

FY/Q4 2017 Financial Summary for Investors and Analysts

Performance amid headwinds:

- Healthcare – sound core business; successful launches of Mavenclad & Bavencio
- Life Science – strong performance above the market amid ongoing integration
- Performance Materials – softness in Liquid Crystals; growth in ICM, Pigments & OLED
- Organic sales growth of 3.8%; EBITDA pre almost stable despite FX headwinds
- Deleveraging remains focus and well on track; Net debt reduction of €1.4 bn
- Delivered on Guidance

Overview Financials

Q4 2017 Overview

- EBITDA pre & margin decrease reflects LC market share decline, investments in HC and FX headwinds
- EPS pre down due to EBITDA pre decrease
- Lower operating cash flow reflects softer EBIT also driven by HC investments, LC decline and FX
- Net financial debt reduction due to strong focus on deleveraging and FX
- Higher headcount related to growth initiatives in HC and shift in LS from temporary to permanent

Q4 2017 Cash Flow Statement

- Profit after tax reflects one time U.S. tax reform effect of ~€900 m
- D&A down due to FX effects on asset base
- Changes in other assets/liabilities reflect neutralizing of non-cash relevant U.S. tax gain
- Higher Capex from investments in additional capacities and innovation center
- Financing cash flow reflects repayment of debt

YE 2017 Balance Sheet

- Total assets decrease, while equity ratio increases to 39.5%
- Reduction in intangible assets mainly reflects scheduled amortization and FX (-€2.2 bn)
- Net financial debt reduced by €1.4 bn due to healthy operating cash flow and favorable FX translation
- Other liabilities down as U.S. tax reform reduces deferred tax liabilities

Q4 2017 Business Overview

Healthcare

- **Solid organic growth of core business and investments in future growth**
- Net sales deviation YoY: organic +5.9%, FX -4.8%, portfolio -0.7%
- Solid organic growth driven by Glucophage China repatriation and double digit growth for Consumer Health across all major regions
- Bavencio and Mavenclad successfully launched
- Rebif organic decline driven by volume decline in EU and U.S. partially offset by U.S. pricing
- Erbitux facing competition and price pressure in major markets
- Marketing & Selling slightly lower due to improved cost control and FX
- Profitability impacted by product mix and back-end loaded R&D investments

Life Science

- **Strong sales quarter amid synergy realization**
- Net sales deviation YoY: organic +8.9%, FX -5.5%, portfolio +0.4%
- Process Solutions shows double digit organic growth due to strong demand in single-use & services globally
- Applied Solutions with strong organic growth, benefits from good demand in all regions and all businesses
- Research Solutions growth driven by strong eCommerce
- Q4 LY EBIT contains D&A effects from final purchase price allocation for Sigma-Aldrich
- Higher profitability from organic growth and synergy ramp-up outweighing FX headwinds

Performance Materials

- **Profitability burdened by LC market share decline**
- Net sales deviation YoY: organic -1.2%, FX -5.9%, portfolio +0.0%
- Organic growth of Integrated Circuit Materials, Pigments and OLED outweighed by Liquid Crystals market share decline
- Innovative UB-FFS technology continues to see strong demand
- Strong growth of Integrated Circuit Materials driven by all major material classes, esp. strong demand of dielectrics and process materials
- Healthy growth of Pigments & Functional Materials due to demand for specialty coating pigments for the automotive industry
- Lower profitability reflects business mix, usual Liquid Crystals price decline and FX headwinds

2018 guidance

Group:

- Net sales: Moderate organic growth; moderate FX headwinds*
- EBITDA pre: Slight organic decline; -4 to -6% YoY headwinds from FX
 - EBITDA supporting factors:
 - Organic net sales growth by Healthcare and Life Science
 - Sigma-Aldrich incremental cost and revenue synergies ~+€95 m YoY
 - Biosimilars divestment frees up R&D budget (2017: mid to high double-digit million R&D costs)
 - First full-year sales contribution from newly launched pipeline products Mavenclad® and Bavencio®
 - EBITDA reducing factors:
 - Underlying R&D costs in Healthcare are budgeted above 2017, but actual development will be subject to clinical data outcome of priority projects and prioritization decisions
 - Healthcare margins negatively impacted by product mix (esp. Rebif)
 - 2017 special gains of ~€200 m will not recur
 - Performance Materials sales and earnings continuously affected by decline in Liquid Crystals
 - First launch preparations for Mavenclad® U.S., driving M&S costs
 - At current rates, FX remains a strong headwind, esp. in H1 2018

Outlook by business sector (including Consumer Health):

Healthcare

- Net sales:
 - Moderate organic growth: ongoing organic Rebif decline offset by growth in other franchises
 - Full-year contributions from 2017 launches
- EBITDA pre:
 - Slight organic % YoY decline
 - Adverse FX impact
 - Higher R&D, subject to pipeline decisions
 - Higher M&S investments, for launch preparations

Life Science

- Net sales:
 - Organic growth slightly above market; driven by Process Solutions
- EBITDA pre:
 - Organic % YoY growth with similar dynamics as in prior year (2017)
 - Adverse FX impact
 - Full realization of expected synergies

*Constant portfolio

Performance Materials

- Net sales:
 - Slight to moderate organic decline
 - Volume increases in all businesses
 - Ongoing Liquid Crystals market share decline

- EBITDA pre:
 - Organic % YoY decline in the mid teens
 - Adverse FX impact
 - Decline from LC cannot be compensated by ICM and Pigments

Additional financial guidance for 2018

- | | |
|--------------------------------|---|
| ▪ Corporate & Other EBITDA pre | ~ -€320 – -360 m |
| ▪ Interest result | ~ -€230 – -240 m |
| ▪ Effective tax rate | ~24% to 26% |
| ▪ Capex on PPE | ~€900 – 950 m |
| ▪ Hedging / USD assumption | 2018 hedge ratio ~50%-60%
at EUR/USD ~1.19 to 1.20 |
| ▪ 2018 Ø EUR/USD assumption | ~1.18 – 1.22 ¹ |

First outlook on 2019:

Merck KGaA, Darmstadt, Germany to return to profitable growth track from 2019 onwards

- HC: EBITDA pre growth from accelerated top line growth and disciplined cost management
 - LS: EBITDA pre growth driven by above-market growth and further margin expansion from operating leverage
 - PM: Trough year for profitability and focus on strategy execution
- ➔ Group: High confidence to deliver sales and EBITDA pre growth as well as EBITDA pre margin improvements

¹Exacerbated by devaluation of important Emerging Market currencies; FX effect on EBITDA-pre -4% to -6%.

Merck KGaA

Darmstadt, Germany

Group Q4

€m	Group			Healthcare			Life Science			Performance Materials			Corporate/Others		
	Q4 2016	Q4 2017	% YoY	Q4 2016	Q4 2017	% YoY	Q4 2016	Q4 2017	% YoY	Q4 2016	Q4 2017	% YoY	Q4 2016	Q4 2017	% YoY
Net sales	3.830	3.848	0%	1.766	1.773	0%	1.441	1.496	4%	623	579	-7%			
% organic			6%			6%			9%			-1%			
% FX			-5%			-5%			-5%			-6%			
% portfolio			0%			-1%			0%			0%			
EBIT	405	241	-41%	279	73	-74%	70	156	>100%	210	136	-35%	-154	-124	-20%
Depreciation and amortization	548	511	-7%	198	236	19%	282	182	-36%	59	77	31%	9	17	93%
EBITDA	953	752	-21%	478	308	-35%	352	338	-4%	269	213	-21%	-146	-107	-26%
Exceptionals in EBITDA	121	253	>100%	20	75	>100%	67	123	84%	9	15	73%	26	40	51%
EBITDA pre	1.075	1.005	-7%	497	384	-23%	419	461	10%	278	228	-18%	-119	-68	-43%
Net financial debt*	11.513	10.144	-12%												

* as per 31 December

Totals may not add up due to rounding

Group FY

€m	Group			Healthcare			Life Science			Performance Materials			Corporate/Others		
	FY 2016	FY 2017	% YoY	FY 2016	FY 2017	% YoY	FY 2016	FY 2017	% YoY	FY 2016	FY 2017	% YoY	FY 2016	FY 2017	% YoY
Sales	15.024	15.327	2%	6.855	6.999	2%	5.658	5.882	4%	2.511	2.446	-3%			
% organic			4%			5%			5%			-2%			
% FX			-2%			-2%			-2%			-1%			
% portfolio			0%			-1%			0%			0%			
EBIT	2.481	2.525	2%	1.593	1.447	-9%	556	834	50%	823	689	-16%	-492	-445	-10%
Depreciation and amortization	1.934	1.758	-9%	831	708	-15%	822	746	-9%	254	258	1%	27	45	66%
EBITDA	4.415	4.282	-3%	2.425	2.155	-11%	1.378	1.580	15%	1.077	947	-12%	-465	-400	-14%
Exceptionals in EBITDA	75	132	75%	-297	-206	-31%	274	206	-25%	29	33	13%	69	99	45%
EBITDA pre	4.490	4.414	-2%	2.128	1.949	-8%	1.652	1.786	8%	1.106	980	-11%	-396	-301	-24%
Net financial debt*	11.513	10.144	-12%												

Totals may not add up due to rounding

Group

P&L Group	Q4 2016	Q4 2017	% YoY
Net sales	3.830	3.848	0%
Cost of sales	-1.328	-1.394	5%
thereof: intangibles amortization	-44	-45	2%
Gross profit	2.502	2.454	-2%
Marketing and selling expenses	-1.224	-1.182	-3%
thereof: intangibles amortization	-265	-249	-6%
Administration	-234	-211	-10%
Other operating income/expenses	-92	-240	>100%
Research and development	-547	-580	6%
EBIT	405	241	-41%
Depreciation and amortization	548	511	-7%
EBITDA	953	752	-21%
Exceptionals in EBITDA	121	253	>100%
EBITDA pre	1.075	1.005	-7%
Financial result	-70	-93	33%
Profit before tax	336	148	-56%
Income tax	-70	868	n.m.
Income tax rate	21%	-587%	
Profit after tax	265	1.016	>100%
Non-controlling interests	4	-3	n.m.
Net income	269	1.013	>100%
Number of theoretical shares in million	434,8	434,8	
EPS in €	0,62	2,33	>100%
EPS pre in €	1,43	1,31	-8%

Totals may not add up due to rounding

Healthcare

P&L Healthcare	Q4 2016	Q4 2017	% YoY
Net sales	1.766	1.773	0%
Cost of sales	-367	-435	18%
thereof: intangibles amortization	0	-1	n.m.
Gross profit	1.399	1.338	-4%
Marketing and selling expenses	-709	-689	-3%
thereof: intangibles amortization	-140	-138	-1%
Administration	-68	-73	8%
Other operating income/expenses	75	-60	n.m.
Research and development	-418	-443	6%
EBIT	279	73	-74%
Depreciation and amortization	198	236	19%
EBITDA	478	308	-35%
Exceptionals in EBITDA	20	75	>100%
EBITDA pre	497	384	-23%

Totals may not add up due to rounding

Life Science

P&L Life Science	Q4 2016	Q4 2017	% YoY
Net sales	1.441	1.496	4%
Cost of sales	-679	-685	1%
thereof: intangibles amortization	-15	-15	3%
Gross profit	762	811	6%
Marketing and selling expenses	-458	-431	-6%
thereof: intangibles amortization	-126	-107	-15%
Administration	-71	-67	-7%
Other operating income/expenses	-92	-106	15%
Research and development	-70	-52	-26%
EBIT	70	156	>100%
Depreciation and amortization	282	182	-36%
EBITDA	352	338	-4%
Exceptionals in EBITDA	67	123	84%
EBITDA pre	419	461	10%

Totals may not add up due to rounding

Performance Materials

P&L Performance Materials	Q4 2016	Q4 2017	% YoY
Net sales	623	579	-7%
Cost of sales	-281	-275	-2%
thereof: intangibles amortization	-29	-29	1%
Gross profit	342	304	-11%
Marketing and selling expenses	-57	-61	6%
thereof: intangibles amortization	0	-3	n.m.
Administration	-16	-18	11%
Other operating income/expenses	-2	-37	>100%
Research and development	-56	-52	-7%
EBIT	210	136	-35%
Depreciation and amortization	59	77	31%
EBITDA	269	213	-21%
Exceptionals in EBITDA	9	15	73%
EBITDA pre	278	228	-18%

Totals may not add up due to rounding