

# Strong earnings momentum continues

**Roadshow Presentation** 

## Global leader in high-tech material solutions

## Covestro key investment highlights



- Favorable industry environment with long-term, above GDP growth prospects in a diverse range of end markets
- Portfolio with broad-based geographical and industry footprint with increasing share of differentiated, resilient business
- Leading and defendable global industry positions as innovation and cost leader
- Positioned to deliver future volume growth in line with industries through well-invested asset base and smart capex approach
- Attractive cash flow growth outlook
  with use of cash focused on value creation

## Covestro at a glance



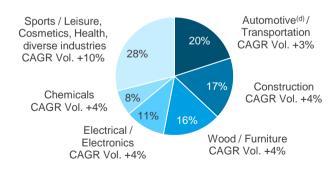
Inventor and leader in high-tech material solutions driven by global trends

- Leading global polymer producer in polyurethanes and its derivatives as well as polycarbonates
- Proven track record of process and product innovation, customer proximity as well as market-driven solutions
- State-of-the-art asset base with leading process technology and total production capacity of 4,950kt(a) distributed across 8 world-scale production facilities in three main regions
- Backward-integration into chlorine, propylene oxide and other feedstock, aimed at sourcing critical raw materials internally with no or limited merchant market sales
- Headquartered in Leverkusen, Germany, with approx. 15.600 employees(b) globally



#### Sales split by end-market

2016 Group sales in % / Core volume growth, CAGR 2014-2016



**Key financials 2016** 

Sales €11.9bn Sales Core Vol. CAGR 2014-2016: +5%

Adj. EBITDA €2.0bn

**FOCF** €1.4bn ROCE 14.2%

## Covestro business units

## Three industry-leading, structurally attractive business units

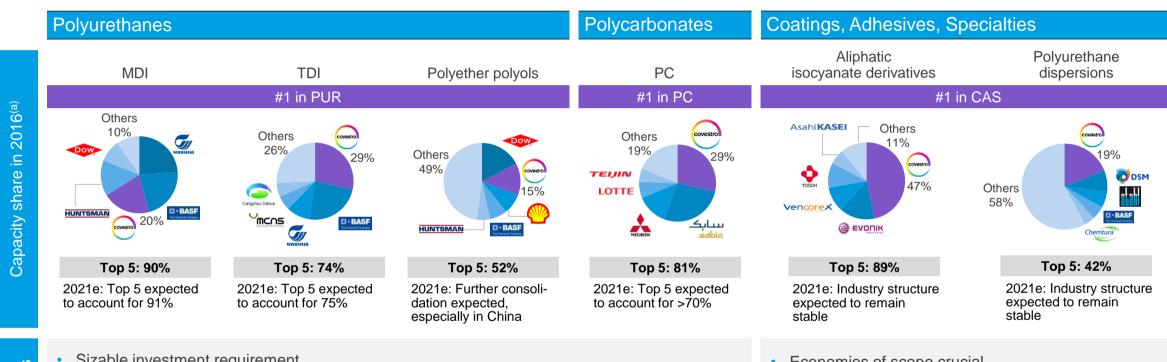


<b>Business Units</b>	Polyurethanes (PUR)	Polycarbonates (PCS)	Coatings, Adhesives, Specialties (CAS)
Global Position <sup>(a)</sup>	Global #1 (3,470kt)  • MDI: #3 (1,420kt)  • TDI: #1 (720kt)  • Polyether polyols: #2 (1,330kt)	Global #1 (1,480kt)  • EMEA: #2 (540kt)  • NAFTA: #2 (230kt)  • APAC: #1 (710kt)	<ul><li>Global #1:</li><li>Aliphatic isocyanate derivatives</li><li>Aromatic isocyanate derivatives</li><li>Polyurethane dispersions</li></ul>
Sales 2016	€5.9bn or 50% of Covestro	€3.3bn or 28% of Covestro	€2.0bn or 17% of Covestro
Adj. EBITDA Margin 2016	14.9%	21.3%	24.5%
Key Applications	Rigid foam:  • Building insulation  • Cold chain  • Automotive parts Flexible foam:  • Furniture  • Bedding / mattresses	<ul> <li>Automotive parts</li> <li>IT and electrical equipment, electronics</li> <li>Construction (windows, roof structure)</li> <li>Consumer products, medical and other applications</li> </ul>	<ul> <li>Surface coatings</li> <li>Adhesives and sealants</li> <li>Elastomers</li> <li>Specialty films</li> </ul>

## Global industry positions

## Covestro is a leader across its entire portfolio





# Entry requirements

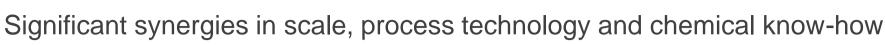
- Sizable investment requirement
- Intense pressure to advance process technology
- Global asset base to enable customer proximity
- Persistent demand for product and process innovation
- Efficient feedstock integration required

- Economies of scope crucial
- Formulation and application know-how necessary
- Close customer relationships and long-term R&D collaborations
- Operation of global platform essential

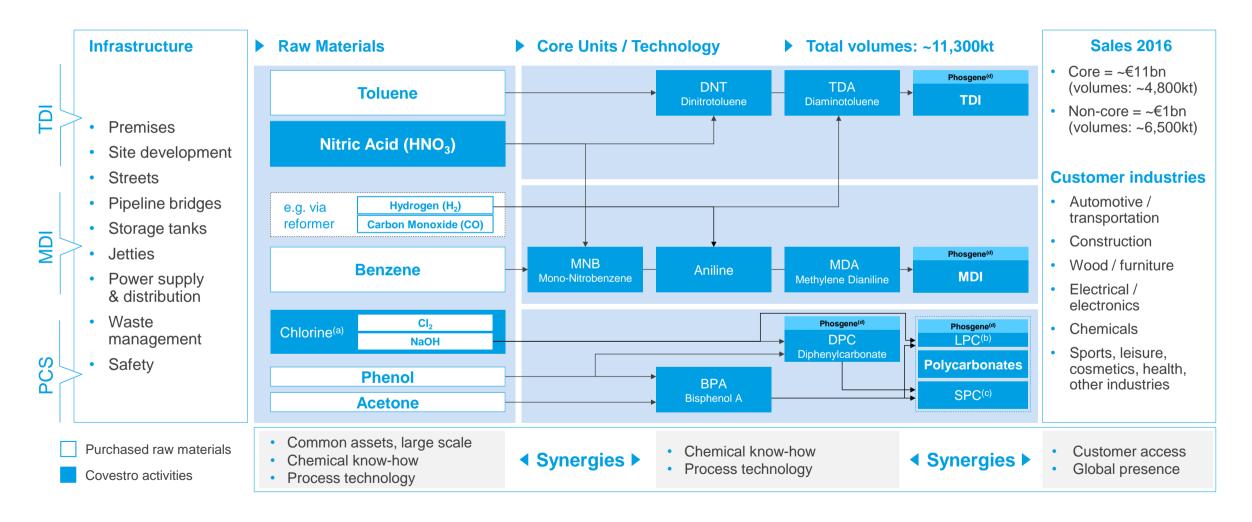
Notes:

Source:

## A common chemical backbone across all segments



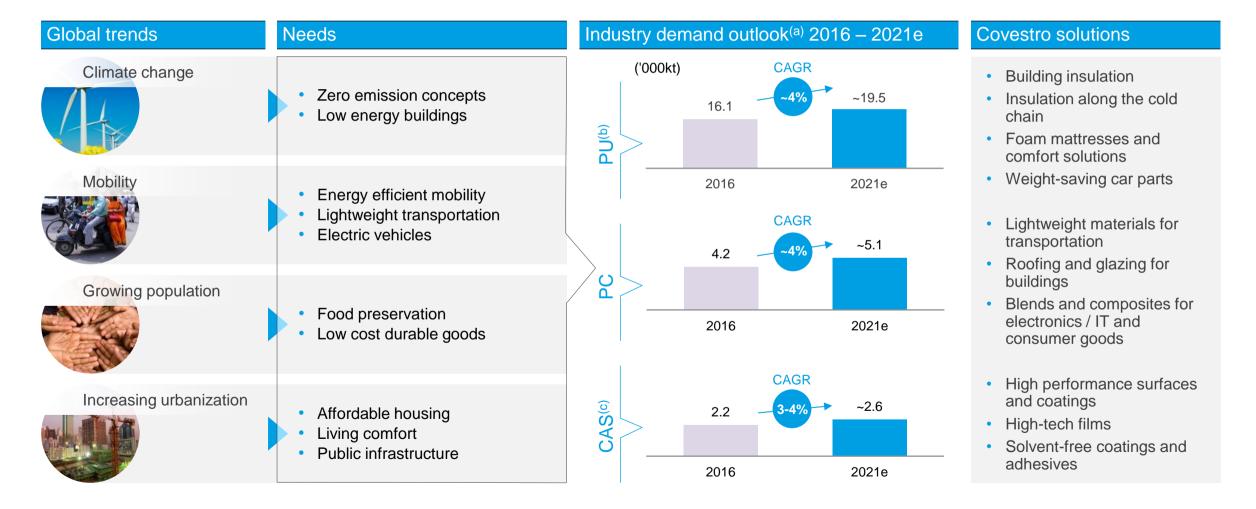




## Favorable industry environment







Notes:

## Product innovation is long-term driver of growth

# covestro

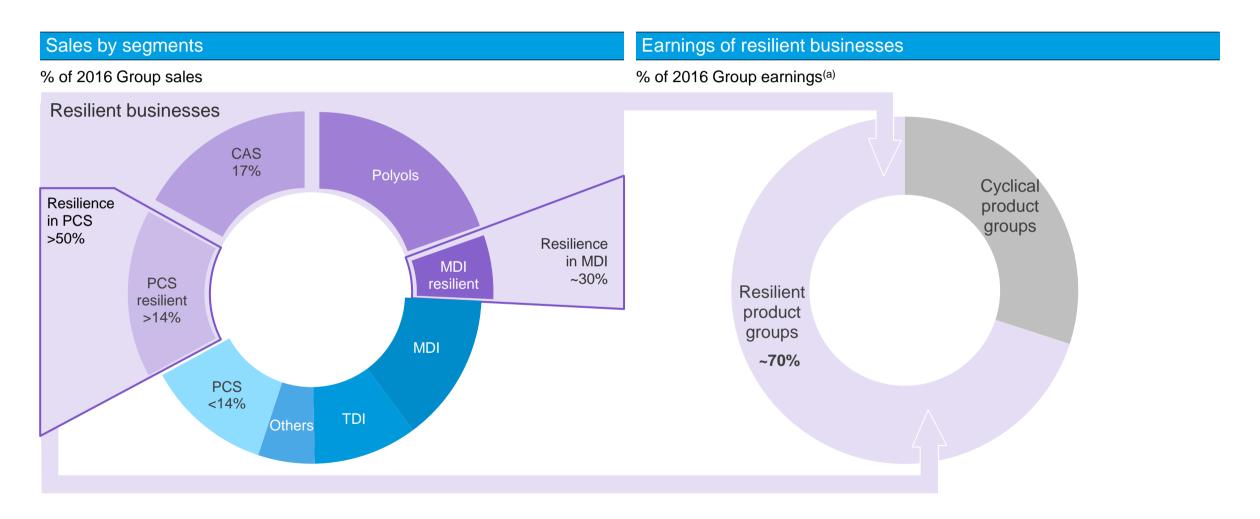
## Addressing ever-changing customer needs for new material solutions

Need	Overall market <sup>(a)</sup>	Relevant market <sup>(b)</sup>	Covestro solutions
More durable and economical wind power plants	Energy consumption CAGR: ~3%	Offshore wind energy CAGR: ~19%	Novel components for wind power plants: PU resins for rotor blades, PU materials for coatings, Elastomers for sea cables
Energy- and cost-efficient buildings	Construction CAGR: ~2%	Polyurethane insulation CAGR: ~5%	Raw materials for PU foam (rigid and in spray form) enabling highly efficient insulation
Reduction of high energy consumption of lighting	Luminaire CAGR: ~3%	Luminaire LED CAGR: ~19%	Polycarbonates in LED lenses, light guides, heat sinks
Eco-friendly produced furniture	Coating industrial furniture CAGR: ~3%	Water-based industrial furniture CAGR: ~5%	New bio-based hardener for water-based wood coatings
Sustainable and functional fashion	Textile coating CAGR: ~6%	Covestro relevant textile coating CAGR: ~11%	Waterborne, solvent-free materials for functionalized textiles in diverse applications
More and better cooling devices	Refrigerators CAGR: ~3%	Refrigeration insulation foam CAGR: ~8%	Raw materials for particularly effective insulating foams: 40% smaller pores allow up to 10% better insulation
Perfect insulation for perishable products	Containers CAGR: ~4%	Reefer containers CAGR: ~9%	Rigid polyurethane foam components for temperature- controlled shipments
Reduced weight and increased comfort	Global car production CAGR: ~3%	Covestro relevant car CAGR: ~5%	Attractive alternatives to conventional materials: polymers to replace glass and metal

## Portfolio geared towards differentiated products



Over 50% of sales and ~70% of earnings generated with resilient businesses



## Margin resilience in CAS



Focus on stable high margins in CAS business with defendable competitive advantages

#### Global leading supplier of high performance materials to the coatings, adhesives and sealants industries













6+
Monomers

2,300+ Products 4,300+ Customers<sup>(a)</sup>

#1

Producer of aliphatic isocyanates(b)

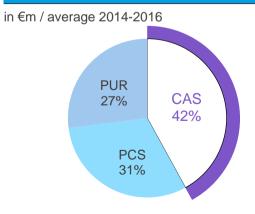
€2.0bn Sales 2016

20.1% EBIT margin 2016

#### CAS products have all the characteristics of niche coating / ingredients chemicals

- ✓ High value-add materials
- ✓ Priced on the basis of performance, high level of margin resilience
- ✓ Competition with other players based on performance, distinct entry requirements.
- ✓ Small proportion of cost to end-customer
- Low volumes and large number of niche-customized products sold
- Products tailored to customer needs lead to significant switching efforts
- Product innovation and R&D critical to success

#### EBIT contribution of segments(c)



(c) Excluding contribution of "Other segments / Consolidation"

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<sup>(</sup>a) Includes direct customers only

<sup>(</sup>b) Based on total aliphatic isocyanates volume in 2016 relative to competitors as per Covestro estimates

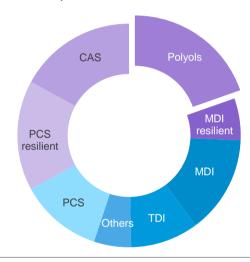
## Margin resilience in polyols

## Polyether polyols demonstrate inherently stable margins

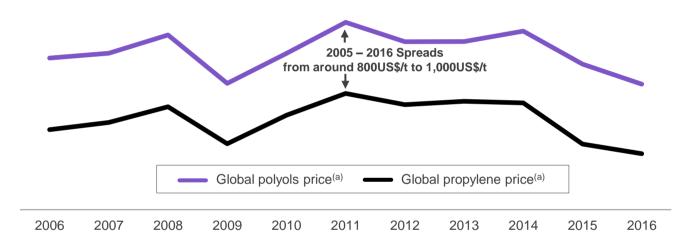


#### Resilience of polyether polyols business confirmed in 2016, although at low end of historic band

#### % of 2016 Group sales



- Non-integrated polyether polyols producers with limited competitiveness
- Single capacity addition with little influence on supply / demand dynamics
- Distinct entry requirements for new players, e.g. capex and technology

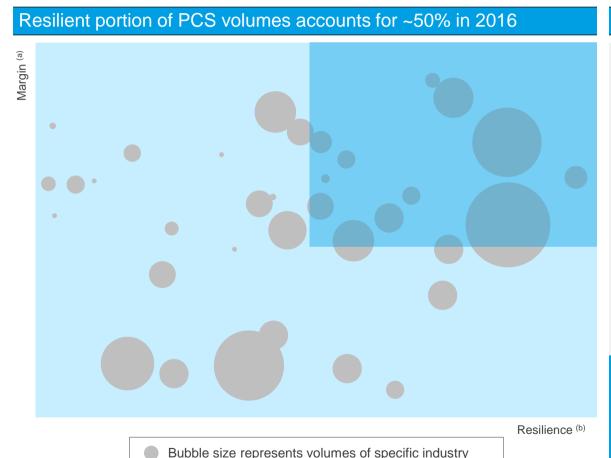


- Resilient industry margins over the last decade reflective of overall Covestro polyether polyols profitability
- Spreads not materially impacted by high volatility of propylene prices, particularly during the financial crisis
- Propylene oxide supply / demand dynamics create local pricing opportunities in the short-term

## Margin resilience in PCS



Excellent global position to access differentiated, high-value polycarbonates applications



#### Improving portfolio mix

#### High-value industry application (e.g. automotive, medical, electrical)

- Greater technical specification requirement
- Longer lifecycles, higher market growth
- Comprehensive innovation capabilities and technical service is key
- Premium pricing in selected segments

#### Limited disruptions from new capacity additions

- Niche applications with strong differentiation potential
- Customer intimacy and distinct industry entry requirements
- Investment need for material switch

Resilient portion of PCS volumes improved from ~40% to ~50% in the last 5 years, supported by continuous progress of innovative offerings

## Margin resilience in MDI





## Differentiated grades account for ~30% of MDI sales in 2016 Margin<sup>(a)</sup> 2008 2009 2010 2011 2012 2013 2014 2015 2016

#### Differentiation potential beyond standardized products

#### Joint sales of polyols and MDI

Examples: CASE<sup>(c)</sup>, soft furniture, automotive seating

#### Specialty or downstream products

 Examples: Selected MDI grades (pre-polymers, blends, monomeric), TPU

#### Formulations as market access requirement

Examples: Automotive, appliances

#### **Customized solutions**

Example: Window frames

Differentiated business with ~0.25€/kg higher gross margin

Standardized

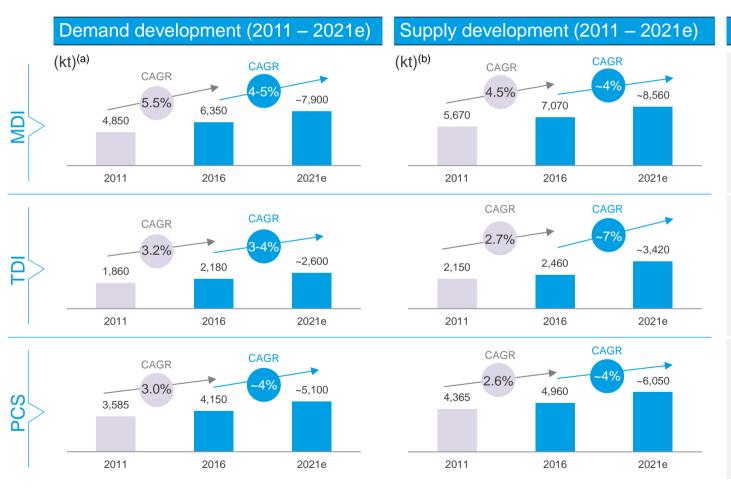
Volatility(b)

Differentiated

## Historical industry development and outlook



Above GDP growth driving industry capacity utilization and supporting stable margins



#### **Industry highlights**

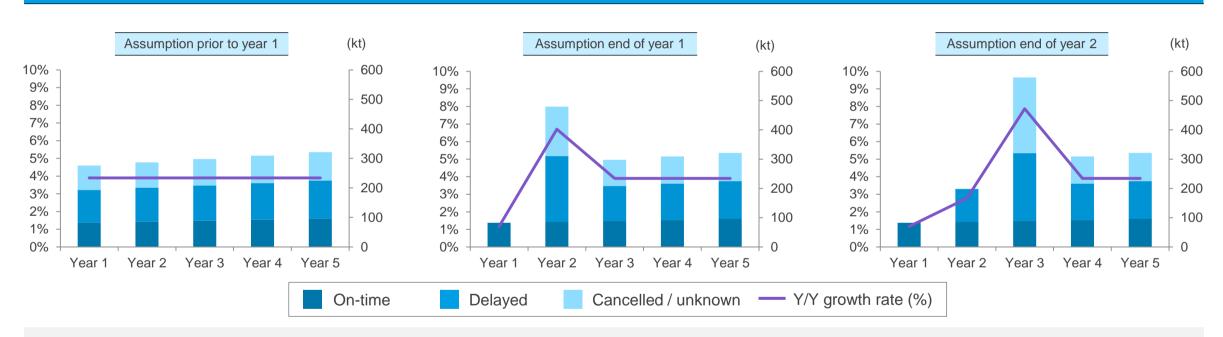
- MDI margins currently above long-term historical level based on robust industry utilization above 90%
- In 2018 / 19, margins expected to slightly decrease based on new investments
- Major additions expected until 2021: BASF, Covestro, SLIC, Kumho Mitsui, Sadara
- Upside margin potential towards the end of the decade along with increasing industry utilization
- TDI margins currently above long-term average due to delayed start-up of major investments
- From 2018, margins expected to normalize based on new worldscale capacities
- Major additions expected until 2021: BASF, Sadara, Wanhua, Yantai Juli
- Possible industry consolidation in China
- Sustainable margins driven by high utilization rates
- Diversified growth drivers ensure stability of demand development
- Major additions expected until 2021: Covestro, Wanhua, Luxi, Heng Yuan, Ningbo Zhetie Dafeng
- New industry players likely to penetrate low-end applications

## Modeling future supply additions

## Illustrative example of the wave effect in supply models



#### Typical supply model assumes oversupply in the coming year

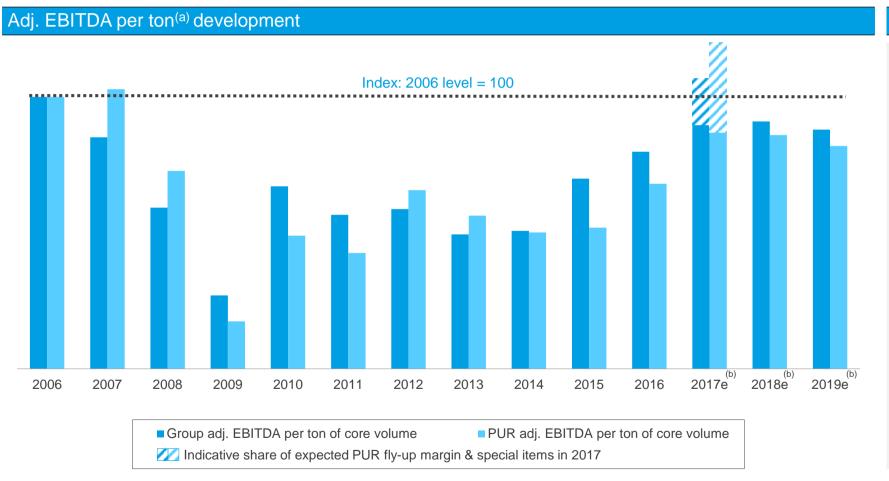


- Supply models are usually based on public information
- Delays and / or cancellations are commonly not announced by companies or publically available
- In models, delayed capacities are moved to the next year, thus add up and create an unreal, inflated level of supply additions in the following years

## Adj. EBITDA per ton development

## Current earnings levels are not excessive by historic standards





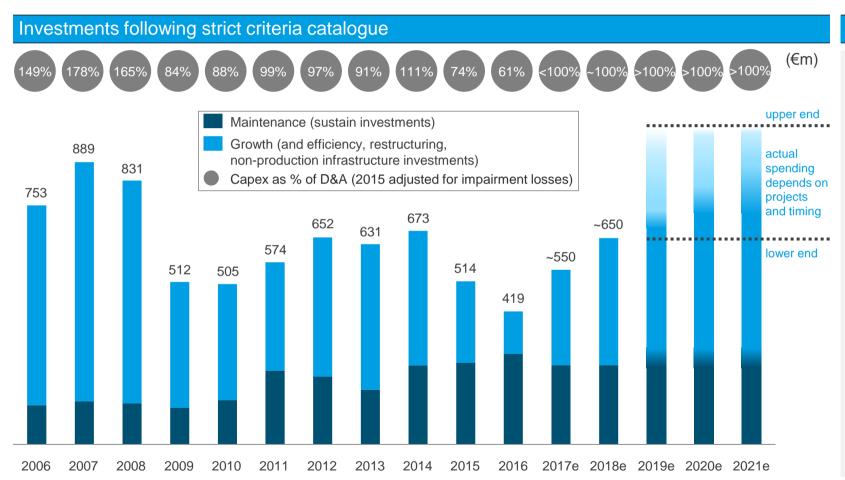
#### **Highlights**

- Several years of high earnings levels recorded prior to 2008 financial crisis
- Global corrections of GDP growth assumptions in 2008 / 2009 resulted in oversupply for many years
- Adjusted industry supply assumptions are now aligned with adjusted GDP growth expectations of 2-3% p.a.
- Comparing asset utilization levels, 2017 and following years are expected to operate on higher levels compared to 2007 and before
- Covestro stand-alone operating costs per ton in mid-term future expected to be lower compared to pre-IPO

## Smart capex approach







#### **Highlights**

#### **Until 2008**

- Capacity expansion through growth investments
- Building up an integrated, multi-BU, worldscale site in Caojing, China, as APAC production hub

#### 2009 to 2016

- Continue expansion of Caojing site
- Increasing utilization of underutilized assets
- Optimize regional production network

#### 2017e to 2021e

 Accompany industry growth by adding capacity through smart capex approach

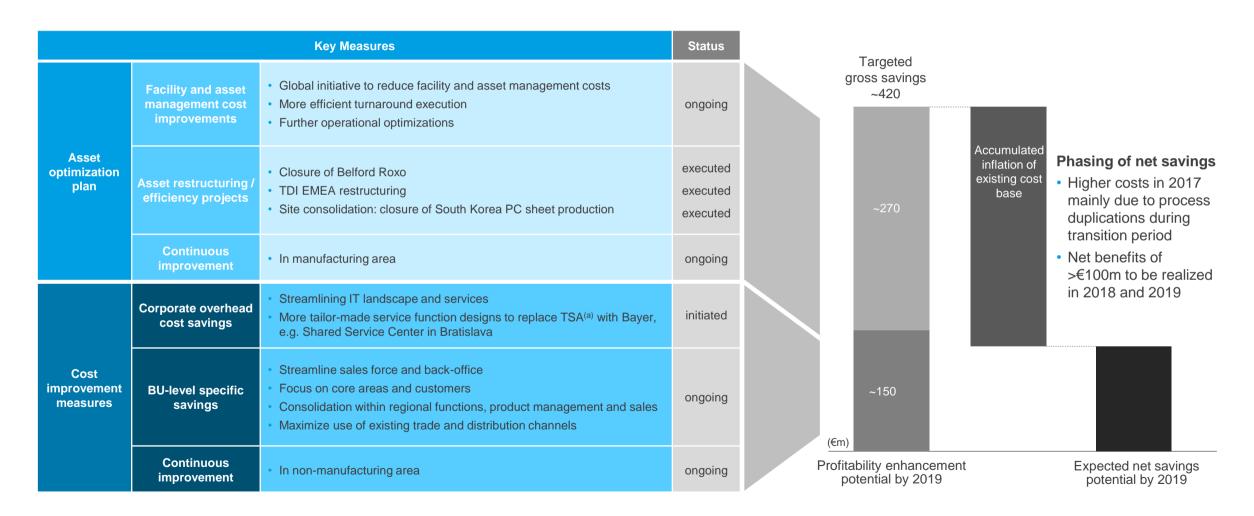
#### 2022e and beyond

- New growth investments lead to capacity expansions
- Strengthen leading industry positions

## Savings potential: structured profitability enhancement program



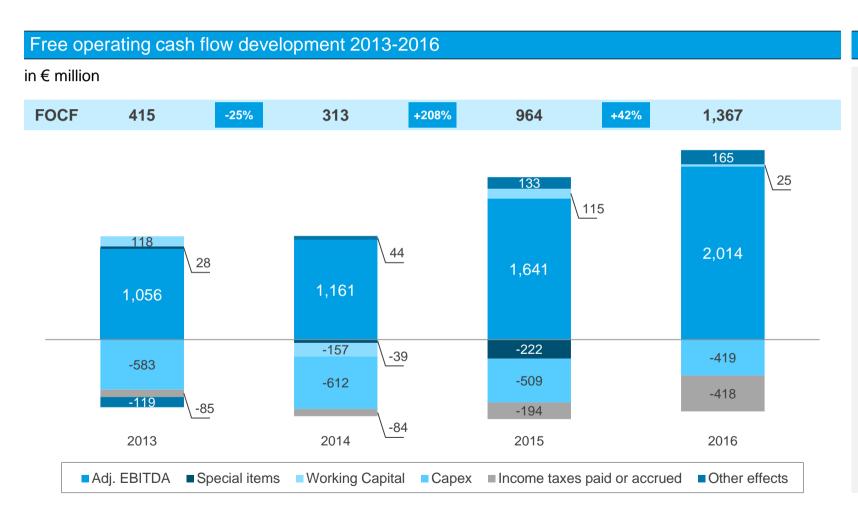
Net saving expected to start ramping up in 2018



## High EBITDA to FOCF conversion rate

### Record FOCF in 2015 and 2016





#### Highlights in 2016

- The FOCF to EBITDA conversion rate increased to 68% compared to 59% in 2015 due to the absence of cash-out for special items
- Working capital to sales ratio almost unchanged at 15.6% vs. 15.4% end of 2015, in the targeted range of 15-17%
- Capex of €419m significantly down Y/Y
  partly due to project delays; capex below
  D&A of €683m; D&A/sales above long-term
  average given the young asset base and
  the conservative life time applied
- High cash-tax rate of 37% vs. effective tax rate of 29% due to prepayments

## Commitment to deliver €5bn cumulative FOCF in next 5 years



Use of free cash flow: value creation and cash return to shareholders

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- Focus on increasing or at least stable dividends
- FY 2016 dividend of €1.35 per share represents a dividend yield of 2.1% (year end DY)

#### Portfolio



- Disciplined & focused approach
- Bolt-on acquisitions to boost R&D and business development
- Focus on high margin, differentiated business areas and continuous portfolio optimization

## Return to shareholders



- Commitment to return excess cash to shareholders after 24 months without significant M&A activity
- Options of either share buyback or special dividends

## Attractive cash flow profile

#### Focus on value creation



- Strong cash generation history and future commitment driven by volume growth, operational leverage and profitability enhancement measures
- Smart capex approach balances required capacity additions and capital-efficient growth investments
- Disciplined M&A strategy with focus on value creation follows clear strategic direction, defined process and strict financial criteria
- Commitment to return excess cash to shareholders after 24 months without significant M&A activity
- Attractive dividend policy with focus on increasing or at least stable dividends going forward



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# Financial Highlights Q2 2017

## Q2 2017 Key Highlights

## Strong earnings momentum continues





**Constrained core volume growth (-1.6% Y/Y)** 

10<sup>th</sup> consecutive quarter with Y/Y EBITDA improvement (€848m; 56% Y/Y)

**EPS increase to €2.39 (112% Y/Y)** 

FOCF increase to €319m (35% Y/Y)

**Guidance for FY 2017 unchanged** 

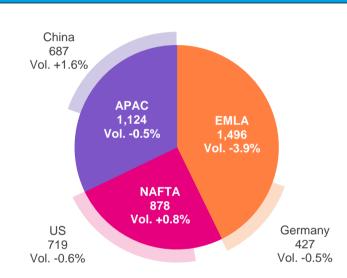
## Q2 2017 & 6M 2017 - Sales per Region

## Solid volume growth in all regions in 6M 2017



#### Constrained growth in Q2 2017

in € million / Core volume growth Y/Y

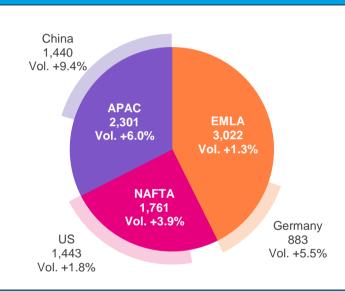


#### Q2 2017 Highlights

- Core volume growth constrained by product availability
- Supply focus on core applications
- Mid-single-digit growth in automotive driven by APAC and NAFTA

#### Solid growth in 6M 2017

in € million / Core volume growth Y/Y

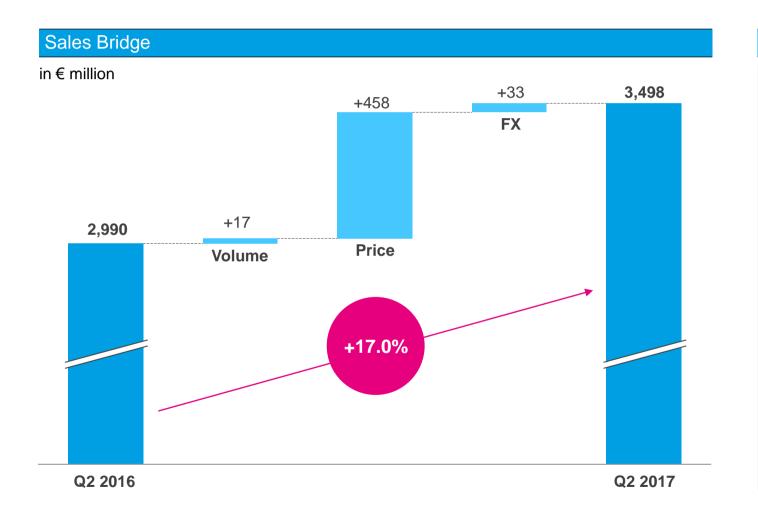


- Solid core volume growth of 3.5% Y/Y
- High-single-digit growth in automotive, outgrowing global OEM production growth
- Double-digit growth in medical & other industries, driven by high value added applications

## Q2 2017 – Sales Bridge

## Constrained volume growth and strong pricing





#### **Highlights**

#### Strong pricing and higher industry utilization

 Higher selling prices positively impacted sales by 15.3% Y/Y

#### **Product mix upgrades**

- Core volume growth (in kt) of -1.6% Y/Y
- Total sales volumes (in €) on the level of prior year with +0.6% Y/Y
- Sales volume expansion above core volume growth due to product mix upgrades

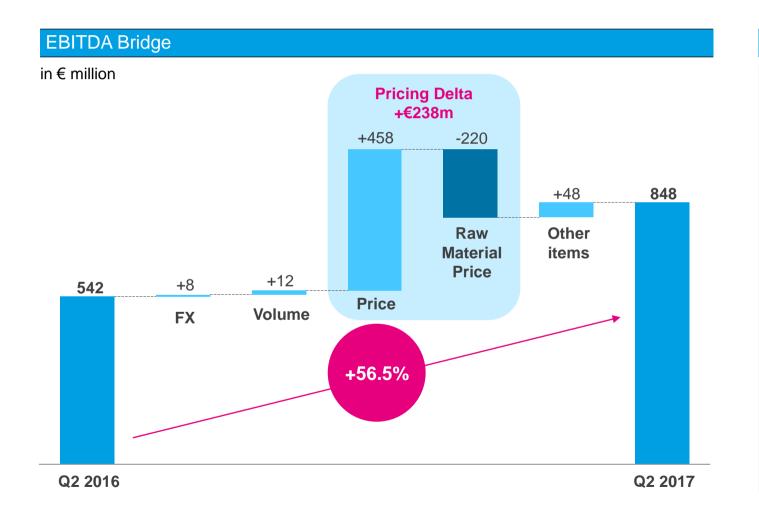
#### **Positive FX effects**

 Sales benefited from FX by 1.1% Y/Y mainly due to stronger USD

## Q2 2017 – EBITDA Bridge

## Strong positive pricing delta





#### Highlights

#### Improving cash margin

- Positive pricing delta driven by TDI & MDI
- Selling price increases could more than compensate for higher raw material prices

#### Positive volume leverage

Driven by product mix upgrades

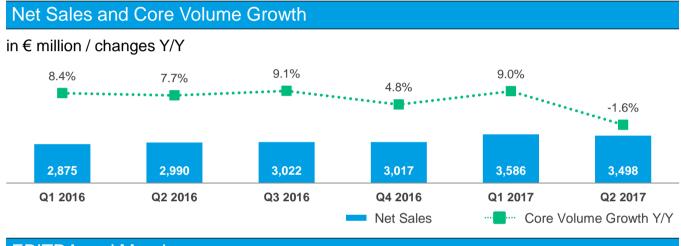
#### Other items

 One-time items of €74m from insurance payments and book gain from disposal

## Q2 2017 – Group Results

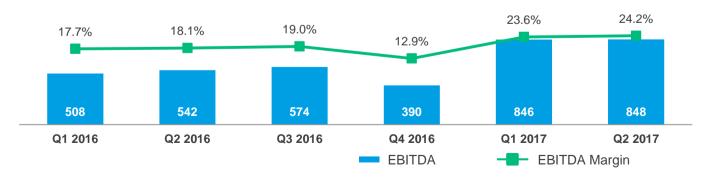
## Continued margin expansion





## **EBITDA** and Margin

in € million / margin in percent



#### **Highlights**

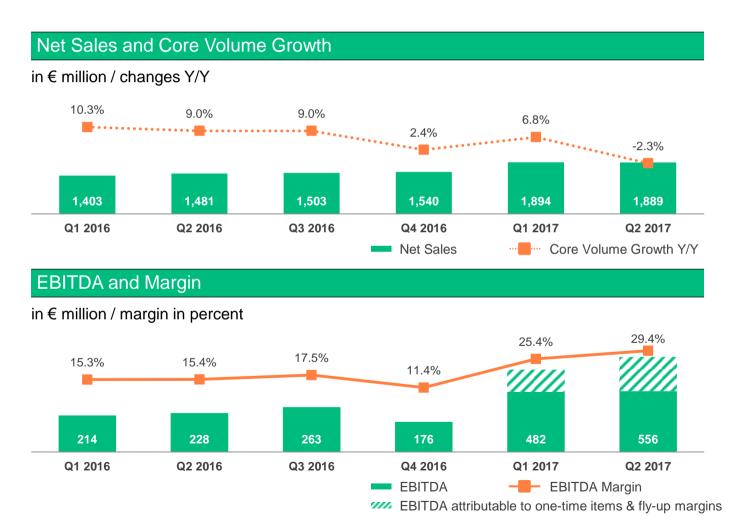
- Above GDP core volume growth (in kt) of 3.5% in 6M 2017
- Slightly declining core volumes in Q2 mainly due to constrained product availability
- Sales increased by 17% Y/Y in Q2 2017 mainly driven by higher prices

- EBITDA margin improved significantly to 24.2% vs. 18.1% in Q2 2016
- EBITDA margin of 22.1% excluding one-time items
- 10th consecutive quarter with Y/Y EBITDA increase

## Q2 2017 – PUR Segment Results

## Polyurethanes – Structurally improving margins in MDI





#### **Highlights**

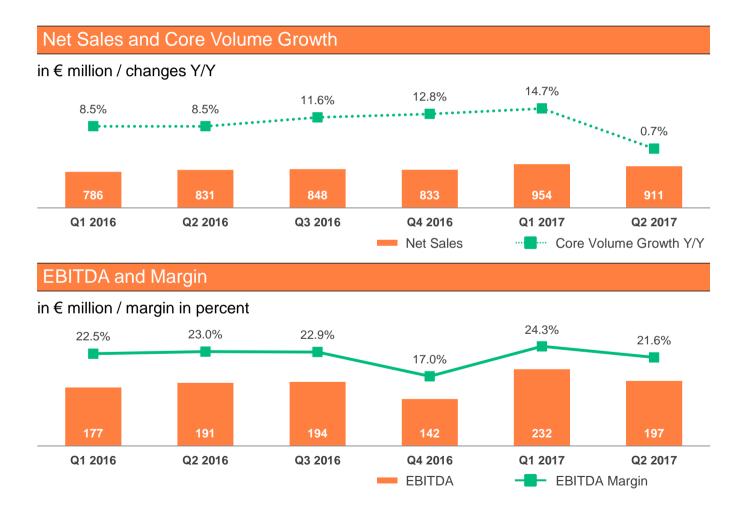
- Solid core volume growth of 2.1% Y/Y in 6M 2017
- Slight core volume decrease of 2.3% Y/Y in Q2 due to constrained product availability
- Selling prices increased by 27% Y/Y in Q2 2017

- EBITDA increased by 144% Y/Y with a margin of 29.4% vs. 15.4% in Q2 2016
- Helped by one-time items of €74m
- Fly-up margins (mainly in TDI) are positively impacting Q1 and Q2

## Q2 2017 – PCS Segment Results

## Polycarbonates – Steady high margin business





#### Highlights

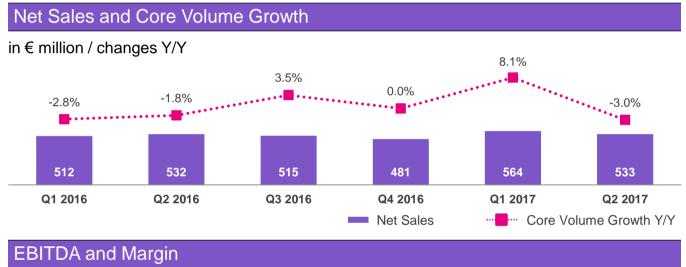
- Strong core volume growth of 7.5% Y/Y in 6M 2017
- Core volumes stable with 0.7% Y/Y in Q2 2017 due to high prior-year basis
- Sales increase by 9.6% Y/Y in Q2 2017, driven by volumes and prices

- EBITDA increased by 3.1% Y/Y due to product mix improvements, compensating higher raw material costs
- Announced price increases expected to balance negative raw material impact in H2 2017

## Q2 2017 – CAS Segment Results



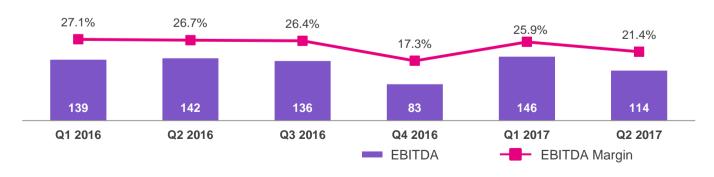
Coatings, Adhesives, Specialties – Quarter affected by volume phasing



#### Highlights

- Solid core volume growth of 2.3% Y/Y in 6M 2017
- Core volumes decreased by 3.0% Y/Y in Q2 2017 due to pre-buying in Q1 2017
- First time in 9 quarters, increase of selling prices Y/Y in Q2 2017

in € million / margin in percent

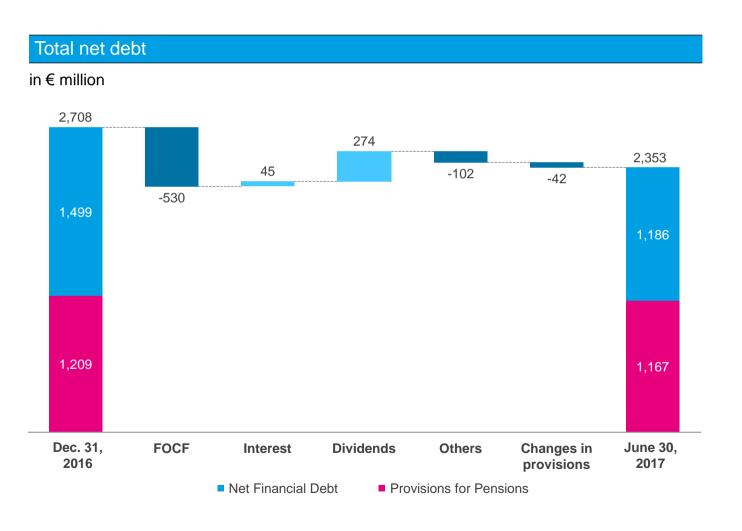


- EBITDA decreased by 19.7% Y/Y due to:
  - higher raw material costs
  - lower sales volumes
  - phasing of price increases
- Temporarily lower margin below par in Q2

## June 30, 2017 – Total Net Debt

## Strong balance sheet





#### Highlights

- Total net debt to EBITDA ratio<sup>(a)</sup> slightly reduced to 0.9x
- Pension provisions decreased slightly to €1,167m due to higher interest rates in Germany
- Equity ratio further improved to 45%

## Guidance 2017

## Fully on track



	FY 2016	Guidance FY 2017 <sup>(a)</sup>	1-6 2017
Core Volume Growth	+7.5%	Low- to mid-single-digit percentage increase Y/Y	+3.5%
FOCF	Ø 2014-2016: €881m	Significantly above the average of the last three years	€530m
ROCE	14.2%	Significantly above the 2016 level	n.a.
Additional financial expectations	FY 2016	Guidance FY 2017 <sup>(a)</sup>	1-6 2017
EBITDA 2017 FY	€2,014m	Significantly above 2016	€1,694m
EBITDA 2017 Q3	Q3: €574m	Significantly above Q3 2016	n.a.
D&A	€683m	~€650m	€319m
Financial results	€-196m	~€-180m	€-88m
Effective tax rate	29.0%	~28%	25.8%
Capex	€419m	~€550m	€166m

## **Upcoming IR Events**



## Find more information on investor.covestro.com

Reporting dates	
<ul><li>October 24, 2017</li><li>February 20, 2018</li><li>April 26, 2018</li></ul>	Q3 2017 Interim Statement Q4 & FY 2017 Annual Report Q1 2018 Interim Statement
Annual General Meeting	
• April 13, 2018	Annual General Meeting, Bonn
Broker conferences	
• August 29, 2017	Commerzbank Sector Conference, Frankfurt
<ul> <li>September 12, 2017</li> </ul>	Credit Suisse 30th Annual Basic Materials Conference, New York
<ul> <li>September 18-19, 2017</li> </ul>	Berenberg and Goldman Sachs 6th German Corporate Conference, Munich
<ul> <li>September 20, 2017</li> </ul>	Baader Investment Conference, Munich
<ul> <li>September 28, 2017</li> </ul>	J.P. Morgan Investor Forum, Milan



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