



# SOLID ORGANIC PERFORMANCE

Merck KGaA, Darmstadt, Germany Q2 2018 results

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# Agenda

**01** Executive summary

**02** Financial overview

**03** Business deep dive

**04** Guidance



01

## EXECUTIVE SUMMARY

# Highlights

## Operations

- ▶ Healthcare – Solid organic sales growth, Mavenclad U.S. submission accepted by FDA (approved in 38 countries)
- ▶ Life Science – Continued strong organic sales performance across all businesses
- ▶ Performance Materials – Strong growth of Semiconductor Solutions and OLED, mitigated by ongoing LC decline

## Financials

- ▶ Org. sales growth of 5.2%; Org. EBITDA pre decline of -2.7%
- ▶ H1 org. sales growth of 4.2%; H1 org. EBITDA pre decline of -6.2%
- ▶ FY 2018 guidance confirmed<sup>1</sup> – net sales: €14.1-14.6 bn & EBITDA pre: €3,750-4,000 m

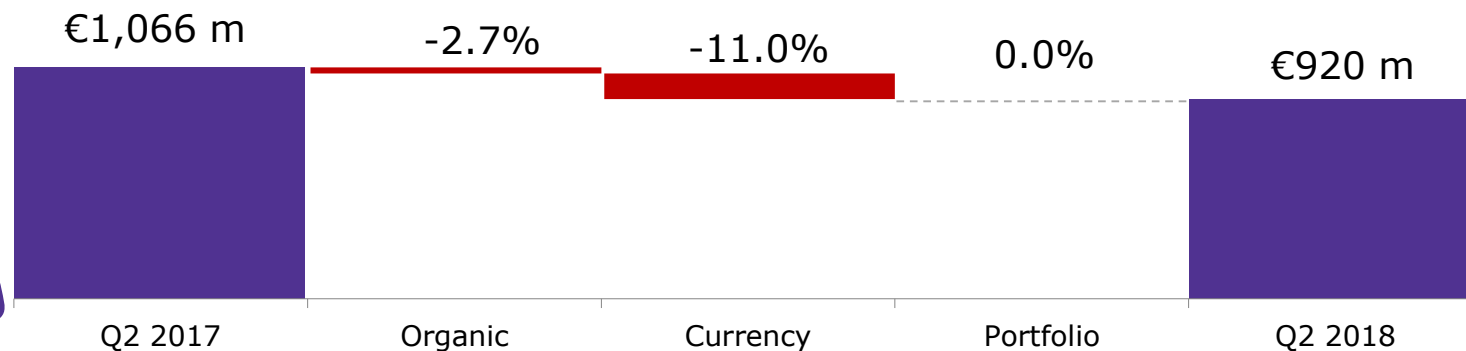
## Strong organic growth in Life Science and Healthcare almost offset by FX

### Q2 2018 YoY net sales

	Organic	Currency	Portfolio	Total
Healthcare	4.7%	-4.9%	0.0%	<b>-0.2%</b>
Life Science	7.7%	-4.6%	0.0%	<b>3.2%</b>
Performance Materials	0.4%	-4.6%	0.0%	<b>-4.2%</b>
Group	5.2%	-4.7%	0.0%	<b>0.5%</b>

- Healthcare driven by solid growth of core business and increasing contribution from Mavenclad and Bavencio launches
- Life Science's above-market growth driven by all business segments
- Flat Performance Materials due to growth of Semiconductor, compensating declining Display

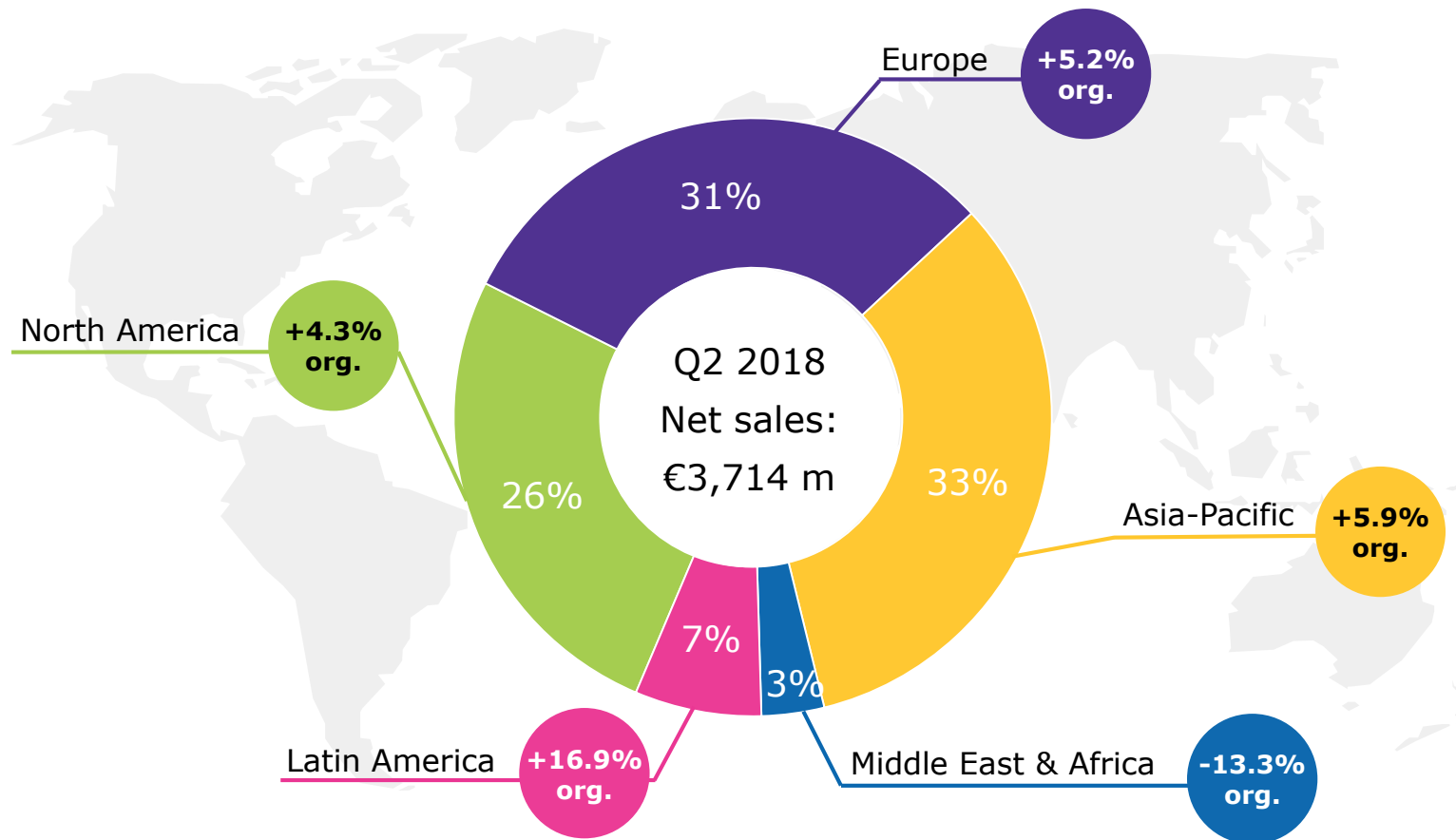
### Q2 YoY EBITDA pre



- Organic decline of EBITDA pre explained by Healthcare's LY one time effect, higher launch and R&D investments and PM business mix
- Currency effects mainly related to EUR/USD development

# Organic growth driven by LATAM, APAC, Europe and North America

## Regional breakdown of net sales [€ m]



## Regional organic development

- Solid growth in Europe reflects Mavenclad ramp up, Fertility resilience, and solid demand in Life Science
- Solid growth in North America from Life Science; Bavencio and Fertility overcompensating declining Rebif
- Solid growth in APAC due to strong Life Science and Glucophage in China, Semiconductor outweighing LC decline
- Strong performance in LATAM across all major businesses
- MEA reflects flat LS, PM and decline in HC





02

## FINANCIAL OVERVIEW

## Q2 2018: Overview

### Key figures

[€m]	Q2 2017	Q2 2018	Δ
Net sales	3,695	<b>3,714</b>	0.5%
EBITDA pre	1,066	<b>920</b>	-13.7%
Margin (in % of net sales)	28.9%	24.8%	
EPS pre	1.51	<b>1.23</b>	-18.5%
Operating cash flow	520	<b>367</b>	-29.3%

[€m]	Dec. 31, 2017	June 30, 2018	Δ
Net financial debt	10,144	<b>10,674</b>	5.2%
Working capital	3,387	<b>3,677</b>	8.5%
Employees*	52,941	<b>54,009</b>	2.0%

\*Thereof CH Headcount ~3.400;  
Totals may not add up due to rounding

### Comments

- EBITDA pre & margin reduction mainly driven by LY milestone in Healthcare and ongoing LC decline
- Lower EPS pre driven by EBITDA pre decline
- Operating cash flow impacted by higher working capital
- Net financial debt increase reflects lower operating cash flow amid dividend payment
- Working capital reflects organic sales growth

# Reported figures

## Reported results

[€m]	Q2 2017	Q2 2018	Δ
EBIT	608	<b>392</b>	-35.4%
Financial result	-66	<b>-65</b>	-1.8%
Profit before tax	542	<b>328</b>	-39.5%
Income tax	-130	<b>-84</b>	-35.4%
<i>Effective tax rate (%)</i>	23.9%	<b>25.5%</b>	
Net income <sup>*</sup>	426	<b>247</b>	-42.0%
EPS (€) <sup>*</sup>	0.98	<b>0.57</b>	-41.8%

## Comments

- Lower EBIT in line with EBITDA pre decrease; LY EBIT included Vevey write-up (~ €70 m)
- Profit before tax in line with EBIT decrease
- Effective tax rate within guidance range of ~24-26%

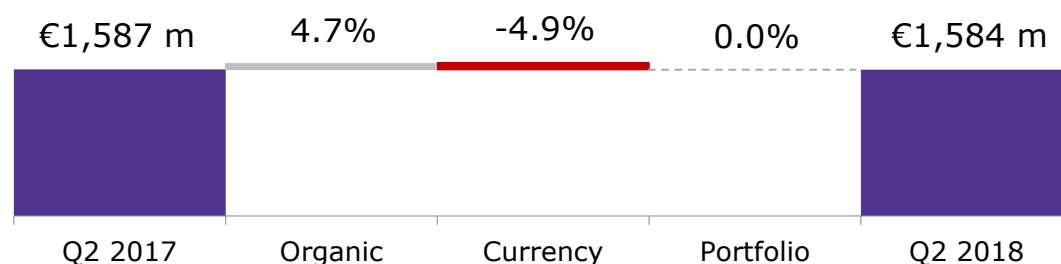
<sup>\*</sup>From continuing and discontinued operations;  
Totals may not add up due to rounding

# Healthcare: Solid organic performance offsets FX headwinds; Profitability burdened by LY's favorable one-time effect

## Healthcare P&L

[€m]	Q2 2017	Q2 2018
Net sales	1,587	<b>1,584</b>
Marketing and selling	-617	<b>-592</b>
Administration	-70	<b>-79</b>
Research and development	-381	<b>-407</b>
EBIT	326	<b>155</b>
EBITDA	439	<b>338</b>
EBITDA pre	450	<b>379</b>
Margin (in % of net sales)	28.4%	<b>23.9%</b>

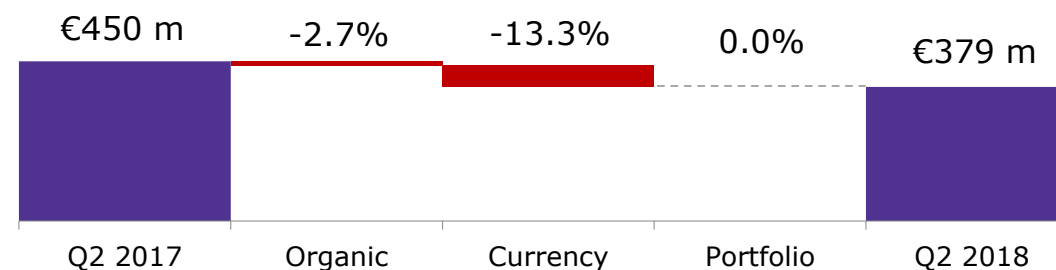
## Net sales bridge



## Comments

- Organic growth supported by strong Fertility, Glucophage (China) as well as Mavenclad and Bavencio launches
- Erbitux facing ongoing competition and price pressure in major markets
- Rebif showing stable market share in Interferons in North America, growing competition in Europe
- Lower M&S mainly due to favorable FX; higher M&S for Mavenclad and Bavencio offset by lower investment in declining products
- R&D investment picking up, expected further ramp-up in H2
- EBITDA pre reflects FX headwinds and higher investments; LY EBITDA pre contained Bavencio milestone payment (+ €36 m)

## EBITDA pre bridge

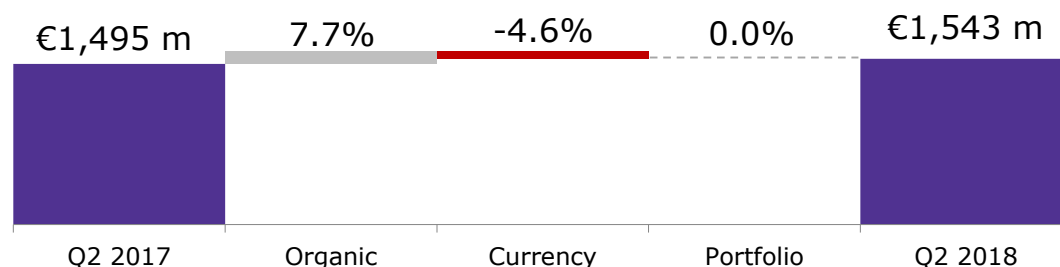


# Life Science: Strong organic sales growth across all businesses, profitability reflects phasing and unfavorable one-time effects

## Life Science P&L

[€m]	Q2 2017	Q2 2018
Net sales	1,495	<b>1,543</b>
Marketing and selling	-443	<b>-451</b>
Administration	-65	<b>-60</b>
Research and development	-67	<b>-61</b>
EBIT	221	<b>254</b>
EBITDA	411	<b>442</b>
EBITDA pre	454	<b>452</b>
Margin (in % of net sales)	30.4%	<b>29.3%</b>

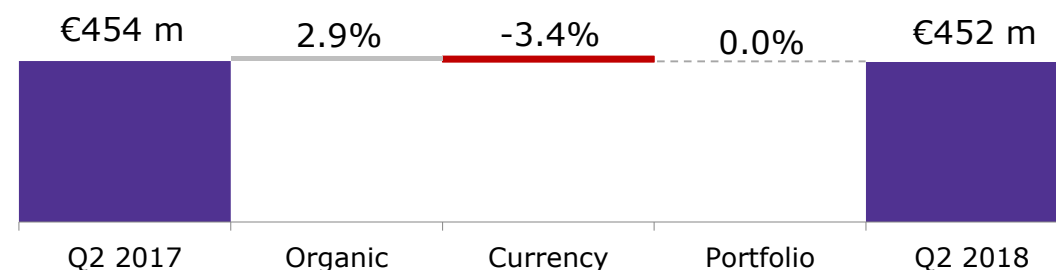
## Net sales bridge



## Comments

- Double-digit growth of Process Solutions driven by all major businesses, especially strong demand for single-use, cell culture media and filters
- Continued momentum in Applied Solutions with mid-single digit growth, reflecting solid demand for lab water and reference materials
- Solid organic growth of Research Solutions driven by all businesses across all regions, especially reagents and laboratory
- Profitability reflects unfavorable portfolio mix, one-time effects of startup costs on innovation projects and dissolving Sigma Aldrich regional operating model

## EBITDA pre bridge



# Life Science: Phasing and unfavorable one-time effects have visible impact on Q2 margin

1

## Portfolio mix effect ~ €5 m

- During H1 2018 strong growth of single-use & hardware with lower margin
- Consumables with higher margin to follow in H2 2018 after initial hardware investment

2

## Start-up costs on strategic initiatives ~ €5 m

- Higher spend on capacities related to Gene-editing and E2E Solutions
- Different phasing between revenue recognition (milestones based) and spending (running costs)

3

## Dissolving of regional operating models ~ €10 m

- Supply chain consolidation led to inventory write downs
- Synergy realization on track

**Full year guidance confirmed**

# Life Science: Strong growth in all business segments across all regions

Business Unit  
Q2 Sales

Growth  
Drivers

Underlying  
Trends

**RESEARCH**  
€518 m



**Outperforming market with mid single digit organic growth**

Reagents and Kits

APAC

- Growth in volume of experiments
- Continuing growth in academic funding
- Investment in industry R&D

**PROCESS**  
€612 m



**Outperforming market with double digit growth**

Downstream processing, cell culture, single use

APAC

- Drug volume growth
  - from biologics
  - from emerging modalities
- Continued shift to single-use

**APPLIED**  
€414 m



**Outperforming the market for the 4th consecutive quarter**

Lab Water, Advanced Analytical

APAC

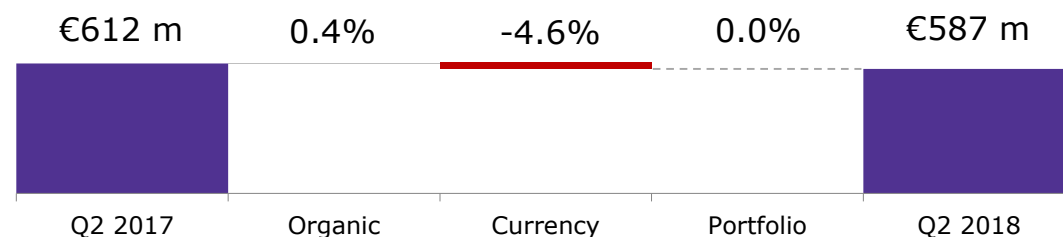
- Volume growth from
  - Population growth
  - Rise in quality standards
  - Increased testing needs

# Performance Materials: Organic growth of Semiconductor Solutions and OLED compensates ongoing LC decline

## Performance Materials P&L

[€m]	Q2 2017	Q2 2018
Net sales	612	<b>587</b>
Marketing and selling	-64	<b>-61</b>
Administration	-19	<b>-23</b>
Research and development	-59	<b>-59</b>
EBIT	167	<b>131</b>
EBITDA	231	<b>192</b>
EBITDA pre	239	<b>196</b>
Margin (in % of net sales)	39.1%	<b>33.4%</b>

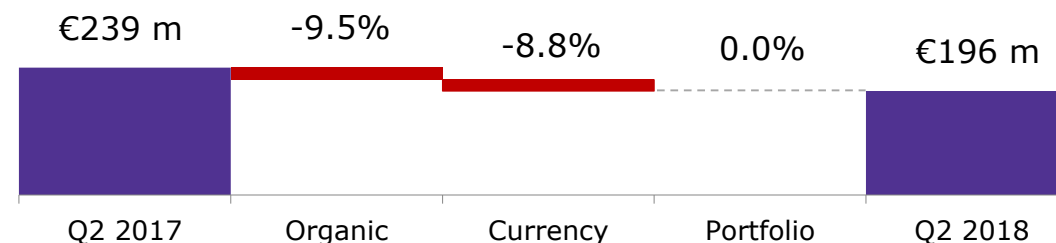
## Net sales bridge



## Comments

- Flat PM due to strong growth of Semiconductor Solutions and OLED compensating LC decline
- Above-market growth of Semiconductor Solutions reflects strong demand of dielectrics, lithography and deposition materials
- Stronger demand for innovative UB-FFS technology
- Profitability reflects business mix and ongoing LC price development

## EBITDA pre bridge

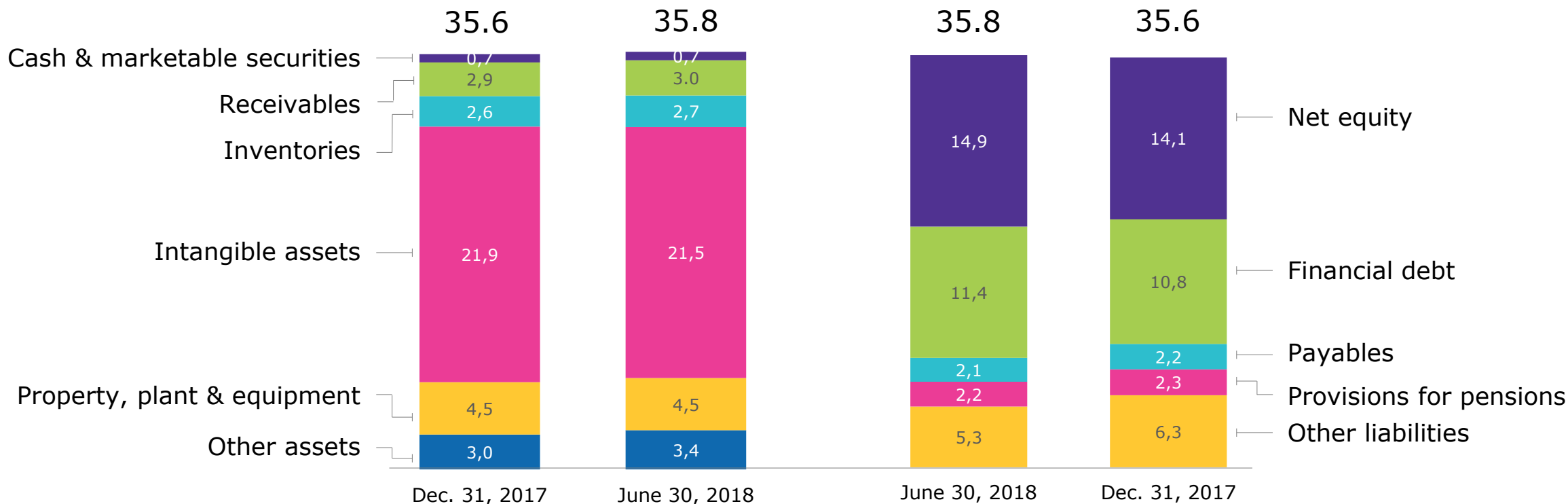




# Balance sheet – deleveraging remains focus

Assets [€ bn]

Liabilities [€ bn]



- Total assets about stable, with an increased equity ratio of 41.6%
- Decrease in intangible assets reflects D&A (-€0.6 bn), FX (+€0.4 bn) and reallocation of CH (-€0.3 bn) to assets held for sale

- Higher financial debt due to weaker operating cashflow and dividend payments
- Other liabilities decrease driven by profit transfer to E. Merck KG, Darmstadt, Germany as well as incentive payments

## Operating cash flow impacted by higher working capital

### Q2 2018 – cash flow statement

[€m]	Q2 2017	Q2 2018	Δ
Profit after tax	427	<b>251</b>	-176
D&A	380	<b>448</b>	68
Changes in provisions	21	<b>34</b>	13
Changes in other assets/liabilities	-333	<b>-243</b>	90
Other operating activities	-15	<b>25</b>	40
Changes in working capital	40	<b>-148</b>	-188
Operating cash flow	520	<b>367</b>	-153
Investing cash flow	-302	<b>-200</b>	102
thereof Capex on PPE	-172	<b>-168</b>	4
Financing cash flow	-184	<b>-295</b>	111

### Cash flow drivers

- D&A increase due to low base LY related to write up of Vevey site (~ €70 m)
- Changes in other assets/liabilities driven by incentive and higher tax payments, mitigated by Peg-pal milestone
- Changes in working capital reflects uptake of receivables in line with business dynamics, LY contained higher payables
- Investing cash flow LY was driven by F-star licensing deals
- Financing cash flow reflects higher dividend payment than LY



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**GUIDANCE**

# Group

## Full-year 2018 guidance\*

### Net sales:

Organic +3% to +5% YoY

FX ~ -3% to -5% YoY

~ € 14.1 – 14.6 bn

### EBITDA pre:

Organic -1% to -3% YoY

FX -5 to -7% YoY

~ € 3,750 – 4,000 m

### EPS pre:

~ € 5.00-5.40

# Group

## 2018 business sector guidance\*



### Net sales

- Moderate organic growth +3% to +5%: ongoing organic Rebif decline offset by growth in other franchises
- Full-year contributions from 2017 launches

### EBITDA pre

- Organic -1% to -2% YoY
- FX -5% to -7% YoY
- ~ €1,580 – 1,650 m (excl. CH)



### Net sales

- Organic growth ~+5% to +6%, slightly above market
- Full realization of expected topline synergies

### EBITDA pre

- Organic ~ +8% YoY
- FX -3% to -5% YoY
- ~€1,830 – 1,880 m



### Net sales

- Slight to moderate organic decline of -2% to -4%
- Volume increases in all businesses
- Continuation of Liquid Crystals sales decline

### EBITDA pre

- Organic -14% to -16% YoY
- FX -6% to -8% YoY
- ~€745 – 785 m



The background features a vibrant, abstract design. On the left side, there are overlapping, organic shapes in shades of purple and cyan. The rest of the page is a solid, bright lime green. The word 'APPENDIX' is centered in the upper right quadrant of the green area.

## **APPENDIX**

# Additional financial guidance 2018

## Further financial details

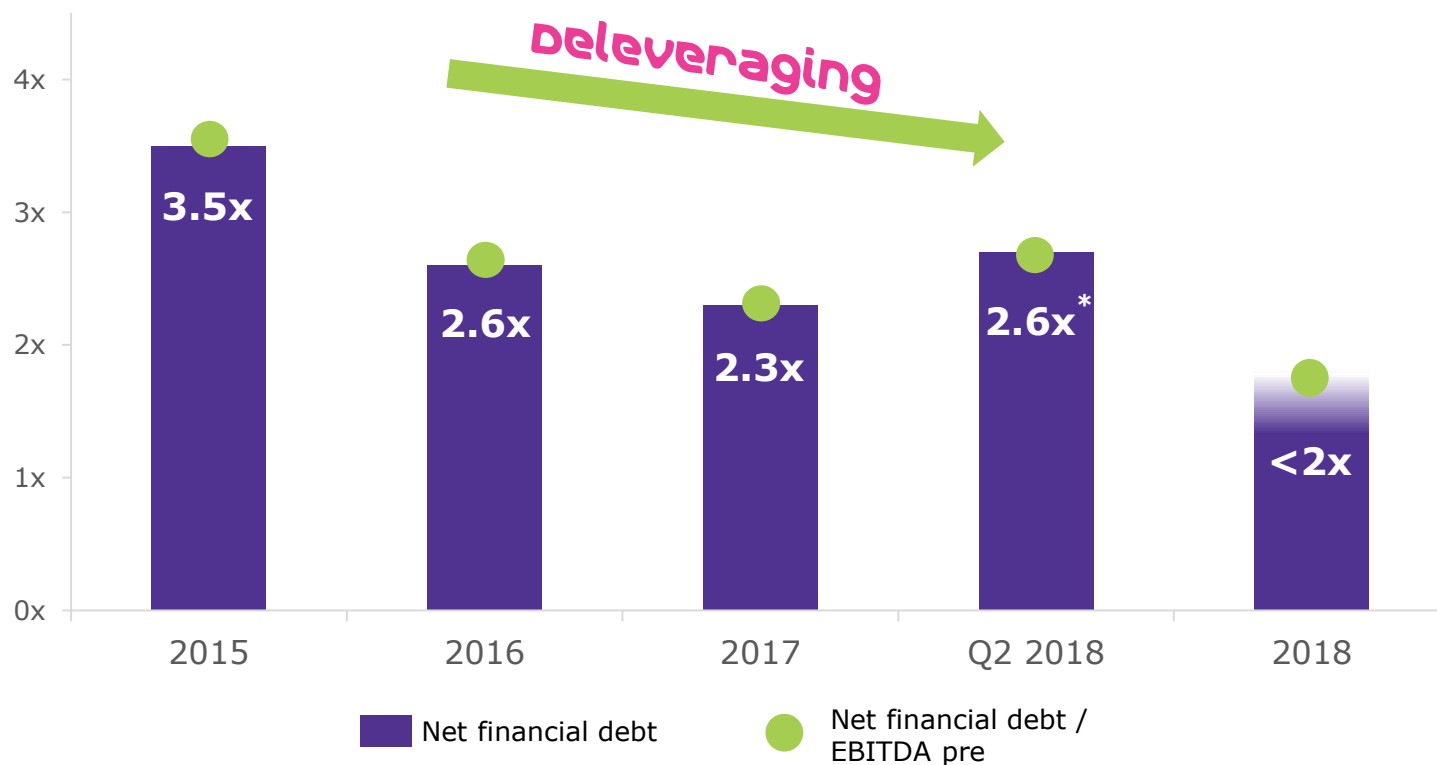
Corporate & Other EBITDA pre	~ -€360 – -400 m
Interest result	~ -€230 – -250 m
Effective tax rate	~ 24% to 26%
Capex on PPE	~ €900 – 950 m
Hedging/USD assumption	<b>2018 hedge ratio ~50-60% at EUR/USD ~ 1.19 to 1.20</b>
2018 Ø EUR/USD assumption	~ 1.19 – 1.22



# Strong focus on cash generation to ensure swift deleveraging

## Net financial debt<sup>1</sup> and leverage development

[Net financial debt/  
EBITDA pre]



## Focus on deleveraging

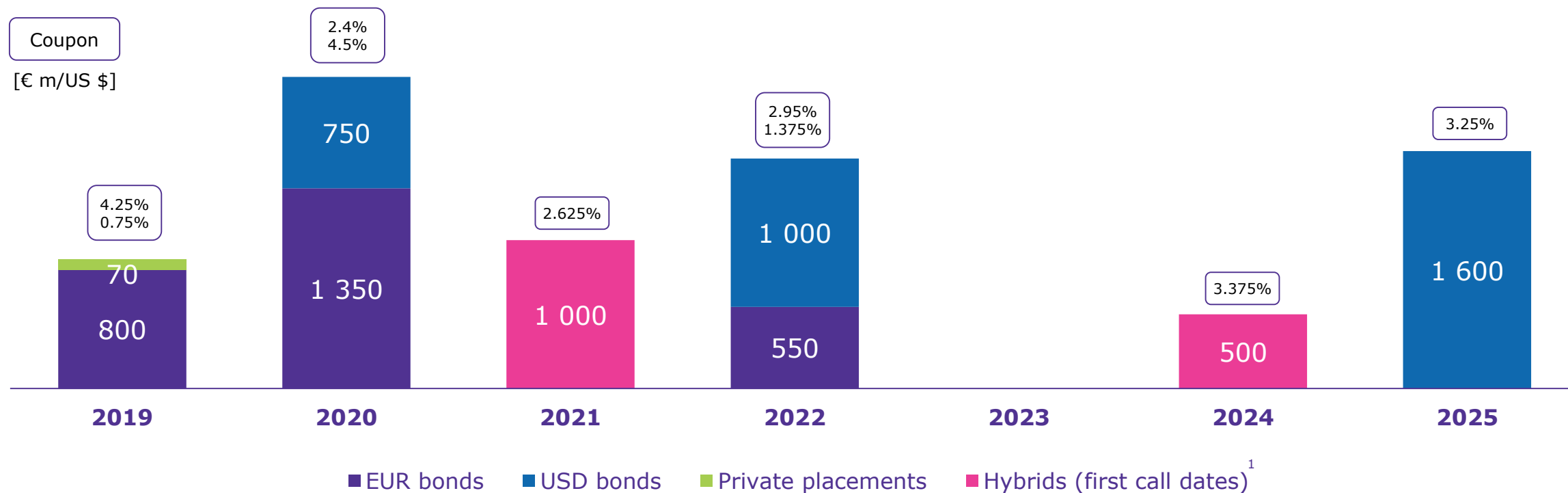
- Commitment to swift deleveraging to ensure a strong investment grade credit rating and financial flexibility
- Cash flow will be used to drive down leverage to expected <2x net debt/EBITDA pre in 2018
- Larger acquisitions (>€500 m) remain ruled out 2018

<sup>1</sup>Net financial debt (without pensions);

\*EBITDA pre (except FY) reflects last twelve months value including CH EBITDA pre (Q2 2018: €39 m)

# Well-balanced maturity profile reflects Sigma-Aldrich financing transactions

Maturity profile as of June 30, 2018



**Financing structure enables flexible and swift deleveraging**

<sup>1</sup>No decision on call rights taken yet

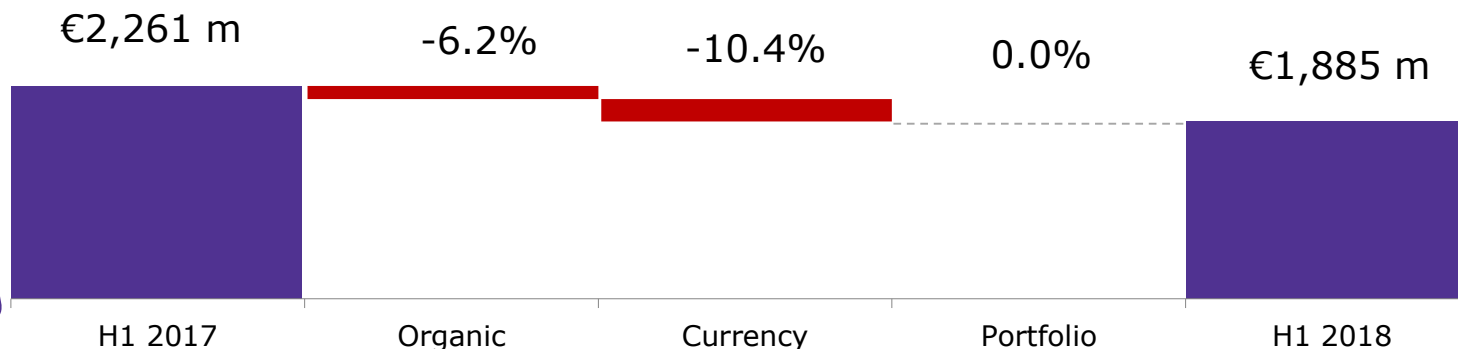
# Organic growth driven by Healthcare and Life Science but more than offset by FX

## H1 2018 YoY net sales

	Organic	Currency	Portfolio	Total
Healthcare	2.8%	-6.0%	0.0%	<b>-3.2%</b>
Life Science	8.3%	-6.5%	0.0%	<b>1.8%</b>
Performance Materials	-1.9%	-6.6%	0.0%	<b>-8.5%</b>
Group	4.2%	-6.3%	0.0%	<b>-2.1%</b>

- Healthcare reflects strong Fertility & Glucophage, Rebif decline partially offset by Mavenclad
- Organic above-market performance in Life Science driven by all business units
- Performance Materials organically lower as growth of Semiconductor and OLED is outweighed by ongoing LC decline
- Strong FX headwinds (-€464 m) in H1 2018

## H1 YoY EBITDA pre



- Organic decline of EBITDA pre driven by Healthcare's higher investments and LY one-time effect, PM business mix and ongoing price decline
- Currency effects mainly related to EUR/USD development

# H1 2018: Overview

## Key figures

[€m]	H1 2017	H1 2018	Δ
Net sales	7,352	7,199	-2.1%
EBITDA pre	2,261	<b>1,885</b>	-16.6%
<i>Margin (in % of net sales)</i>	30.8%	26.2%	
EPS pre	3.24	<b>2.56</b>	-21.0%
Operating cash flow	1,297	<b>748</b>	-42.4%

[€m]	Dec. 31, 2017	Jun. 30, 2018	Δ
Net financial debt	10,144	<b>10,674</b>	5.2%
Working capital	3,387	<b>3,677</b>	8.5%
Employees	52,941	<b>54,009</b>	2.0%

## Comments

- EBITDA pre & margin reduction reflects LY one-time effects in Healthcare, FX headwinds and ongoing LC decline
- Operating cash flow driven by business dynamics, LY cash flow reflects positive tax effects
- Net financial debt increase due to higher dividend payment
- Working capital reflects LY Glucophage repatriation and business dynamics

# Reported figures

## Reported results

[€m]	H1 2017	H1 2018	Δ
EBIT	1,320	<b>895</b>	-32.2%
Financial result	-134	<b>-126</b>	-6.5%
Profit before tax	1,186	<b>769</b>	-35.2%
Income tax	-280	<b>-192</b>	-31.6%
<i>Effective tax rate (%)</i>	23.6%	<b>24.9%</b>	
Net income <sup>*</sup>	948	<b>588</b>	-38.0%
EPS (€) <sup>*</sup>	2.18	<b>1.35</b>	-38.1%

## Comments

- Lower EBIT reflects decreased EBITDA pre, one-time effects, FX headwinds and LC decline; LY EBIT driven by write-up of Vevey site (~ -€70 m)
- Profit before tax in line with EBIT decrease
- Effective tax rate within guidance range of ~24% to 26%

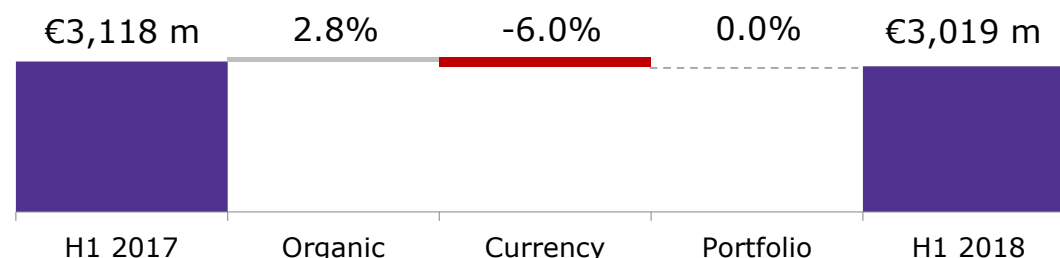
<sup>\*</sup>From continuing and discontinued operations;  
Totals may not add up due to rounding

# Healthcare: Solid organic sales growth while profitability declines in relation to FX headwinds and LY's substantial favorable one-time effects

## Healthcare P&L

[€m]	H1 2017	H1 2018
Net sales	3,118	<b>3,019</b>
Marketing and selling	-1,184	<b>-1,142</b>
Administration	-139	<b>-152</b>
Research and development	-750	<b>-785</b>
EBIT	727	<b>350</b>
EBITDA	1,021	<b>717</b>
EBITDA pre	1,036	<b>758</b>
Margin (in % of net sales)	33.2%	<b>25.1%</b>

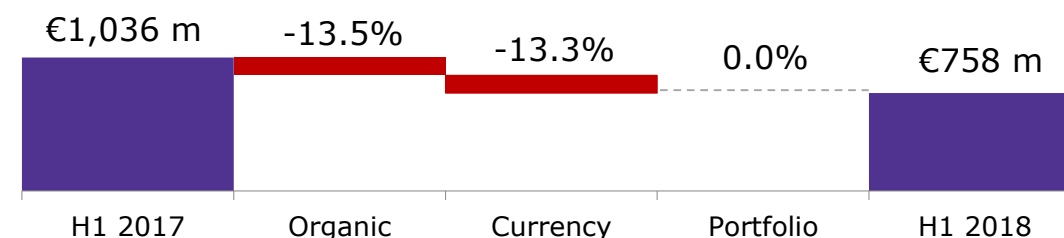
## Net sales bridge



## Comments

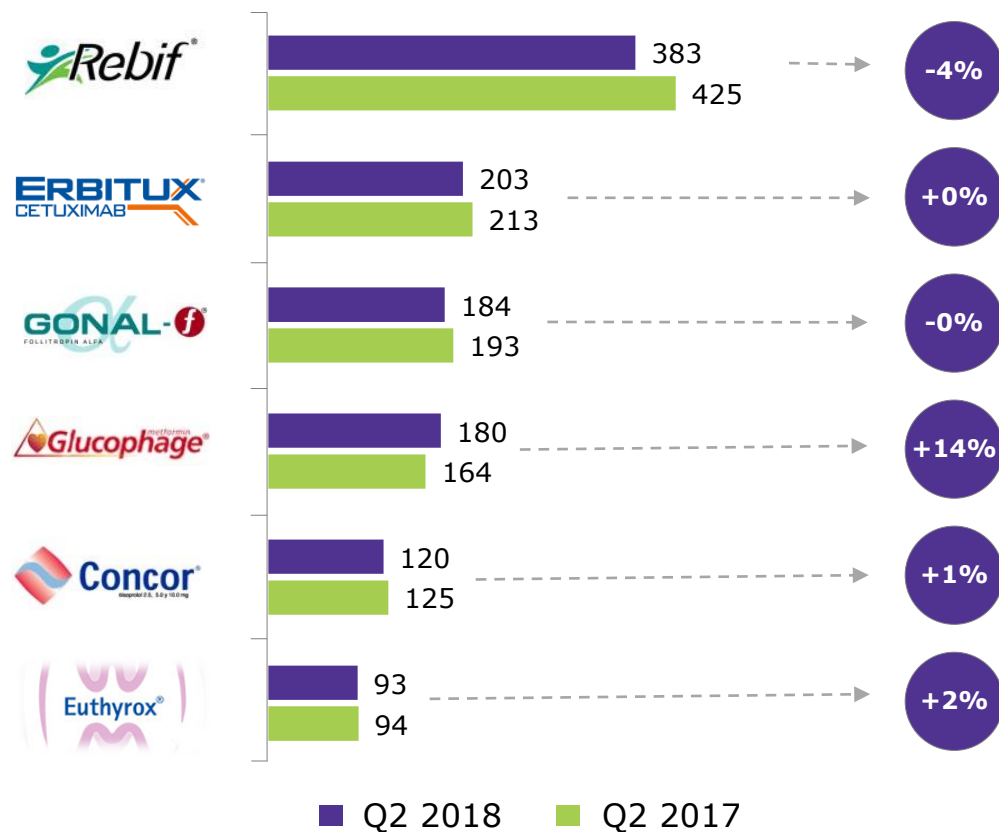
- Organic growth supported by strong Fertility and Glucophage; Mavenclad and Bavencio contribution on track
- Rebif with ongoing volume and price declines in Europe and stable market shares in Interferons market in North America, partially offset by Mavenclad
- Erbitux facing ongoing competition and price pressure in major markets; decline is overcompensated by Bavencio
- Lower Marketing & Selling mainly due to favorable FX; higher M&S for Mavenclad and Bavencio offset by lower investment in mature products (esp. Rebif and Erbitux)
- R&D investment picking up, expected further ramp-up in H2
- Profitability reflects significant FX headwinds and unfavorable product mix mitigated by Kuvan milestone payment (+€50 m); LY included royalty income swap (€116 m) and Bavencio Milestone payments (~€73 m)

## EBITDA pre bridge

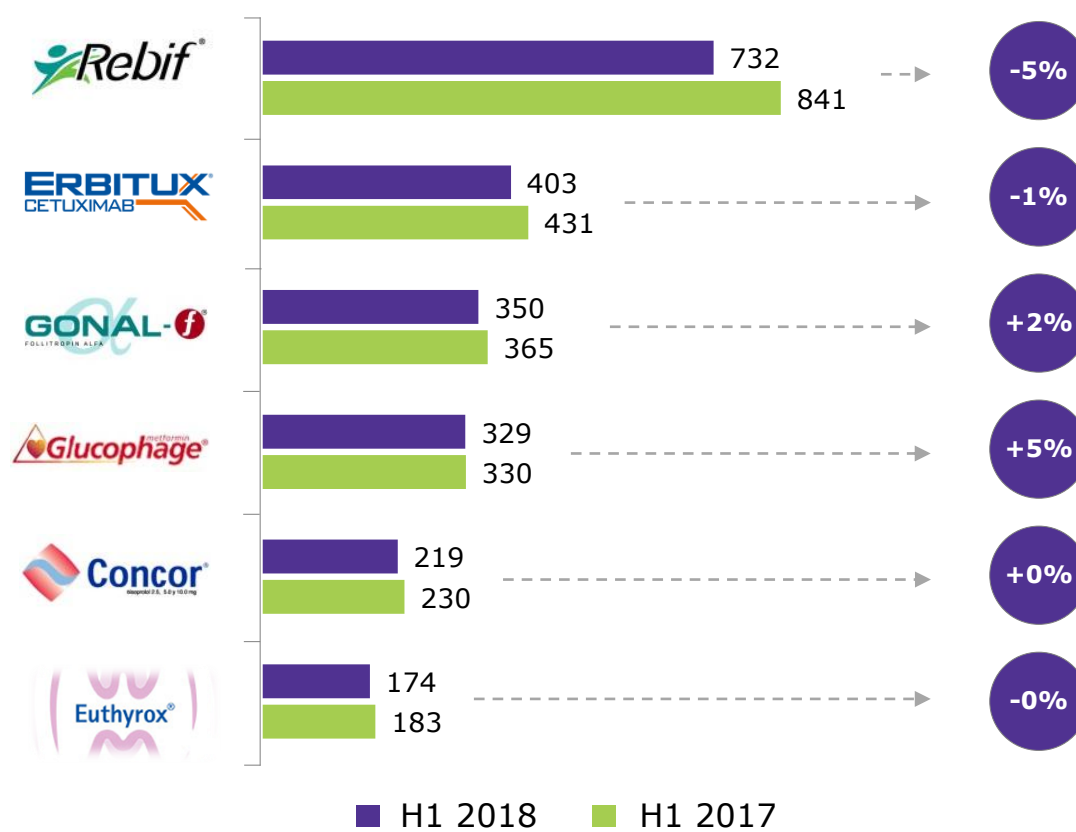


# Healthcare organic growth by franchise/product

Q2 2018 organic sales growth [%]  
by key product [€ m]



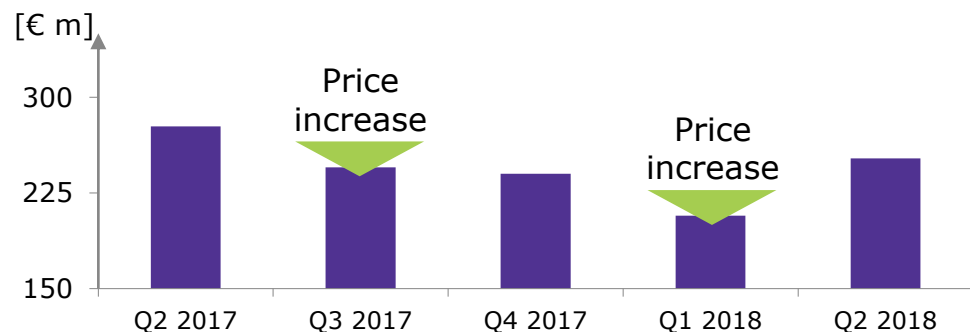
H1 2018 organic sales growth [%]  
by key product [€ m]



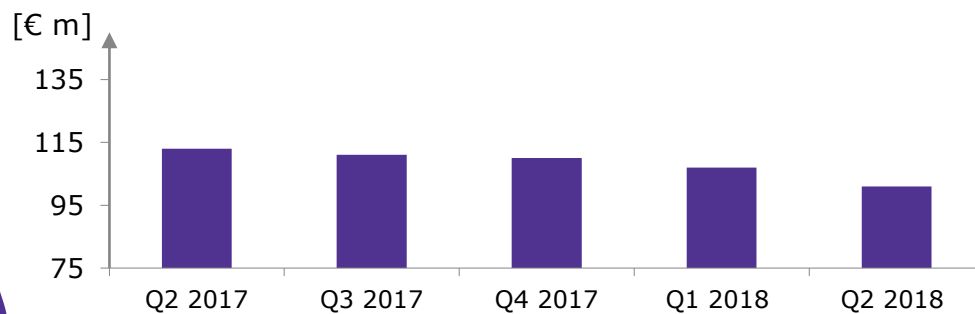
# Rebif: Ongoing decline in line with interferon market

## Rebif sales evolution

### North America



### Europe



### Q2 drivers

-2.5% org.

- Price
- Volume
- FX

### Q2 drivers

-9.7% org.

- Price
- Volume
- FX

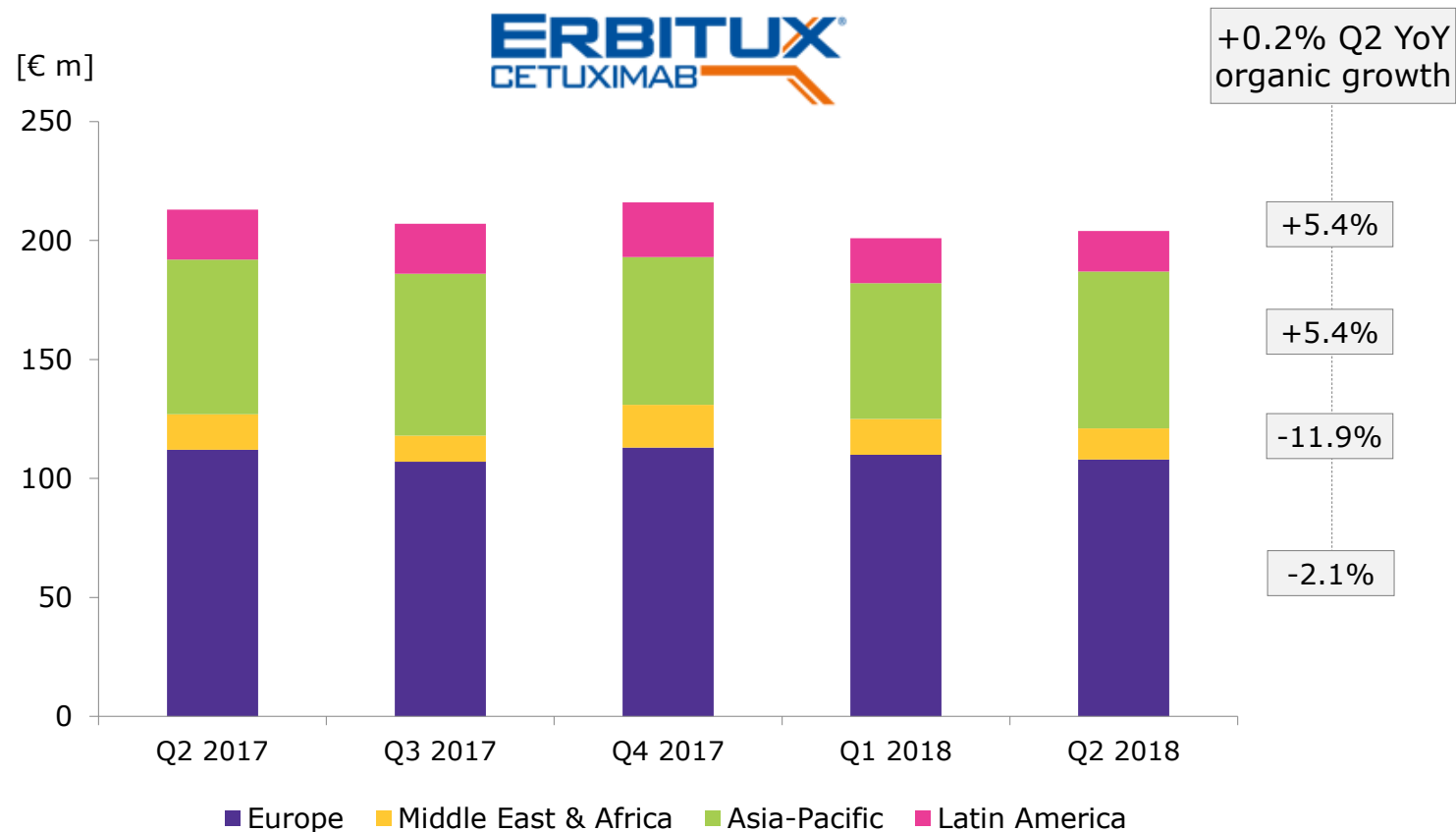
## Q2 2018 Rebif performance

- Rebif sales of €383 m in Q2 2018 reflect organic decline of 4.2% and negative FX effect of -5.7%
- Market shares within interferons stable due to high retention rates and known long-term track record
- Ongoing organic decline in Europe driven by competitive environment incl. competition from orals



# Erbitux: A challenging market environment

## Erbitux sales by region



## Q2 2018 Erbitux performance

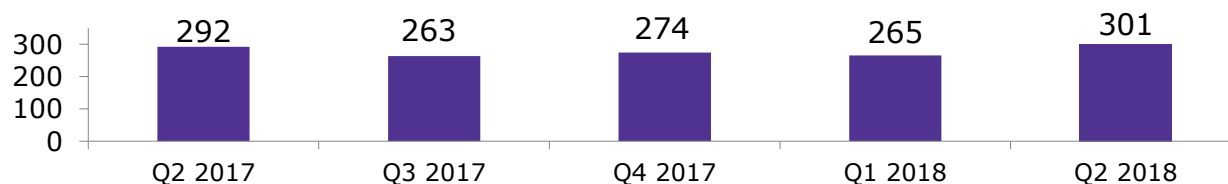
- Sales organically about stable, absolute decrease to €203 m due to FX headwinds mainly from LATAM and APAC
- Europe impacted by competition, price reductions and shrinking market size due to increasing immuno-oncology trials
- APAC with solid organic growth especially in Japan, last year impacted by inventory destocking
- LATAM solid, while MEA affected by tender phasing from Q1 2018

# Solid organic growth of Fertility, General Medicine and Endocrinology

## Sales evolution

### Fertility

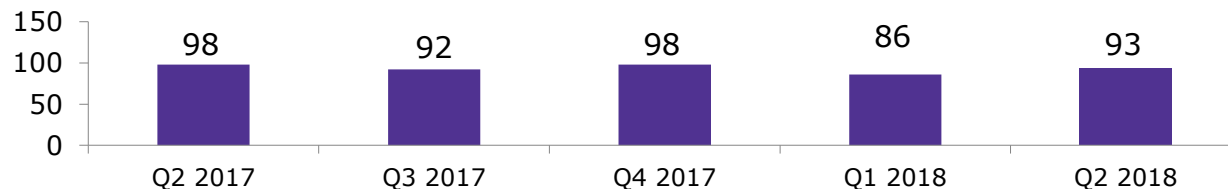
[€ m]



➔ Organic  
+8.0% org.

### Endocrinology

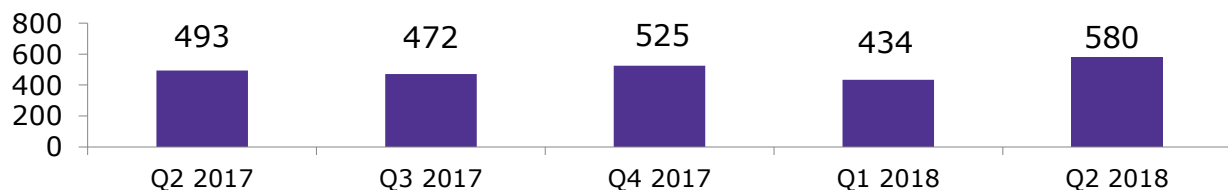
[€ m]



➔ Organic  
2.0% org.

### General Medicine\*

[€ m]



➔ Organic  
2.9% org.

## Q2 2018 organic drivers

- Fertility with strong growth across all major regions, especially in Europe, North America and APAC
- Gonal-f shows slight growth, supported by increasing demand in North America and China, mitigated by competition from biosimilars in the EU
- Rest of Fertility portfolio shows further increases, especially in China and Europe
- General Medicine reflects solid growth of Glucophage (China)
- Endocrinology posts slight growth driven by organic growth in major markets, mitigated by lower demand in U.S.

# Clinical pipeline

August 1, 2018

## Phase I

**M2698**  
**p70S6K & Akt inhibitor**  
Solid tumors

**M3814**  
**DNA-PK inhibitor**  
Solid tumors

**M6620 (VX-970)**  
**ATR inhibitor**  
Solid tumors

**M4344 (VX-803)**  
**ATR inhibitor**  
Solid tumors

**M3541**  
**ATM inhibitor**  
Solid tumors

**M8891**  
**MetAP2 inhibitor**  
Solid tumors

**M7583**  
**BTK inhibitor**  
Hematological malignancies

**avelumab**  
**anti-PD-L1 mAb**  
Solid tumors

**avelumab**  
**anti-PD-L1 mAb**  
Hematological malignancies

**M9241 (NHS-IL12)**  
**Cancer immunotherapy**  
Solid tumors

**M7824**  
**anti-PD-L1/TGFbeta trap**  
Solid tumors

**M4112**  
**Cancer immunotherapy**  
Solid tumors

**M6495**  
**anti-ADAMTS-5 nanobody**  
Osteoarthritis

**M1095 (ALX-0761)<sup>2</sup>**  
**anti-IL-17 A/F nanobody**  
Psoriasis

**M5717**  
**PeEF2 inhibitor**  
Malaria

## Phase II

**tepotinib**  
**c-Met kinase inhibitor**  
Non-small cell lung cancer

**tepotinib**  
**c-Met kinase inhibitor**  
Hepatocellular cancer

**avelumab**  
**anti-PD-L1 mAb**  
Merkel cell cancer 1L<sup>1</sup>

**avelumab**  
**anti-PD-L1 mAb**  
Solid tumors<sup>3</sup>

**avelumab**  
**anti-PD-L1 mAb**  
Non-small cell lung cancer<sup>3</sup>

**avelumab**  
**anti-PD-L1 mAb**  
Urothelial cancer<sup>3</sup>

**abrituzumab<sup>4</sup>**  
**pan-av integrin inhibiting mAb**  
Colorectal cancer 1L<sup>1</sup>

**sprifermin**  
**fibroblast growth factor 18**  
Osteoarthritis

**atacept**  
**anti-BlyS/APRIL fusion protein**  
Systemic lupus erythematosus

**atacept**  
**anti-BlyS/APRIL fusion protein**  
IgA nephropathy

**evobrutinib**  
**BTK inhibitor**  
Rheumatoid arthritis

**evobrutinib**  
**BTK inhibitor**  
Systemic lupus erythematosus

**evobrutinib**  
**BTK inhibitor**  
Multiple sclerosis

- Oncology
- Immuno-Oncology
- Immunology
- Neurology
- Global Health

## Phase III

**avelumab - anti-PD-L1 mAb**  
Non-small cell lung cancer 1L<sup>1</sup>

**avelumab - anti-PD-L1 mAb**  
Gastric cancer 1L-M<sup>1M</sup>

**avelumab - anti-PD-L1 mAb**  
Ovarian cancer platinum resistant/refractory

**avelumab - anti-PD-L1 mAb**  
Ovarian cancer 1L<sup>1</sup> and 1L-M<sup>1M</sup>

**avelumab - anti-PD-L1 mAb**  
Ovarian cancer 1L<sup>1,5</sup>

**avelumab - anti-PD-L1 mAb**  
Urothelial cancer 1L-M<sup>1M</sup>

**avelumab - anti-PD-L1 mAb**  
Renal cell cancer 1L<sup>1</sup>

**avelumab - anti-PD-L1 mAb**  
Locally advanced head and neck cancer

## Registration

**cladribine tablets**  
**lymphocyte-targeting agent**  
Relapsing multiple sclerosis<sup>6</sup>

<sup>1</sup> First-line treatment; <sup>1M</sup> First-line maintenance treatment.

<sup>2</sup> As announced on March 30 2017, in an agreement with Avillion, anti-IL-17 A/F nanobody will be developed by Avillion for plaque psoriasis and commercialized by Merck KGaA, Darmstadt, Germany. <sup>3</sup> Avelumab combination studies with talazoparib, axitinib, ALK inhibitors, chemotherapy, or novel immunotherapies. <sup>4</sup> As announced on May 2 2018, in an agreement with SFJ Pharmaceuticals Group, abrituzumab will be developed by SFJ for colorectal cancer through Phase II/III clinical trials. <sup>5</sup> Avelumab in combination with talazoparib. <sup>6</sup> As announced on July 30 2018, the US Food and Drug Administration (FDA) has accepted the resubmission of the New Drug Application (NDA) for cladribine tablets.

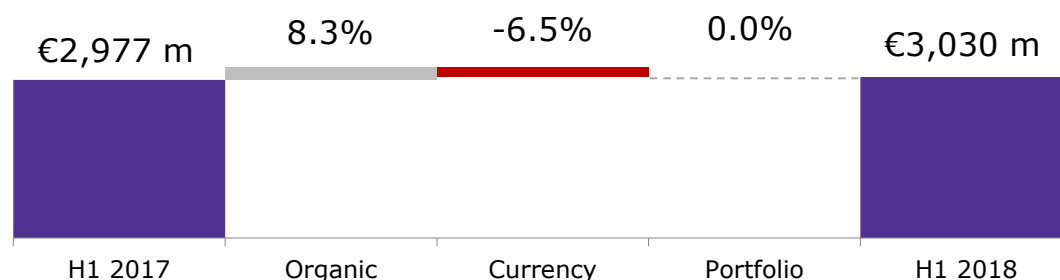
Pipeline products are under clinical investigation and have not been proven to be safe and effective. There is no guarantee any product will be approved in the sought-after indication.

# Life Science: Strong organic performance across all business; Profitability reflects Q2 phasing and one-time effects

## Life Science P&L

[€m]	H1 2017	H1 2018
Net sales	2,977	<b>3,030</b>
Marketing and selling	-891	<b>-859</b>
Administration	-135	<b>-130</b>
Research and development	-129	<b>-120</b>
EBIT	457	<b>527</b>
EBITDA	841	<b>884</b>
EBITDA pre	900	<b>906</b>
Margin (in % of net sales)	30.2%	<b>29.9%</b>

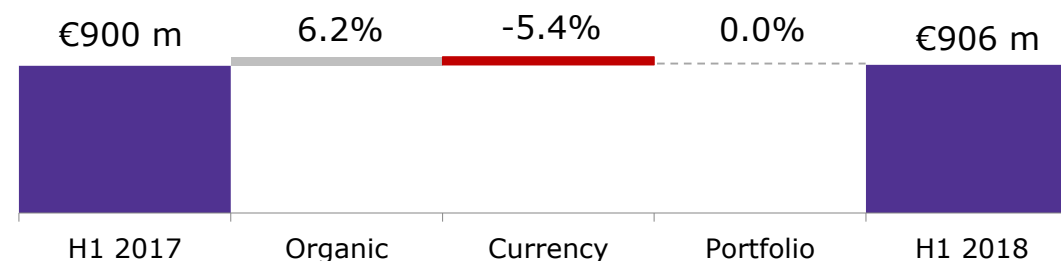
## Net sales bridge



## Comments

- Process Solutions with double-digit growth driven by all major businesses, especially high demand for single use and cell-culture media
- Applied Solutions shows mid single-digit organic growth, fueled by all major businesses across all major regions
- Research Solutions posts solid organic growth from high demand across all major businesses, mainly laboratory & specialty chemicals and reagents
- Profitability reflects unfavorable portfolio mix, one-time effects of startup costs on innovation projects and dissolving Sigma Aldrich regional operating model

## EBITDA pre bridge



# Performance Materials: Adjusting margin level due to ongoing LC decline

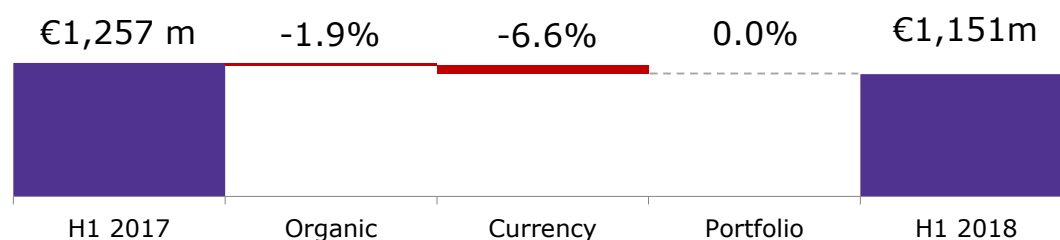
## Performance Materials P&L

[€m]	H1 2017	H1 2018
Net sales	1,257	<b>1,151</b>
Marketing and selling	-126	<b>-121</b>
Administration	-36	<b>-42</b>
Research and development	-116	<b>-118</b>
EBIT	362	<b>267</b>
EBITDA	487	<b>384</b>
EBITDA pre	503	<b>392</b>
Margin (in % of net sales)	40.0%	<b>34.0%</b>

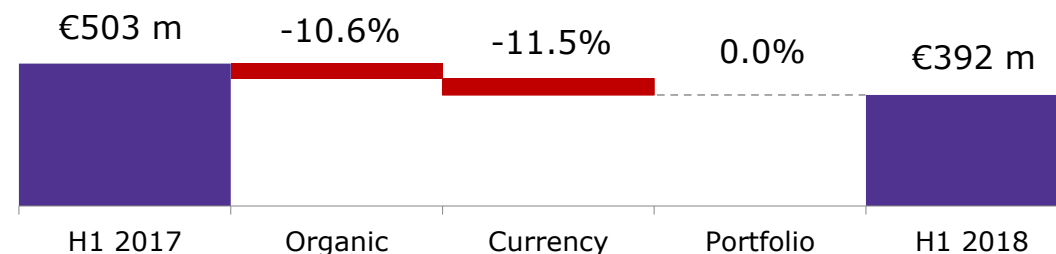
## Comments

- Strong growth of Semiconductor Solutions and OLED more than offset by ongoing LC decline
- Stronger demand for innovative UB-FFS technology
- Semiconductor Solutions with above-market growth due to strong demand from all major material classes, esp. dielectric materials
- Lower profitability reflects FX headwinds and business mix from ongoing LC decline

## Net sales bridge



## EBITDA pre bridge



# Cash flow statement

## H1 2018 – cash flow statement

[€m]	H1 2017	H1 2018	Δ
Profit after tax	952	<b>593</b>	-359
D&A	828	<b>876</b>	48
Changes in provisions	72	<b>50</b>	-22
Changes in other assets/liabilities	-200	<b>-478</b>	-278
Other operating activities	-28	<b>15</b>	43
Changes in working capital	-328	<b>-309</b>	19
Operating cash flow	1,297	<b>748</b>	-549
Investing cash flow	-704	<b>-412</b>	292
thereof Capex on PPE	-372	<b>-396</b>	-24
Financing cash flow	-474	<b>-298</b>	176

## Cash flow drivers

- Profit after tax reflects lower EBIT
- D&A increase due to low base LY related to write up of Vevey site (~ €70 m)
- Changes in other assets/liabilities reflects LY positive tax effects and cash proceeds from Peg-pal milestone
- Investing cash flow LY was driven by Vertex and F-star licensing deals
- Financing cash flow reflects repayment of USD400 m bond and higher dividend payment, compensated by increased bank loan and commercial paper

# Adjustments in Q2 2018

## Adjustments in EBIT

[€m]	Q2 2017		Q2 2018	
	Adjustments	thereof D&A	Adjustments	thereof D&A
Healthcare	-56	-68	40	0
Life Science	46	3	26	16
Performance Materials	16	7	5	1
Corporate & Other	16	-3	26	0
Total	22	-61	97	17

# Adjustments in H1 2018

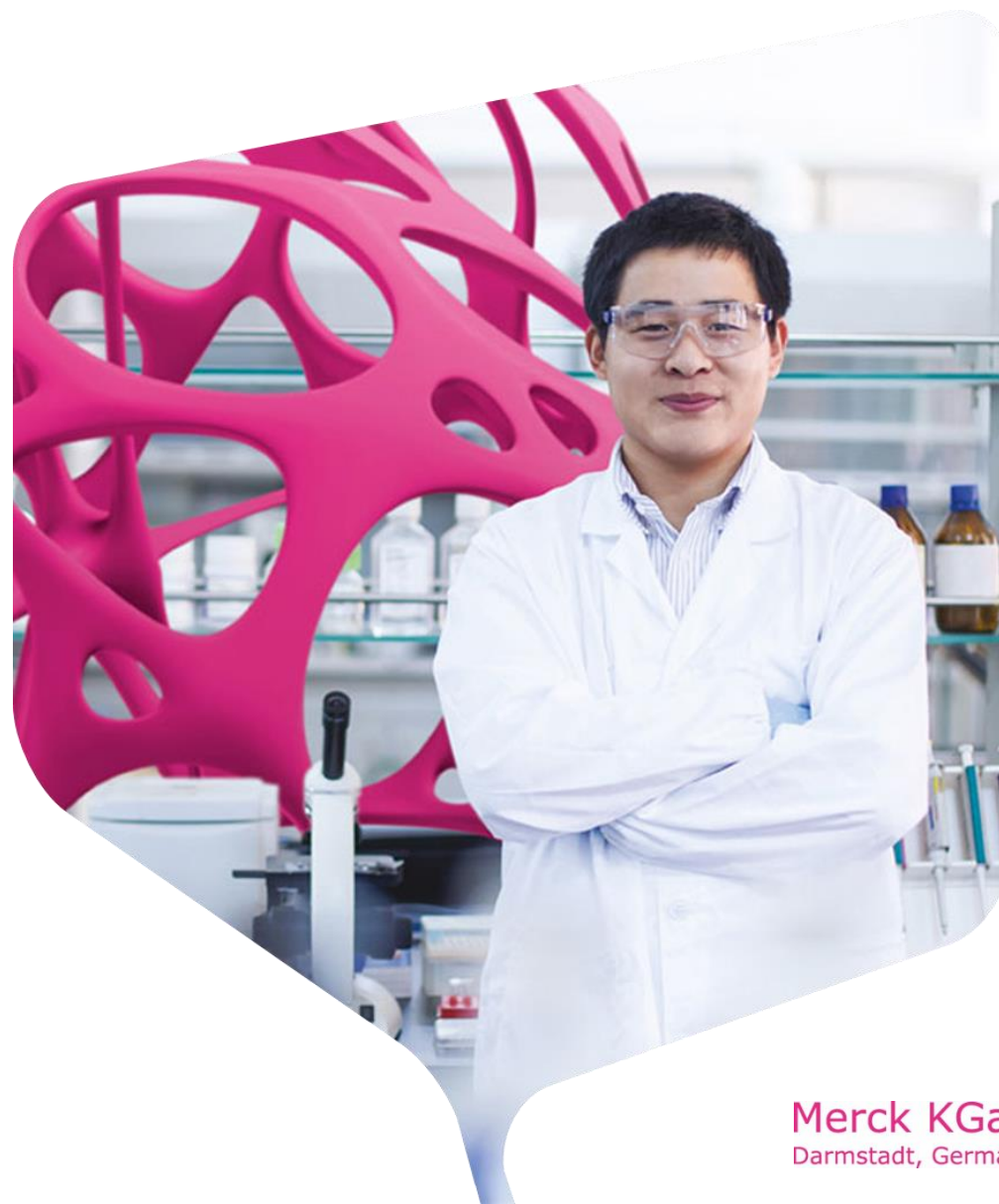
## Adjustments in EBIT

[€m]	H1 2017		H1 2018	
	Adjustments	thereof D&A	Adjustments	thereof D&A
Healthcare	-52	-67	43	2
Life Science	62	3	39	16
Performance Materials	23	7	9	1
Corporate & Other	31	0	50	0
Total	63	-57	140	19



## Financial calendar

Date	Event
November 14, 2018	Q3 2018 Earnings release
March 7, 2019	FY 2018 Earnings release
April 26, 2019	Annual General Meeting
May 14, 2019	Q1 2019 Earnings release



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