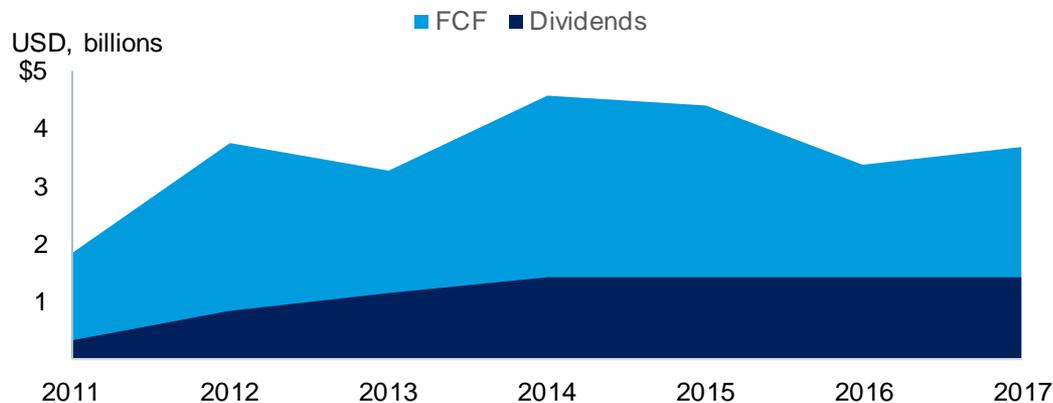
## Historical Dividend Yield<sup>(1)</sup>



## 2017 Dividend Yield<sup>(3)</sup>



## Dividends and Incremental Free Cash Flow<sup>(1,2)</sup>



(1) Excludes special dividends in 2011 and 2012 of \$4.50 per share and \$2.75 per share, respectively.  
 (2) FCF based on cash flow from operating activities less total capital expenditures.  
 (3) Source: CapIQ as of December 31, 2017.

## Increasing Investment in LyondellBasell's Organic Growth

		Scope (MM lbs.)	Projected Start-Up	CAPEX (\$MM)	Estimated EBITDA <sup>(1)</sup> (\$MM/year) '15-'17 Avg. Margins
Projects Underway	Hyperzone HDPE	1,100	2019	~\$725	\$150 - 200
	Propylene Oxide/TBA	1,000/2,200	2021	~\$2,400	\$350 - 450
	Channelview Ethylene	550	2020, 2024	~\$350	\$100 - 150
Potential Projects	North America PP	1,100	2022 - 2023	~\$650 - 750	\$150 - 250
	North America PDH	1,600	2022 - 2023	~\$1,400 - 1,600	\$250 - 400
	Europe PP	1,100	2023 - 2024	~\$650 - 750	\$150 - 200
	North America PE	1,100	2024 - 2025	~\$700 - 800	\$150 - 250

Regular cadence of investment to drive earnings growth

(1) For the purpose of this slide, estimated EBITDA is volume times 2015-2017 average margins.

# LyondellBasell Currently Participates in One of Several Advanced Polymers Markets

POLYMERS

PE PP EP

PE Polyethylene  
PP Polypropylene  
EP Engineered Polymers

VALUE  
ADDITION

COMPOUNDS

SECTORS



Packaging &  
Consumer



Electronics &  
Appliances



Automotive



Building &  
Construction



Agriculture

LyondellBasell's PP Compounding business is a global leader in automotive

# Combination Enables Vertically Integrated Solutions and Expands Offering

POLYMERS

PE PP EP

PE Polyethylene  
PP Polypropylene  
EP Engineered Polymers

VALUE  
ADDITION

COLORS

COMPOUNDS

ENGINEERED  
COMPOSITES

MASTERBATCHES

POWDERS

SECTORS



Packaging &  
Consumer



Electronics &  
Appliances



Automotive



Building &  
Construction



Agriculture

Comprehensive customer solutions for broad and attractive markets

# Combination Creates Value, Strengthens Earnings Growth and Stability

	LyondellBasell <sup>(1)</sup>	A. Schulman <sup>(2)</sup>	Combined Businesses <sup>(3)</sup>
LTM Revenue	\$2.1 billion	\$2.5 billion	\$4.6 billion
LTM Adjusted EBITDA	\$241 million	\$205 million	\$446 million
LTM Adjusted EBITDA Margin <sup>(4)</sup>	11.3%	8.1%	9.5%
LTM Sales Volume	2.5 billion pounds	2.4 billion pounds	4.9 billion pounds
Global Manufacturing Sites	18	54	72
Number of Employees	1,500	5,100	6,600
Revenue by End Markets			
Revenue by Geographies			

(1) Represents LyondellBasell's Polypropylene Compounding (PPC) business for the twelve-month period ended December 31, 2017. See the Information Related to Financial Measures slide in the Appendix for information about LTM Adjusted EBITDA and LTM Adjusted EBITDA Margin.

(2) A. Schulman information obtained from publicly available quarterly release data and management estimate. LTM and Number of Employees refers to the twelve-month period ended November 30, 2017. Global Manufacturing Sites and Revenue by Geography based on the twelve month-period ended August 31, 2017. Revenue by End Markets based on the twelve month-period ended August 31, 2015.

(3) Combined business calculated as the sum of LyondellBasell PPC business and A. Schulman.

(4) LTM Adjusted EBITDA Margin calculated as LTM Adjusted EBITDA divided by LTM Revenue.

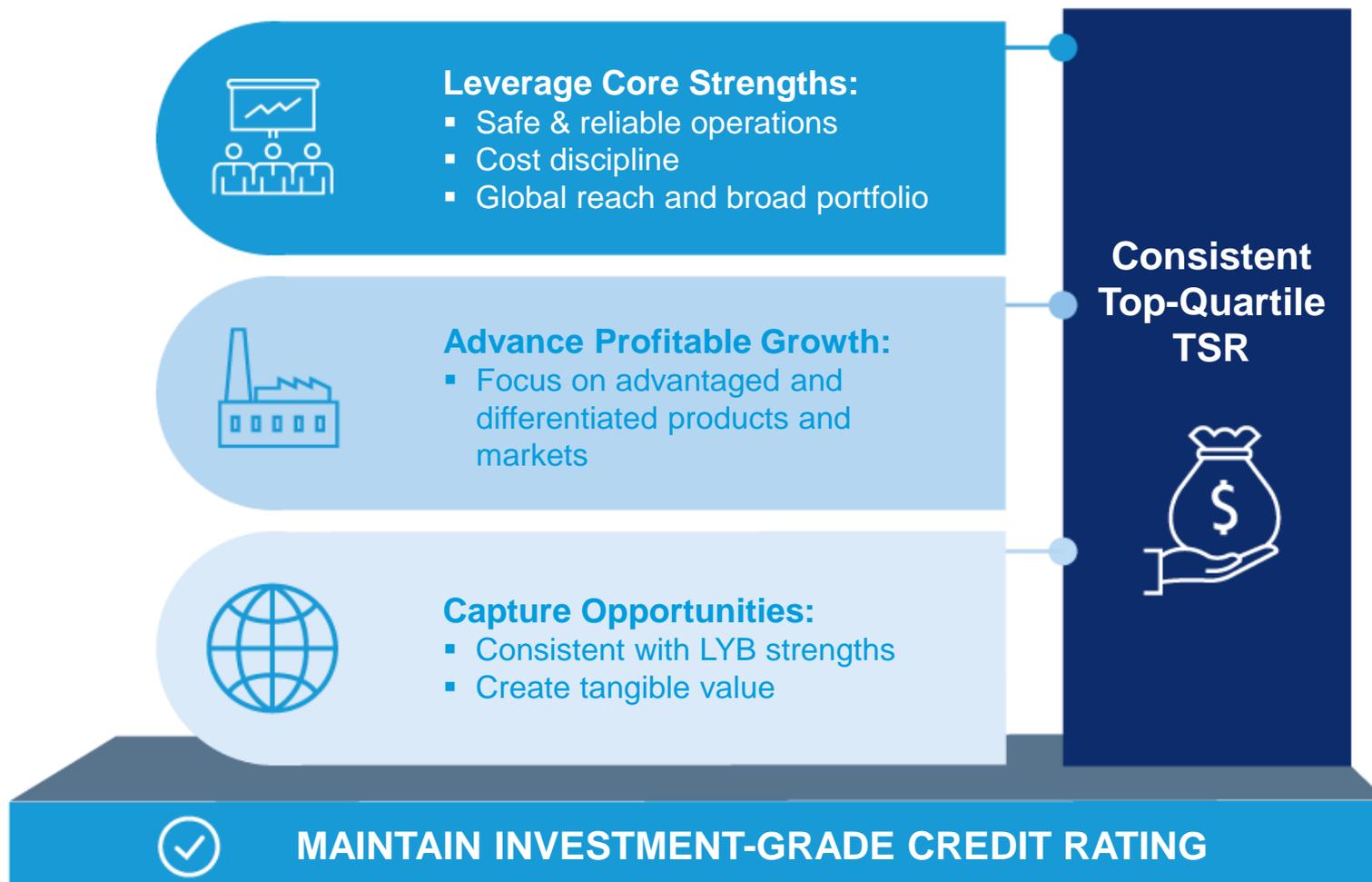
## Significant Cost Synergies Expected Within Two Years



A. Schulman Average Adjusted EBITDA<sup>(1)</sup> from 2014 – 2017: \$190 million

(1) Adjusted EBITDA as presented by A. Schulman obtained from publicly available quarterly release data, calculated as the average for the twelve-month periods ended August 31, 2014, 2015, 2016 and 2017.

# Growth Guided by Strategic Goals



# Appendix

## Information Related to Financial Measures

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This presentation makes reference to certain “non-GAAP” financial measures as defined in Regulation G of the U.S. Securities Exchange Act of 1934, as amended. The non-GAAP measures we have presented include diluted earnings per share from continuing operations excluding LCM, EBITDA, EBITDA excluding LCM, LTM Adjusted EBITDA and LTM Adjusted EBITDA Margin. LCM stands for “lower of cost or market,” which is an accounting rule consistent with GAAP related to the valuation of inventory. Our inventories are stated at the lower of cost or market. Cost is determined using the last-in, first-out (“LIFO”) inventory valuation methodology, which means that the most recently incurred costs are charged to cost of sales and inventories are valued at the earliest acquisition costs. Market is determined based on an assessment of the current estimated replacement cost and selling price of the inventory. In periods where the market price of our inventory declines substantially, cost values of inventory may be higher than the market value, which results in us writing down the value of inventory to market value in accordance with the LCM rule, consistent with GAAP. This adjustment is related to our use of LIFO accounting and the decline in pricing for many of our raw material and finished goods inventories. We report our financial results in accordance with U.S. generally accepted accounting principles, but believe that certain non-GAAP financial measures, such as EBITDA and earnings and EBITDA excluding LCM, provide useful supplemental information to investors regarding the underlying business trends and performance of the company's ongoing operations and are useful for period-over-period comparisons of such operations. Non-GAAP financial measures should be considered as a supplement to, and not as a substitute for, or superior to, the financial measures prepared in accordance with GAAP.

EBITDA, as presented herein, may not be comparable to a similarly titled measure reported by other companies due to differences in the way the measure is calculated. We calculate EBITDA as income from continuing operations plus interest expense (net), provision for (benefit from) income taxes, and depreciation & amortization. EBITDA should not be considered an alternative to profit or operating profit for any period as an indicator of our performance, or as an alternative to operating cash flows as a measure of our liquidity. We have also presented financial information herein exclusive of adjustments for LCM.

Additionally, LTM Adjusted EBITDA and LTM Adjusted EBITDA Margin, as presented herein, may not be comparable to similarly titled measures of A. Schulman or as reported by other companies due to differences in the way the measure is calculated. LTM Adjusted EBITDA, as presented for LyondellBasell Polypropylene Compounding (PPC) business, is calculated based upon a standard inventory costing methodology. For GAAP purposes, we present EBITDA for our Olefins and Polyolefins Europe, Asia, and International segment which includes PPC based upon last-in, first-out (LIFO) inventory costing methodology. To date, we have not allocated a ‘LIFO effect’ to PPC as it is not available. As such, we are unable to provide a quantitative reconciliation of Adjusted EBITDA to the most directly comparable GAAP measure. We calculate PPC Adjusted EBITDA in this presentation as income from continuing operations, with cost of goods sold valued at standard cost, plus interest expense (net), provision for (benefit from) income taxes, and depreciation & amortization. Adjusted EBITDA should not be considered an alternative to profit or operating profit for any period as an indicator of our performance, or as an alternative to operating cash flows as a measure of our liquidity. LTM Adjusted EBITDA Margin is calculated as LTM Adjusted EBITDA divided by LTM Revenue.

While we also believe that free cash flow (FCF) and free cash flow yield (FCF Yield) are measures commonly used by investors, free cash flow and free cash flow yield, as presented herein, may not be comparable to similarly titled measures reported by other companies due to differences in the way the measures are calculated. For purposes of this presentation, free cash flow means net cash provided by operating activities minus capital expenditures and free cash flow yield means the ratio of free cash flow to market capitalization.

Reconciliations for our non-GAAP measures can be found on our website at [www.lyb.com/investorrelations](http://www.lyb.com/investorrelations).

# EBITDA Excluding LCM Adjustments to EBITDA 2013-2017

## Reconciliation of EBITDA Excluding LCM Adjustments to EBITDA

In Millions of Dollars	For the Years Ended December 31,					Average
	2013	2014	2015	2016	2017	2013 - 2017
<b>EBITDA Excluding LCM Adjustments:</b>						
Olefins & Polyolefins - Americas	\$ 3,573	\$ 4,190	\$ 3,821	\$ 2,906	\$ 2,982	\$ 3,494
Olefins & Polyolefins - EAI	839	1,410	1,855	2,067	2,282	1,691
Intermediates & Derivatives	1,492	1,552	1,656	1,333	1,490	1,505
Refining	182	409	519	72	157	268
Technology	232	232	243	262	223	238
Other	(7)	17	(13)	(9)	-	(2)
Total	6,311	7,810	8,081	6,631	7,134	7,194
<b>Less:</b>						
<b>LCM Adjustments:</b>						
Olefins & Polyolefins - Americas	-	279	160	29	-	\$ 94
Olefins & Polyolefins - EAI	-	44	30	-	-	15
Intermediates & Derivatives	-	93	181	-	-	55
Refining	-	344	177	-	-	104
Technology	-	-	-	-	-	-
Other	-	-	-	-	-	-
Total	-	760	548	29	-	268
<b>EBITDA:</b>						
Olefins & Polyolefins - Americas	3,573	3,911	3,661	2,877	2,982	3,400
Olefins & Polyolefins - EAI	839	1,366	1,825	2,067	2,282	1,676
Intermediates & Derivatives	1,492	1,459	1,475	1,333	1,490	1,450
Refining	182	65	342	72	157	164
Technology	232	232	243	262	223	238
Other	(7)	17	(13)	(9)	-	(2)
Total	\$ 6,311	\$ 7,050	\$ 7,533	\$ 6,602	\$ 7,134	\$ 6,926

# EBITDA Excluding LCM Adjustments to EBITDA – 2017 by Quarter

## Reconciliation of EBITDA Excluding LCM Adjustments to EBITDA

In Millions of Dollars	Three Months Ended			
	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017
<b>EBITDA Excluding LCM Adjustments:</b>				
Olefins & Polyolefins - Americas	\$ 723	\$ 859	\$ 616	\$ 784
Olefins & Polyolefins - EAI	529	699	698	356
Intermediates & Derivatives	339	339	402	410
Refining	(30)	25	58	104
Technology	60	48	47	68
Other	(4)	-	-	4
Total	<u>1,617</u>	<u>1,970</u>	<u>1,821</u>	<u>1,726</u>
<b>Less:</b>				
<b>LCM Adjustments:</b>				
Olefins & Polyolefins - Americas	-	-	-	-
Olefins & Polyolefins - EAI	-	-	-	-
Intermediates & Derivatives	-	-	-	-
Refining	-	-	-	-
Technology	-	-	-	-
Other	-	-	-	-
Total	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>EBITDA:</b>				
Olefins & Polyolefins - Americas	723	859	616	784
Olefins & Polyolefins - EAI	529	699	698	356
Intermediates & Derivatives	339	339	402	410
Refining	(30)	25	58	104
Technology	60	48	47	68
Other	(4)	-	-	4
Total	<u>\$ 1,617</u>	<u>\$ 1,970</u>	<u>\$ 1,821</u>	<u>\$ 1,726</u>

# Net Income to EBITDA 2013-2017

## Reconciliation of Net Income To EBITDA

For the Years Ended December 31,

**In Millions of Dollars**

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Net Income	\$ 3,853	\$ 4,168	\$ 4,474	\$ 3,837	\$ 4,877
Loss from Discontinued Operations	7	4	5	10	18
LCM Adjustments, After Tax	-	483	351	18	-
Income from Continuing Operations Excluding LCM Adjustments	3,860	4,655	4,830	3,865	4,895
Less:					
LCM Adjustments, After Tax	-	(483)	(351)	(18)	-
Income from Continuing Operations	3,860	4,172	4,479	3,847	4,895
Provision for Income Taxes	1,136	1,540	1,730	1,386	598
Depreciation and Amortization	1,021	1,019	1,047	1,064	1,174
Interest expense, net	294	319	277	305	467
LCM Adjustments, Pre Tax	-	760	548	29	-
EBITDA Excluding LCM Adjustments	6,311	7,810	8,081	6,631	7,134
LCM Adjustments, Pre Tax	-	(760)	(548)	(29)	-
EBITDA	\$ 6,311	\$ 7,050	\$ 7,533	\$ 6,602	\$ 7,134

## Net Income to EBITDA – 2017 by Quarter

### Reconciliation of Net Income To EBITDA

<u>In Millions of Dollars</u>	<b>Three Months Ended</b>			
	<b>March 31, 2017</b>	<b>June 30, 2017</b>	<b>September 30, 2017</b>	<b>December 31, 2017</b>
Net Income	\$ 797	\$ 1,130	\$ 1,056	\$ 1,894
Loss from Discontinued Operations	8	4	2	4
LCM Adjustments, After Tax	-	-	-	-
Income from Continuing Operations Excluding LCM Adjustments	805	1,134	1,058	1,898
Less:				
LCM Adjustments, After Tax	-	-	-	-
Income from Continuing Operations	805	1,134	1,058	1,898
Provision for (benefit from) Income Taxes	315	459	380	(556)
Depreciation and Amortization	296	286	294	298
Interest expense, net	201	91	89	86
LCM Adjustments, Pre Tax	-	-	-	-
EBITDA Excluding LCM Adjustments	1,617	1,970	1,821	1,726
LCM Adjustments, Pre Tax	-	-	-	-
EBITDA	\$ 1,617	\$ 1,970	\$ 1,821	\$ 1,726

# Diluted EPS from Continuing Operations Excluding LCM Adjustments to Diluted EPS from Continuing Operations

## Reconciliation of Diluted EPS from Continuing Operations Excluding LCM Adjustments to Diluted EPS from Continuing Operations

	For the Years Ended December 31,				
	2013	2014	2015	2016	2017
Diluted Earnings Per Share from Continuing Operations Excluding LCM Adjustments	\$ 6.76	\$ 8.92	\$ 10.35	\$ 9.20	\$ 12.28
Less:					
LCM Adjustments	-	0.92	0.75	0.05	-
Diluted Earnings Per Share from Continuing Operations	\$ 6.76	\$ 8.00	\$ 9.60	\$ 9.15	\$ 12.28

# Free Cash Flow 2011 - 2017

## Reconciliation of Free Cash Flow to Net Cash Provided by Operating Activities

<u>In Millions of Dollars</u>	<u>For the Years Ended December 31,</u>						
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Free Cash Flow	\$ 1,810	\$ 3,727	\$ 3,274	\$ 4,549	\$ 4,402	\$ 3,363	\$ 3,659
Add:							
Capital Expenditures	<u>1,050</u>	<u>1,060</u>	<u>1,561</u>	<u>1,499</u>	<u>1,440</u>	<u>2,243</u>	<u>1,547</u>
Net Cash Provided by Operating Activities	<u>\$ 2,860</u>	<u>\$ 4,787</u>	<u>\$ 4,835</u>	<u>\$ 6,048</u>	<u>\$ 5,842</u>	<u>\$ 5,606</u>	<u>\$ 5,206</u>

# Free Cash Flow Yield

## Calculation of Free Cash Flow Yield

	<b>Year Ended December 31, 2017</b>
<b><u>In Millions of Dollars (except share data)</u></b>	
Net Cash Provided by Operating Activities	\$ 5,206
Less:	
Capital Expenditures	<u>1,547</u>
Free Cash Flow	\$ 3,659
Divided by:	
Market Capital:	
Common stock outstanding	394,512,054
Closing Share Price, end of period	<u>\$ 110.32</u>
Market Capital	\$ 43,523
Free Cash Flow Yield	<u>8.4%</u>

# Return on Invested Capital

## Calculation of LYB Return on Invested Capital (ROIC)

<b>In Million of Dollars</b>	<b>Years Ended December 31,</b>	
	<b>2016</b>	<b>2017</b>
Income from Continuing Operations		\$ 4,895
Less:		
Tax Benefit due to change in tax law		
from U.S. Tax Cuts and Jobs Act		819
Add:		
Interest Expense, Net		467
Effective Tax Rate (excluding Tax Benefit due to change in tax law)		25.8%
Interest Expense, Net, After Tax		347
Adjusted Income from Continuing Operations		4,423
Divided by:		
Average Invested Capital:		
Property, Plant & Equipment, Net	10,137	10,997
Current Assets	9,599	11,738
Less:		
Current Liabilities	4,540	4,777
Cash and Cash Equivalents	875	1,523
	\$ 14,321	16,435
Average Invested Capital		\$ 15,378
Return on Invested Capital		29%