

Deutsche Bank Global Industrials & Materials Summit

Jim Guilfoyle

SVP, Global Intermediates & Derivatives and Global Supply Chain

June 7, 2018

Cautionary Statement

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 on the Investor Relations page and on the Securities and Exchange Commission's website at 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.lyondellbasell.com/investorrelations.

Additional Information

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 Securities and Exchange Commission ("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. 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, under the heading "Investors" or by contacting Schulman's Investor Relations at 330-668-7346 or 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 11, 2018. 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 persons who may be deemed participants in the proxy solicitation, including their respective interests by security holdings or otherwise, was set forth in the preliminary proxy statement Schulman filed with the SEC on March 27, 2018 and may be updated or supplemented in the definitive proxy statement that Schulman intends to file with the SEC. These documents can be obtained free of charge from the sources indicated above.

LyondellBasell

A Strong, Global Company Delivering Outstanding Performance

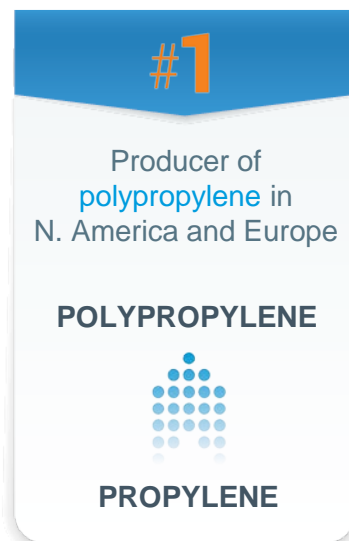
GLOBAL

\$47 billion enterprise value⁽¹⁾

13,400 employees globally, mostly in the U.S. and Europe with others in strategic regions

Manufacturing in **17** countries and our products are sold in approximately **100** countries

LEADING⁽²⁾



GROWING

OLEFINS & POLYOLEFINS

Expanded polypropylene compounds capacity in **China, India** and **Europe**

Building the first world-scale **Hyperzone HDPE plant**

Announced **acquisition** of A. Schulman

INTERMEDIATES & DERIVATIVES

Site preparation for the world's largest **PO/TBA plant** on track

(1) Enterprise value means market capitalization plus preferred equity (non-controlling interests), total debt and minority interest less cash and cash equivalents and short term investments as of March 31, 2018.

(2) Source IHS, LYB. 2017 ranking as of Dec. 31, 2017

LyondellBasell in 2017

Delivering Results

\$ 4.9 billion
Net Income

\$ 7.1 billion
EBITDA (+8% vs 2016)

8.4%
Free Cash Flow Yield

29%
Return on Invested Capital

34%
Total Shareholder Return⁽¹⁾

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

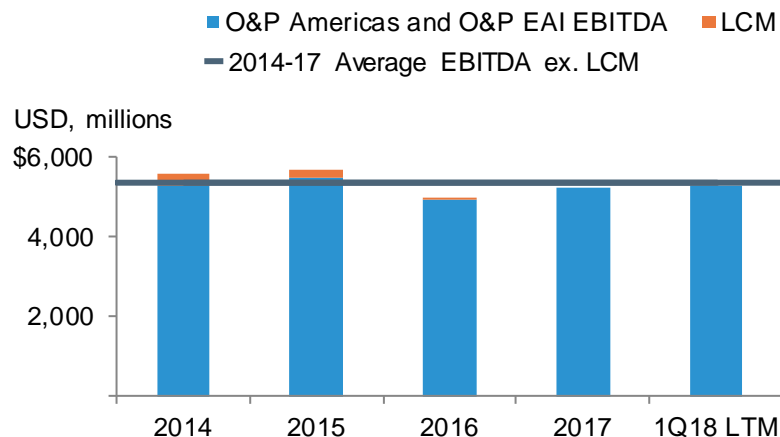
Innovation
in Technology

Investment
In Project Management
& Execution

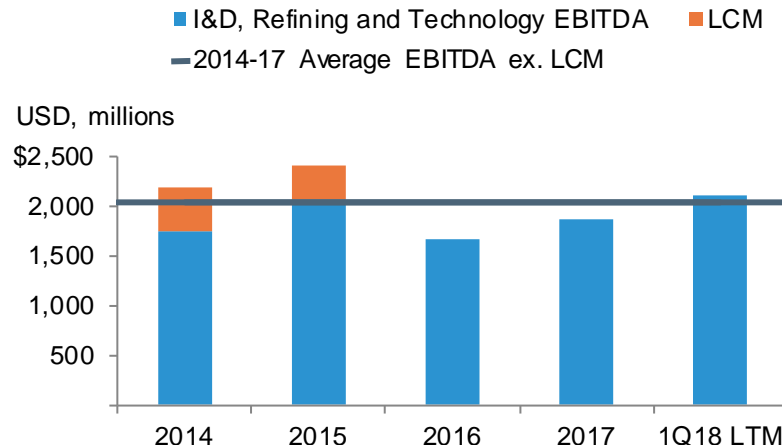
(1) Source: CapitalIQ

LYB Portfolio Diversity Increases Earnings Resiliency

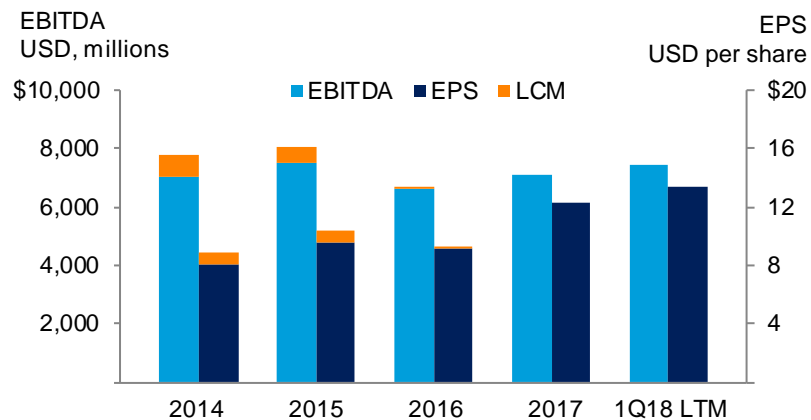
O&P Americas and O&P EAI EBITDA



I&D, Refining and Technology EBITDA



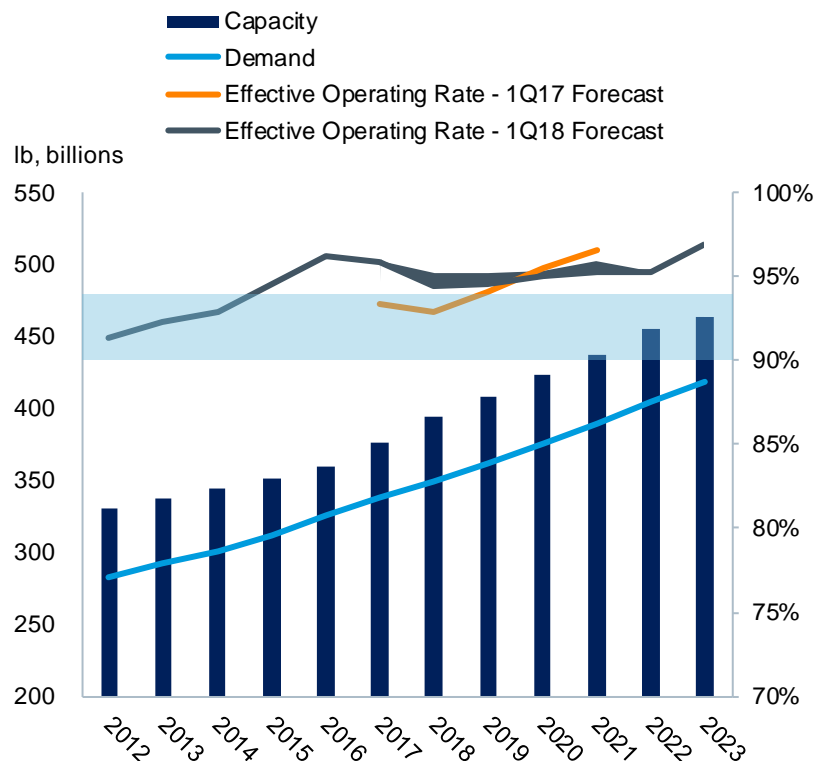
LyondellBasell Profitability



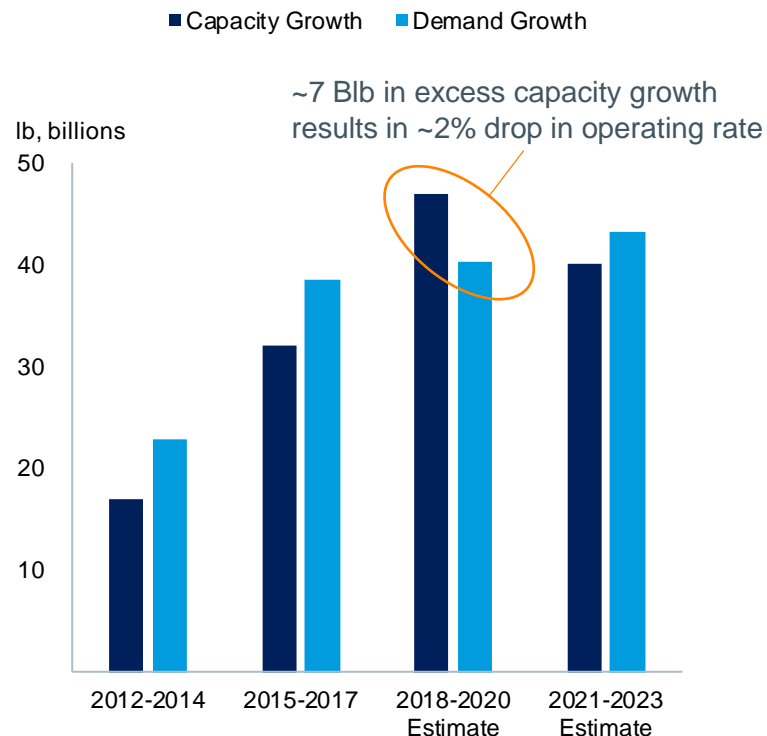
Broad global portfolio improves earnings stability

Industry Capacity Additions Serving Strong Global Demand Growth

Global Ethylene Supply & Demand⁽¹⁾



Global Ethylene Supply & Demand Growth⁽¹⁾



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

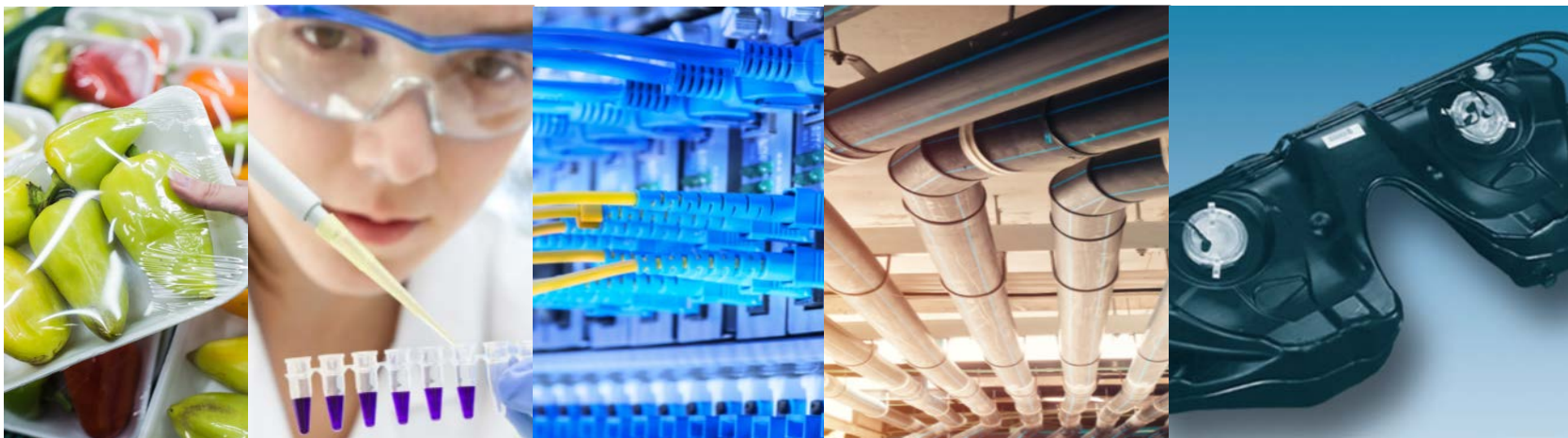
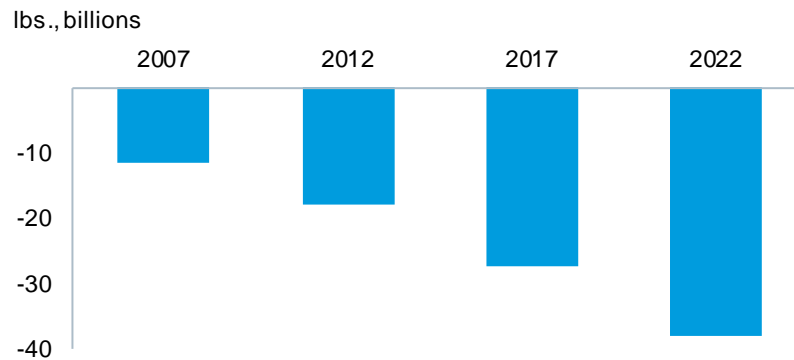
(1) Source: IHS, Wood Mackenzie, LYB estimates, effective operating rate assuming 6% industry downtime. Based on 2017 updated balances.

LYB Polyethylene Products Aligned with Global Market Growth of 4%⁽¹⁾

Strong LYB Presence

- Film & Sheet
- Pressure Pipe
- Automotive Fuel Tanks
- Wire & Cable

China PE Trade Deficit: 38 Blbs by 2022⁽²⁾



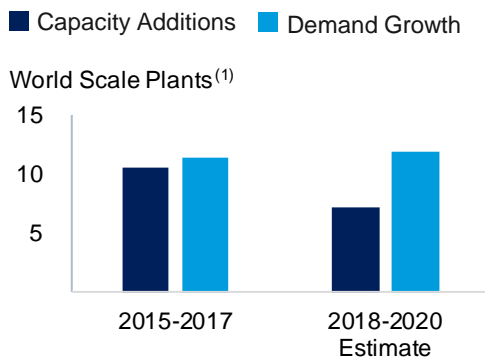
PE Demand Growth⁽¹⁾: U.S./Canada 3.7%, Western Europe 0.8%, Northeast Asia 6.3%

(1) Source: LYB and IHS forecasts. Represents 1Q18 year over year demand growth.

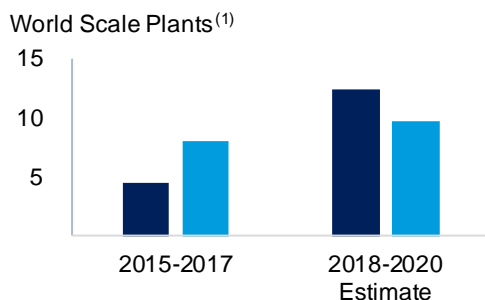
(2) Source: IHS. China PE trade deficit is calculated as production less domestic demand.

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

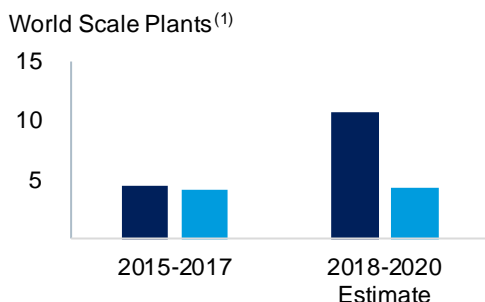
HDPE



LLDPE



LDPE



La Porte Hyperzone HDPE

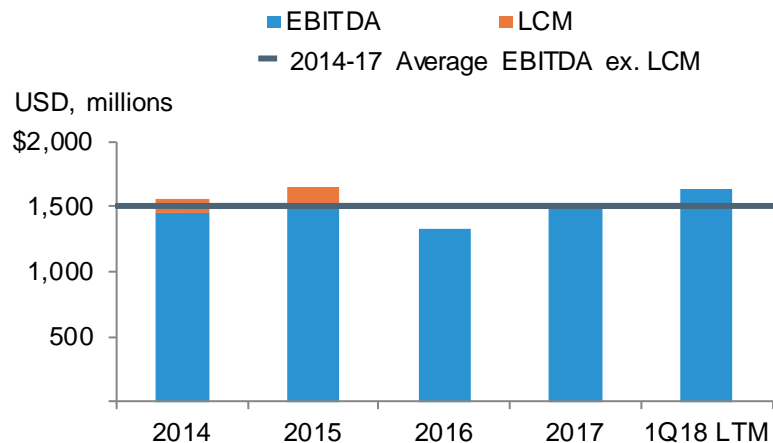
- 1.1 billion pounds per year
- Estimated investment: ~\$725 million
- Startup 2019
- Estimated EBITDA⁽²⁾: \$150 - \$200 MM/year

(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⁽¹⁾

Product	Capacity	Global Ranking
Propylene Oxide	5.1 Blbs.	#2
Oxyfuels	75 MBPD	#2
Styrene	5.9 BLbs.	#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⁽¹⁾: \$350 - \$450 MM/year

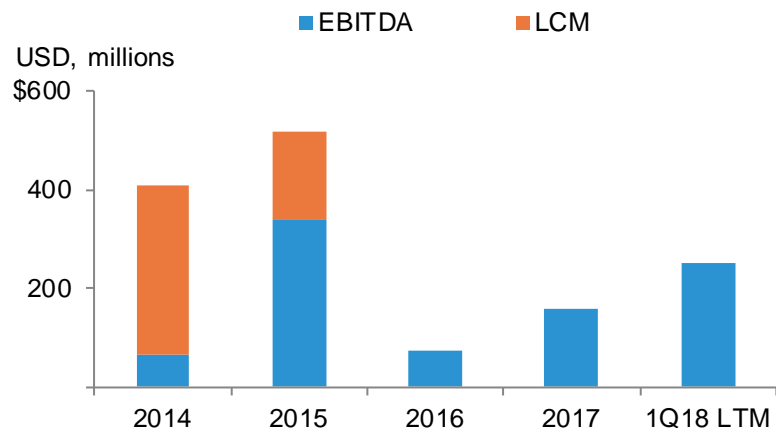


Value-driven growth supported by advantaged feedstocks and technology

(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

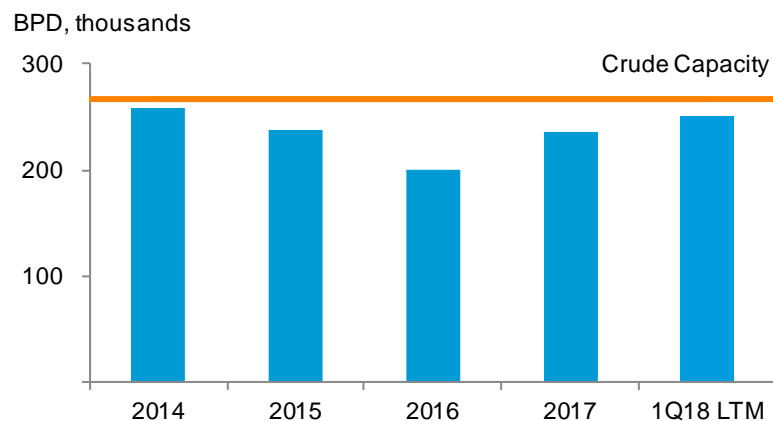
EBITDA



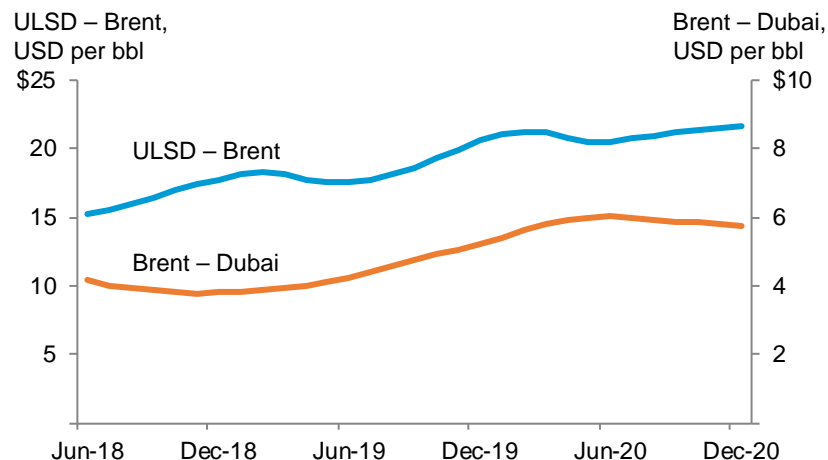
Refinery Outlook

- Improved reliability increased operating rates and throughput since 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

Refining Throughput



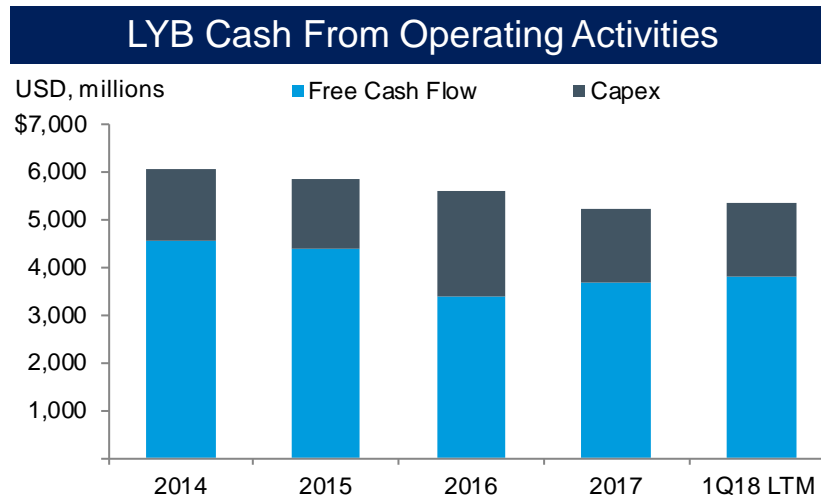
Indicative Forward Curves⁽¹⁾



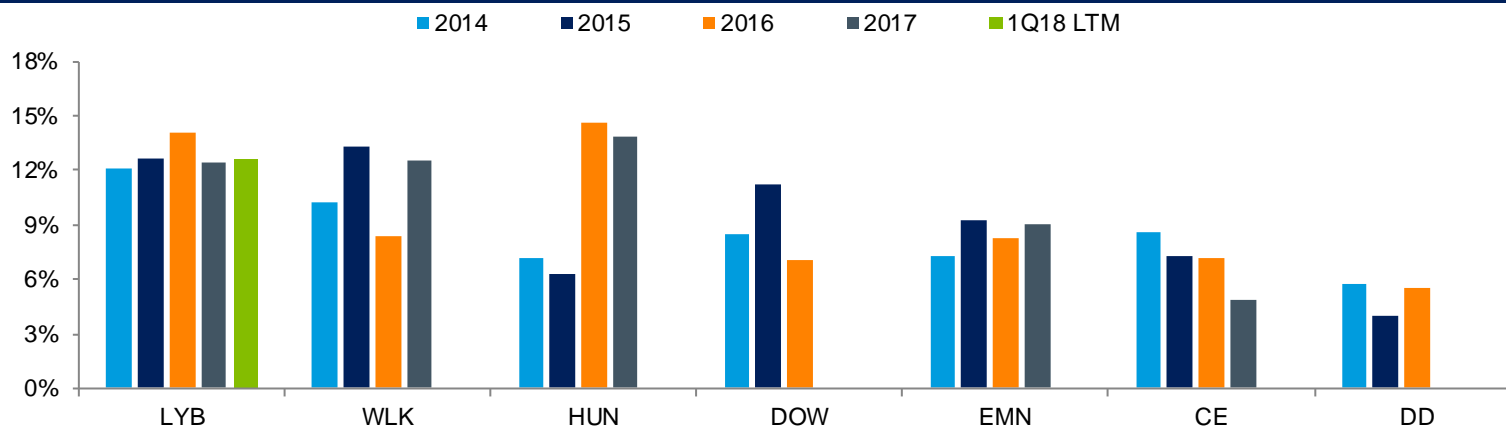
(1) Source: NYMEX as of April 17, 2018

Strong, Consistent Cash Generation

- 1Q18 LTM Capex: \$1.6 billion
- 1Q18 LTM Free Cash Flow⁽¹⁾: \$4.0 billion
- 1Q18 Ending Total Liquidity⁽²⁾: \$6.9 billion

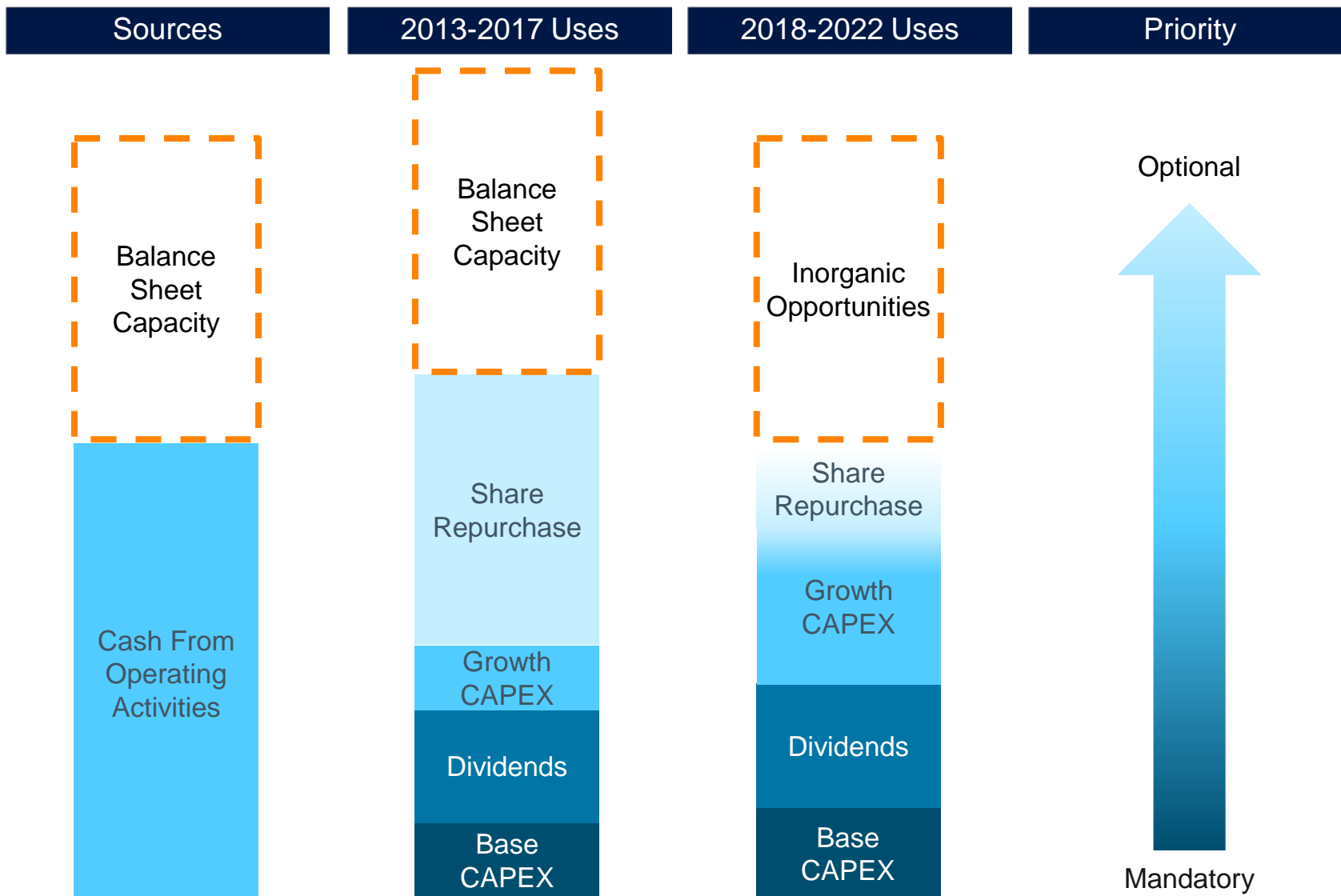


Cash From Operating Activities as a Percent of Average Enterprise Value⁽³⁾



- (1) Free Cash Flow is calculated as cash from operating activities less capital expenditures.
- (2) Total liquidity includes cash and cash equivalents, restricted cash and restricted cash equivalents, short term investments, repurchase agreements, and availability under our Senior Revolving Credit Facility and U.S. Receivables Securitization Facility as of March 31, 2018.
- (3) Source: CapIQ, LYB. Cash from operating activities is as of December 31 for each full year and as of March 31, 2018 for the period 1Q18 LTM. Average enterprise value means average market capitalization plus preferred equity, total debt and minority interest less cash and cash equivalents and short term investments. Market capitalization is based upon the average daily closing share price for the respective period. Preferred equity, total debt, minority interest, cash and cash equivalents and short-term investments are as of the last day of the respective period.

Profitability Supports Reinvestment for Value-Driven Growth



Note: Graphic for illustrative purposes only.

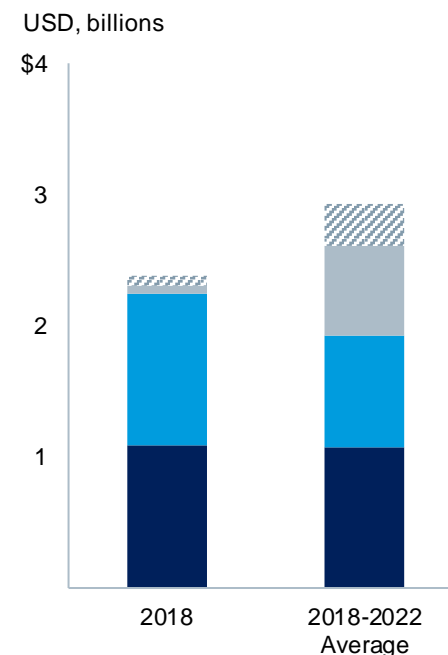
Regular Cadence of Investment in LyondellBasell's Organic Growth

Large Profit Generating Projects

		Scope (MM lbs.)	Projected Start-Up	Estimated EBITDA ⁽¹⁾ (\$MM/year) '15-'17 Avg. Margins
Projects Underway	Hyperzone HDPE	1,100	2019	\$150 - 200
	Propylene Oxide/TBA	1,000/2,200	2021	\$350 - 450
Potential Projects	North America PP	1,100	2022 - 2023	\$150 - 250
	North America PDH	1,600	2022 - 2023	\$250 - 400
	Europe PP	1,100	2023 - 2024	\$150 - 200
	North America PE	1,100	2024 - 2025	\$150 - 250

Estimated Capital Allocation⁽²⁾

- ▨ Other Potential Projects
- Large Potential Projects
- Projects Underway
- Base CAPEX



Value-driven growth with the potential for other high return projects

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

(2) Projects Underway include *Hyperzone HDPE*, PO/TBA and other small profit generating projects. Large Potential Projects include North America PP, PDH, and PE and Europe PP.

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 ⁽¹⁾	A. Schulman ⁽²⁾	Combined Businesses ⁽³⁾
LTM Revenue	\$2.1 billion	\$2.5 billion	\$4.6 billion
LTM Adjusted EBITDA	\$241 million	\$205 million	\$446 million
LTM Adjusted EBITDA Margin ⁽⁴⁾	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.

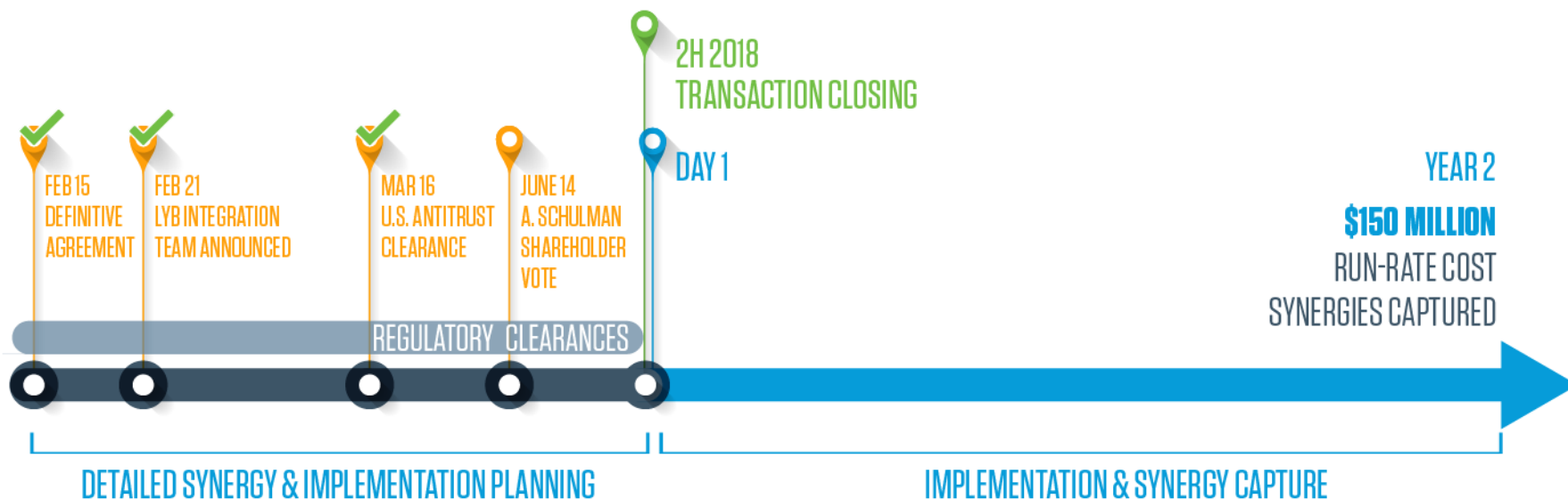
A. Schulman Acquisition: Creating a Platform for Growth

Strategic Rationale

- Vertical integration
- New growth platform for organic and inorganic opportunities
- End-to-end customer solutions
- Diverse and growing markets

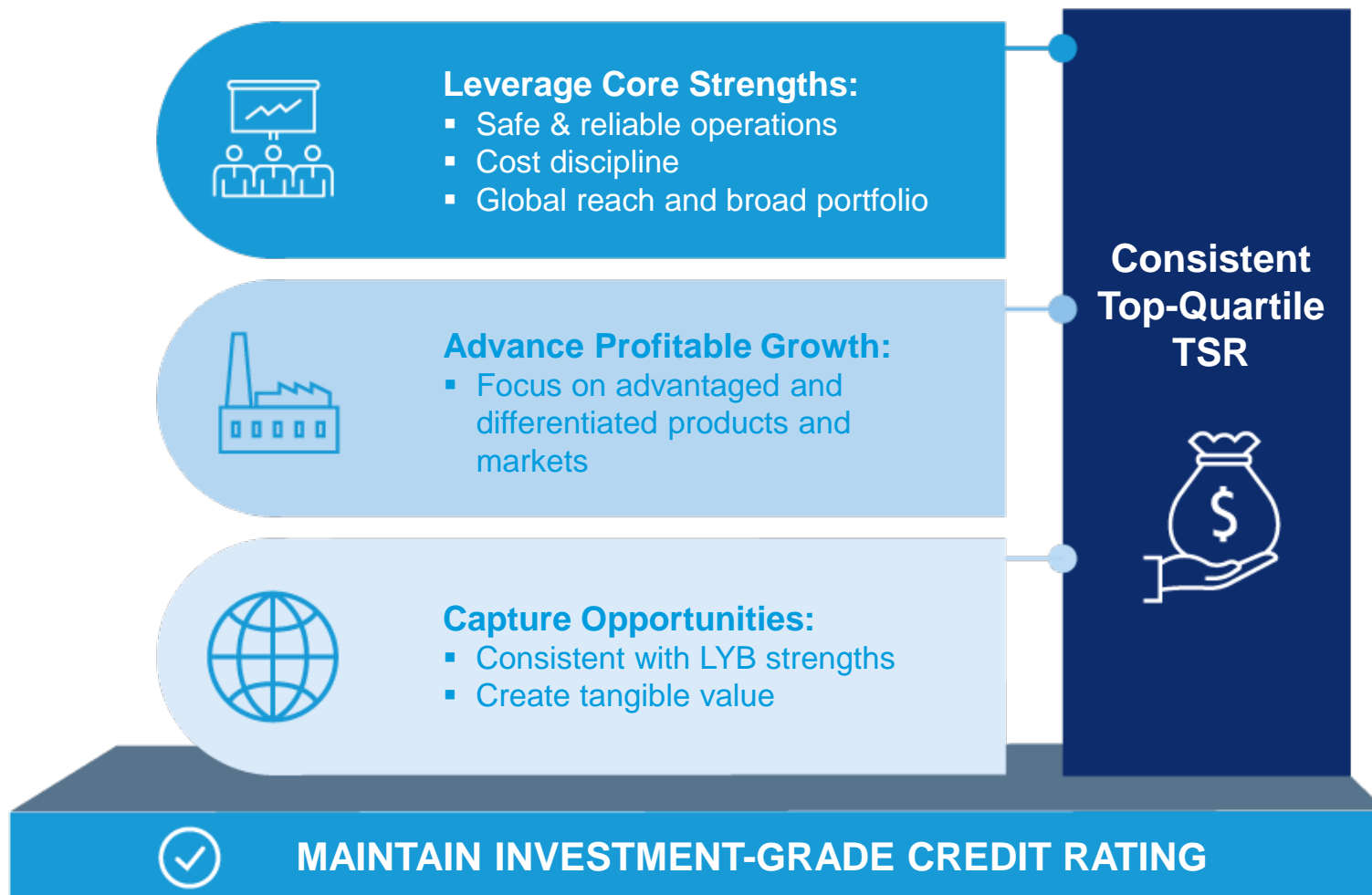
Financial Metrics⁽¹⁾

- Purchase price = \$2.25 billion
- 6.3x LTM 1Q18 Adjusted EBITDA, including synergies
- Accretive to earnings within 1 year of closing, including synergies



(1) LTM Adjusted EBITDA as presented by A. Schulman obtained from publicly available quarterly release data. LTM 1Q18 refers to the twelve-month period ended November 30, 2017. Includes estimated run-rate cost synergies of \$150 million.

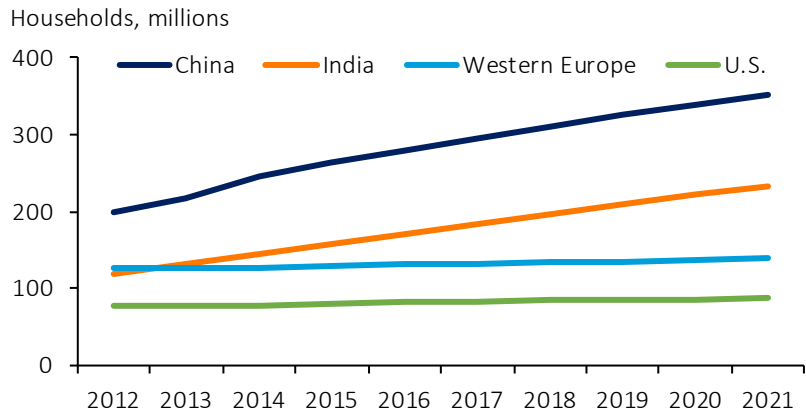
Growth Guided by Strategic Goals



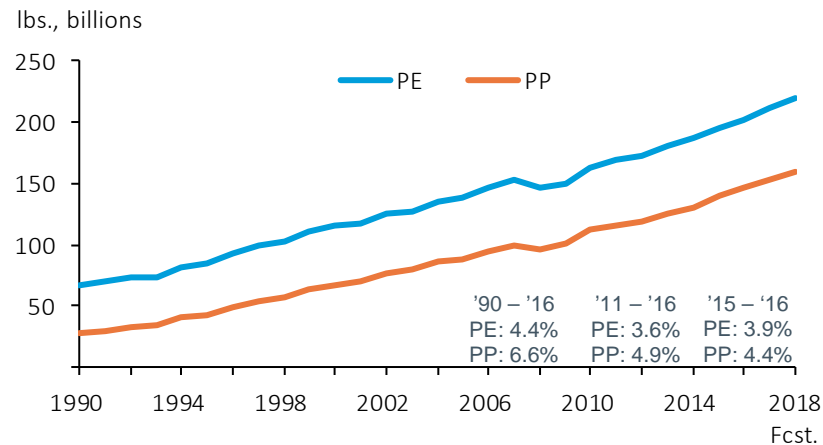
Appendix

Global Macro Trends - Demographics Driving Demand

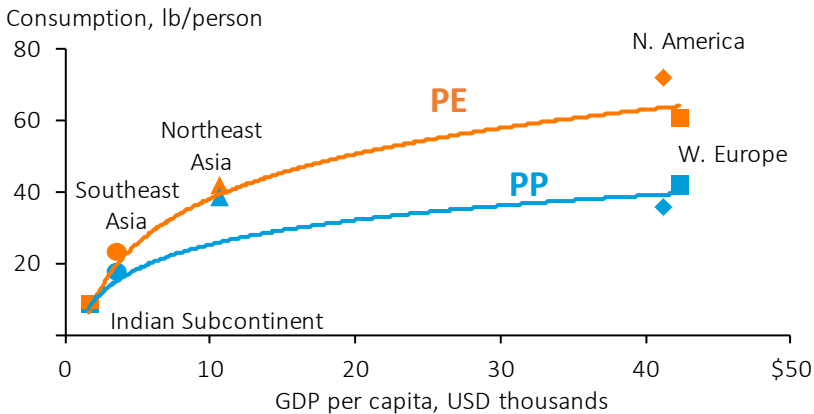
Upper/Middle Class Households



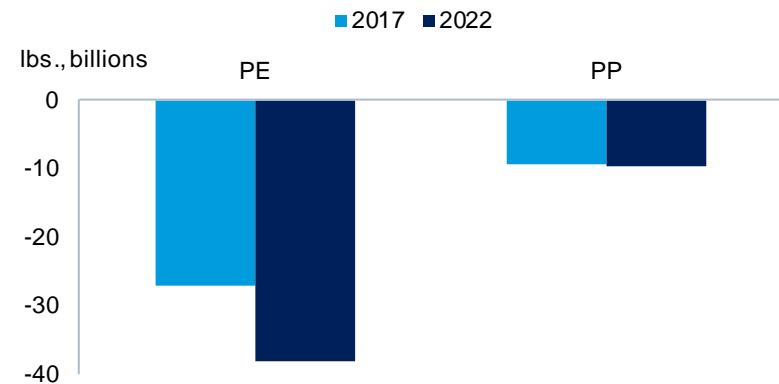
World PE and PP Demand



2016 Polyolefins Consumption



China Polyolefin Trade Deficit⁽¹⁾



Source: IHS.

1. China polyolefin trade deficit is production less domestic demand.

Information Related to Financial Measures

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 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.

Additionally, total liquidity, enterprise value and the ratio of cash from operating activities to average enterprise value are measures that provide an indicator of value to investors. For purposes of this presentation, total liquidity includes cash and cash equivalents, restricted cash and restricted cash equivalents, short term investments, repurchase agreements, and availability under our Senior Revolving Credit Facility and U.S. Receivables Securitization Facility. Enterprise value means market capitalization plus preferred equity (non-controlling interests), total debt and minority interest less cash and cash equivalents and short term investments. The ratio of cash from operating activities to average enterprise value means cash from operating activities divided by average enterprise value. Average enterprise value means average market capitalization plus preferred equity (non-controlling interests), total debt and minority interest less cash and cash equivalents and short term investments.

Reconciliations for our non-GAAP measures can be found on our website at www.lyondellbasell.com/investorrelations.

Enterprise Value

Calculation of Enterprise Value

<u>In Millions of Dollars, except share amounts</u>	<u>March 31, 2018</u>
Common Shares Outstanding	393,482,424
Closing Price	\$ 105.68
Market Capitalization	41,583
Current Maturities of Long Term Debt	5
Short-Term Debt	77
Long-Term Debt	8,531
Less:	
Cash and Cash Equivalents	1,840
Short-Term Investments	1,042
Net Debt	5,731
Non-Controlling Interests	1
Enterprise Value	\$ 47,315
Enterprise Value, in billions	\$ 47

EBITDA Excluding LCM Adjustments to EBITDA

Reconciliation of EBITDA Excluding Lower of Cost or Market Inventory Valuation Adjustments ("LCM Adjustments") to EBITDA

In Millions of Dollars	For the Years Ended			For the Three Months Ended				For the Year Ended	For the Year Ended	For the Three Months Ended		Last Twelve Months	Average
	December 31, 2014	December 31, 2015	December 31, 2016	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017	December 31, 2017	December 31, 2017	March 31, 2017	March 31, 2018	March 31, 2018	2014 - 2017
EBITDA excluding LCM:													
Olefins & Polyolefins - Americas	\$ 4,190	\$ 3,821	\$ 2,906	\$ 723	\$ 859	\$ 616	\$ 784	\$ 2,982	\$ 2,982	\$ (723)	\$ 780	\$ 3,039	\$ 3,475
Olefins & Polyolefins - EAI	1,410	1,855	2,067	529	699	698	356	2,282	2,282	(529)	518	2,271	1,904
Intermediates & Derivatives	1,552	1,656	1,333	339	339	402	410	1,490	1,490	(339)	486	1,637	1,508
Refining	409	519	72	(30)	25	58	104	157	157	30	63	250	289
Technology	232	243	262	60	48	47	68	223	223	(60)	56	219	240
Other	17	(13)	(9)	(4)	-	-	4	-	-	4	10	14	(1)
Continuing	<u>7,810</u>	<u>8,081</u>	<u>6,631</u>	<u>1,617</u>	<u>1,970</u>	<u>1,821</u>	<u>1,726</u>	<u>7,134</u>	<u>7,134</u>	<u>(1,617)</u>	<u>1,913</u>	<u>7,430</u>	<u>7,414</u>
LCM													
Olefins & Polyolefins - Americas	279	160	29	-	-	-	-	-	-	-	-	-	117
Olefins & Polyolefins - EAI	44	30	-	-	-	-	-	-	-	-	-	-	19
Intermediates & Derivatives	93	181	-	-	-	-	-	-	-	-	-	-	69
Refining	344	177	-	-	-	-	-	-	-	-	-	-	130
Technology	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-
Continuing	<u>760</u>	<u>548</u>	<u>29</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>334</u>
EBITDA:													
Olefins & Polyolefins - Americas	3,911	3,661	2,877	723	859	616	784	2,982	2,982	(723)	780	3,039	3,358
Olefins & Polyolefins - EAI	1,366	1,825	2,067	529	699	698	356	2,282	2,282	(529)	518	2,271	1,885
Intermediates & Derivatives	1,459	1,475	1,333	339	339	402	410	1,490	1,490	(339)	486	1,637	1,439
Refining	65	342	72	(30)	25	58	104	157	157	30	63	250	159
Technology	232	243	262	60	48	47	68	223	223	(60)	56	219	240
Other	17	(13)	(9)	(4)	-	-	4	-	-	4	10	14	(1)
Continuing	<u>7,050</u>	<u>7,533</u>	<u>6,602</u>	<u>\$ 1,617</u>	<u>\$ 1,970</u>	<u>\$ 1,821</u>	<u>\$ 1,726</u>	<u>\$ 7,134</u>	<u>\$ 7,134</u>	<u>\$ (1,617)</u>	<u>\$ 1,913</u>	<u>\$ 7,430</u>	<u>7,080</u>

Net Income to EBITDA

Reconciliation of Net Income To EBITDA

In Millions of Dollars	Three Months Ended						For the Year Ended	For the Year Ended	Three Months Ended		Last Twelve Months	
	December 31, 2014	December 31, 2015	December 31, 2016	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017	December 31, 2017	December 31, 2017	March 31, 2018	March 31, 2018	
Net Income ^(a)	\$ 4,168	\$ 4,474	\$ 3,837	\$ 797	\$ 1,130	\$ 1,056	\$ 1,894	\$ 4,877	\$ 4,877	\$ (797)	\$ 1,231	\$ 5,311
Loss from Discontinued Operations	4	5	10	8	4	2	4	18	18	(8)	-	10
LCM Adjustments After Tax	483	351	18	-	-	-	-	-	-	-	-	-
Income from Continuing Operations Excluding LCM Adjustments ^(a)	4,655	4,830	3,865	805	1,134	1,058	1,898	4,895	4,895	(805)	1,231	5,321
Less:												
LCM Adjustments After Tax	(483)	(351)	(18)	-	-	-	-	-	-	-	-	-
Income from Continuing Operations ^(a)	4,172	4,479	3,847	805	1,134	1,058	1,898	4,895	4,895	(805)	1,231	5,321
Provision for (benefit from) Income Taxes ^(a)	1,540	1,730	1,386	315	459	380	(556)	598	598	(315)	303	586
Depreciation and Amortization	1,019	1,047	1,064	296	286	294	298	1,174	1,174	(296)	299	1,177
Interest expense, net	319	277	305	201	91	89	86	467	467	(201)	80	346
LCM Adjustments Pre Tax	760	548	29	-	-	-	-	-	-	-	-	-
EBITDA Excluding LCM Adjustments	7,810	8,081	6,631	1,617	1,970	1,821	1,726	7,134	7,134	(1,617)	1,913	7,430
LCM Adjustments, Pre Tax	(760)	(548)	(29)	-	-	-	-	-	-	-	-	-
EBITDA	\$ 7,050	\$ 7,533	\$ 6,602	\$ 1,617	\$ 1,970	\$ 1,821	\$ 1,726	\$ 7,134	\$ 7,134	\$ (1,617)	\$ 1,913	\$ 7,430

(a) The fourth quarter of 2017 includes an \$819 million non-cash tax benefit related to the lower federal income tax rate resulting from the U.S. Tax Cuts and Jobs Act enacted in December 2017.

Free Cash Flow Yield

Calculation of Free Cash Flow Yield

<u>In Millions of Dollars (except share data)</u>	<u>Year Ended December 31, 2017</u>
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><u>8.4%</u></u>

Return on Invested Capital

Calculation of LYB Return on Invested Capital (ROIC)

<u>In Million of Dollars</u>	<u>Years Ended December 31,</u>	
	<u>2016</u>	<u>2017</u>
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)		<u>25.8%</u>
Interest Expense, Net, After Tax		<u>347</u>
Adjusted Income from Continuing Operations		<u>4,423</u>
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	<u>875</u>	<u>1,523</u>
	<u>\$ 14,321</u>	<u>16,435</u>
Average Invested Capital		<u>\$ 15,378</u>
Return on Invested Capital		<u>29%</u>

Diluted EPS Excluding LCM Adjustments to Diluted EPS

Reconciliation of Diluted EPS Excluding LCM Adjustments to Diluted EPS

	For the Years Ended December 31,				Last Twelve Months March 31,
	2014	2015	2016	2017	2018
	Diluted Earnings Per Share Excluding LCM Adjustments	\$ 8.91	\$ 10.34	\$ 9.18	\$ 12.23
Less:					
LCM Adjustments	0.92	0.75	0.05	-	-
Diluted Earnings Per Share	\$ 7.99	\$ 9.59	\$ 9.13	\$ 12.23	\$ 13.39

Free Cash Flow to Net Cash Provided by Operating Activities

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

<u>In Millions of Dollars</u>	<u>Years Ended December 31,</u>				<u>Year Ended</u>	<u>Three Months Ended</u>		<u>Last Twelve</u>
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>December 31,</u>	<u>March 31,</u>	<u>March 31,</u>	<u>Months</u>
					<u>2017</u>	<u>2017</u>	<u>2018</u>	<u>March 31,</u>
								<u>2018</u>
Free Cash Flow	\$ 4,549	\$ 4,402	\$ 3,363	\$ 3,659	\$ 3,659	\$ (257)	\$ 577	\$ 3,979
Add:								
Capital Expenditures	1,499	1,440	2,243	1,547	1,547	(421)	429	1,555
Net Cash Provided by Operating Activities	<u>\$ 6,048</u>	<u>\$ 5,842</u>	<u>\$ 5,606</u>	<u>\$ 5,206</u>	<u>\$ 5,206</u>	<u>\$ (678)</u>	<u>\$ 1,006</u>	<u>\$ 5,534</u>

Cash and Liquid Investments and Total Liquidity

Components of Cash and Liquid Investments and Total Liquidity

<u>In Millions of Dollars</u>	<u>March 31, 2018</u>
Cash and Cash Equivalents and Restricted Cash	\$ 1,840
Short-Term Investments	1,042
Repurchase Agreements	<u>586</u>
Cash and Liquid Investments	3,468
Availability under Senior Revolving Credit Facility	2,500
Availability under U.S. Receivables Securitization Facility	<u>900</u>
Total Liquidity	<u>\$ 6,868</u>

Cash from Operating Activities as a Percent of Average Enterprise Value

Cash from Operating Activities as a Percent of Average Enterprise Value

<u>In Millions of Dollars, except share amounts</u>	<u>For the Years Ended December 31,</u>				<u>Last Twelve</u>
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>Months</u>
					<u>March 31,</u>
					<u>2018</u>
Cash from Operating Activities	\$ 6,048	\$ 5,842	\$ 5,606	\$ 5,206	\$ 5,534
Average Enterprise Value:					
Common Shares Outstanding	486,969,402	440,150,069	404,046,331	394,512,054	393,482,424
Daily Average Closing Price	\$ 93.66	\$ 91.47	\$ 81.00	\$ 92.00	\$ 97.01
Market Capitalization	45,610	40,261	32,728	36,295	38,172
Current Maturities of Long Term Debt	4	4	2	2	5
Short-Term Debt	346	353	594	68	77
Long-Term Debt	6,695	7,671	8,385	8,549	8,531
Less:					
Cash and Cash Equivalents	1,031	924	875	1,523	1,840
Short-Term Investments	1,593	1,064	1,147	1,307	1,042
Net Debt	4,421	6,040	6,959	5,789	5,731
Non-Controlling Interests	30	24	25	1	1
Enterprise Value	\$ 50,061	\$ 46,325	\$ 39,712	\$ 42,085	\$ 43,904
Cash from Operating Activities as a					
Percent of Enterprise Value	12%	13%	14%	12%	13%