

Q4/FY 2022 Financial Summary for Investors and Analysts

Profitable growth despite challenges

- **Life Science:** +8% org. sales growth despite COVID-19 decline, driven by mid-teens core¹ growth with Process Solutions as key driver; largest growth contribution to Group (org. +€737 m); growth in all business units and geographies
- **Healthcare:** +6% org. sales growth contributing +€391 m to Group; recent launches key growth driver, Bavencio® +58% org., Mavenclad® up +17% org.; CM&E and Fertility each deliver +4% org. sales growth each
- **Electronics:** +4% org. sales growth contributing +€134 m to Group despite challenging macro environment; Semi Solutions growing +15% org., significantly above market and mid-term guidance
- **FY organic sales:** growth of +6.4%
- **FY organic EBITDA pre:** growth of +6.1%
- **Guidance delivered:**
Net sales: €22.23 bn
EBITDA pre: €6.85 bn
EPS pre: €10.05
- Net financial debt to EBITDA pre: 1.2 on December 31, 2022

¹Core business is defined as total sales excluding COVID-19 related business

Overview Financials

Q4 2022 Overview

- Net sales up +9%, driven by solid org. performance in Healthcare and Life Science and positive FX tailwinds
- EBITDA pre up +11%, driven by margin development in Healthcare
- EBITDA pre contribution main driver for EPS pre improvement
- Working capital driven by receivables from business development and inventories from inflationary effects & higher stock levels
- Headcount mainly driven by Life Science

Q4 2022 Cash Flow Statement

- Decline in profit after tax driven by decreased EBIT and higher tax rate
- Higher D&A mainly driven by impairments in relation to Healthcare R&D, FX and higher PPE investments
- Changes in provisions mainly due to lower LY restructuring provisions
- Delta in other assets & liabilities related to higher LY prepayments received and non-income related tax
- Higher capex on PPE driven by capacity expansion in key portfolios
- Financing cash flow driven by ongoing deleveraging

FY 2022 Balance Sheet

- Receivables & inventories driven by strong sales, inflationary effects, higher stock levels, and FX
- Higher intangible assets driven by FX effects and Exelead acquisition
- Cash levels stable year-on-year
- Reduction in provisions for employee benefits driven by actuarial gains from higher interest rates
- Equity ratio further up to 54% (vs 47% in 2021), driven by retained earnings, actuarial gains and translational FX effects

Q4 2022 Business Overview

Life Science

- **Strong performance of core business (+11% org.) continues to deliver growth**
- Net sales deviation YoY: organic +4.2%, FX +4.3%, portfolio +0.7%
- EBITDA pre deviation YoY: organic +2.2%, FX +1.7%, portfolio -2.6%
- Process Solutions: +10% org. growth, driven by strong core business (+24% org.); COVID-19 business declining as anticipated
- Science & Lab Solutions: growing +4% org. across majority of portfolio, supported by positive pricing
- Life Science Services: -16% org. decline amid tough comps, COVID headwinds and near-term volatility in CDMO
- M&S* down as a % of sales from 24% to 23% as logistics costs stabilize
- Higher R&D in absolute terms with continued investments in high growth & emerging segments, e.g. novel modalities
- EBITDA pre growing 2% org., behind topline driven by mix, investments and non-recurring effects incl. inventory adjustments; margin additionally affected by FX and portfolio

* Marketing and selling expenses

Healthcare

- **Bavencio ramp-up, complemented by strong Fertility and CM&E, drive +6% organic growth**
- Net sales deviation YoY: organic +5.5%, FX +2.8%, portfolio 0.0%
- EBITDA pre deviation YoY: organic +21.5%, FX +5.5%, portfolio 0.0%
- Oncology up +11% org., driven by continued strong Bavencio® ramp-up (+39% org.) across regions. Erbitux about stable amid tougher comps (LY Eli Lilly supply agreement impact of +€10 m)
- Mavenclad® continued to grow +10% org., mostly offsetting Rebif® decline of -15% org.
- CM&E portfolio up +6% org., growing in all major products; Fertility rebounding to +11% org., supported by competitor stock-outs
- M&S* declining as a % of sales and in absolute terms due to stringent cost control and lower DTC¹ spend while focusing on growth drivers

- R&D stable as a % of sales, in line with low twenties guidance; slight increase in absolute terms driven by new study initiations
- EBITDA pre growth (+21% org.) driven by sales momentum, prior year production yield fluctuations, income from BD deals and M&S cost focus

*Marketing and selling expenses

¹Direct-To-Consumer

Electronics

- **Strong Semi performance drives sector growth; Display weighs on margins**
- Net sales deviation YoY: organic +2.4%, FX +5.2%, portfolio 0.0%
- EBITDA pre deviation YoY: organic -5.8%, FX +8.6%, portfolio 0.0%
- Semiconductor Solutions: +12% org. fueled by double-digit growth in Materials and DS&S; further growth in DS&S also expected in 2023
- Display Solutions: down -21% org., driven by Liquid Crystals decline, amplified by lower customer capacity utilization following abatement of pandemic tailwind
- Surface Solutions: +6% org. growth driven by strong Coatings and Cosmetics business, more than offsetting somewhat softer industrials
- M&S* slightly up as a % of sales, entirely due to higher logistics cost
- R&D increase in line with sales growth, driven by continuous investments with focus on future growth of Semi Materials, elevated by FX
- EBITDA pre declining organically primarily due to inflationary pressures and reduced contribution from Display Solutions, while Semi margins remain intact; further support from FX

* Marketing and selling expenses

2023 guidance

Group:

- | | |
|---|--|
| <ul style="list-style-type: none"> ▪ Net sales:
Slight to solid organic growth
(ex-COVID: solid to strong organic growth)
Adverse FX of -1% to -4% YoY | <ul style="list-style-type: none"> ▪ EBITDA pre:
Organically from moderate decline to about stable
Adverse FX of -1% to -4% YoY |
|---|--|

2023 business sector guidance¹:

Life Science

- Net sales:
 - Slight to moderate organic growth
 - Solid to strong organic growth in core business (ex-COVID)
 - Process Solutions as main contributor to core growth
 - Total COVID-19 sales of ~€250 m (vs. ~€800 m in 2022)
 - Slight to moderate adverse FX
- EBITDA pre:
 - Organic moderate decline up to about stable
 - Slight adverse FX

Healthcare

- Net sales:
 - Moderate to solid organic growth
 - Driven by recent launches
 - Complemented by CME & Fertility
 - Slight to moderate adverse FX
- EBITDA pre:
 - Slight to moderate organic growth
 - High single digit to low teens adverse FX

Electronics

- Net sales:
 - Slight to solid organic growth
 - Based on industry consensus of a Semi market recovery in H2 2023
 - Semi expected to continuously outperform MSI
 - Low utilization at Display customers into H1
 - Slight to moderate adverse FX
- EBITDA pre:
 - Slight to strong organic decline
 - Significant adverse FX

¹Divisional guidances are only support to the group guidance and do not have to add up;

Additional financial guidance for 2023

- | | |
|--------------------------------|--|
| ▪ Corporate & Other EBITDA pre | Lower costs driven by hedging |
| ▪ Interest result | ~ €-90 to -130 m |
| ▪ Effective tax rate | ~21% to 23% |
| ▪ Capex on PPE ¹ | ~€1.8 to 2.0 bn |
| ▪ Hedging / USD assumption | FY 2022 overall hedge ratio ~50%
at EUR/USD ~1.07 |
| ▪ 2023 Ø EUR/USD assumption | ~1.07 to 1.11 |

¹Based on gross additions to PPE on balance sheet in fiscal year, to reflect planned Capex expansion more accurately

Merck KGaA

Darmstadt, Germany

Group Q4 2022

€ m	Group			Life Science			Healthcare			Electronics			Corporate/Others		
	Q4 2021	Q4 2022	% YoY	Q4 2021	Q4 2022	%YoY	Q4 2021	Q4 2022	%YoY	Q4 2021	Q4 2022	% YoY	Q4 2021	Q4 2022	%YoY
Net sales	5,213.0	5,660.4	8.6%	2,386.4	2,606.4	9.2%	1,874.6	2,030.3	8.3%	952.0	1,023.7	7.5%			
% organic			4.3%			4.2%			5.5%			2.4%			
% FX			3.9%			4.3%			2.8%			5.2%			
% portfolio			0.3%			0.7%			0.0%			0.0%			
EBIT	1,038.7	889.6	-14.4%	628.2	600.2	-4.5%	424.0	396.1	-6.6%	139.8	134.9	-3.4%	-153.2	-241.6	57.8%
Depreciation and amortization	474.0	598.5	26.3%	208.6	244.9	17.4%	94.4	177.9	88.4%	141.8	147.7	4.1%	29.1	28.0	-3.6%
EBITDA	1,512.7	1,488.1	-1.6%	836.8	845.0	1.0%	518.4	573.9	10.7%	281.6	282.7	0.4%	-124.1	-213.6	72.1%
Adjustments in EBITDA	-48.5	139.8	n.m.	3.4	5.3	54.4%	-19.9	59.1	n.m.	18.1	25.5	40.7%	-50.1	49.9	n.m.
EBITDA pre	1,464.2	1,627.9	11.2%	840.2	850.3	1.2%	498.4	633.1	27.0%	299.7	308.2	2.8%	-174.2	-163.7	-6.0%
% organic			12.5%			2.2%			21.5%			-5.8%			
% FX			0.6%			1.7%			5.5%			8.6%			
% portfolio			-1.9%			-2.6%			0.0%			0.0%			

Group FY 2022

€ m	Group			Life Science			Healthcare			Electronics			Corporate/Others		
	FY 2021	FY 2022	% YoY	FY 2021	FY 2022	%YoY	FY 2021	FY 2022	%YoY	FY 2021	FY 2022	% YoY	FY 2021	FY 2022	%YoY
Net sales	19,686.6	22,232.3	12.9%	8,991.8	10,380.3	15.4%	7,088.9	7,838.7	10.6%	3,605.9	4,013.2	11.3%			
% organic			6.4%			8.2%			5.5%			3.7%			
% FX			6.1%			6.4%			5.1%			7.6%			
% portfolio			0.4%			0.8%			0.0%			0.0%			
EBIT	4,178.6	4,474.2	7.1%	2,479.7	2,808.0	13.2%	1,822.6	1,894.6	3.9%	508.3	572.5	12.6%	-632.0	-800.9	26.7%
Depreciation and amortization	1,767.5	2,030.1	14.9%	777.9	869.7	11.8%	322.9	490.2	51.8%	561.4	565.1	0.6%	105.2	105.1	-0.1%
EBITDA	5,946.1	6,504.3	9.4%	3,257.5	3,677.8	12.9%	2,145.5	2,384.8	11.2%	1,069.7	1,137.6	6.3%	-526.8	-695.9	32.1%
Adjustments in EBITDA	156.9	344.9	>100%	29.0	81.8	>100%	7.6	91.8	>100%	58.1	54.6	-5.9%	62.2	116.7	87.5%
EBITDA pre	6,102.9	6,849.1	12.2%	3,286.6	3,759.6	14.4%	2,153.1	2,476.6	15.0%	1,127.8	1,192.2	5.7%	-464.5	-579.2	24.7%
% organic			6.1%			9.7%			3.3%			-7.3%			
% FX			6.4%			5.0%			11.7%			13.0%			
% portfolio			-0.3%			-0.4%			0.0%			0.0%			
	FY 2021	FY 2022													
Net financial debt	8,753.0	8,327.6	-4.9%												
ND/EBITDA pre	1.4	1.2													

Group Net Sales details Q4 2022

€ m	Q4 2021	Q4 2022	% YoY	% YoY org.	% YoY FX	% YoY PF
Group	5,213.0	5,660.4	8.6%	4.3%	3.9%	0.3%
Life Science	2,386.4	2,606.4	9.2%	4.2%	4.3%	0.7%
Process Solutions	991.4	1135.7	14.6%	9.8%	4.8%	0.0%
Research Solutions	262.4	250.3	-4.6%	-15.6%	4.6%	6.4%
Applied Solutions	1132.6	1220.5	7.8%	3.9%	3.8%	0.0%
Healthcare	1,874.6	2,030.3	8.3%	5.5%	2.8%	0.0%
Rebif	243.6	219.2	-10.0%	-14.7%	4.7%	0.0%
Mavenclad	191.3	220.3	15.1%	10.2%	4.9%	0.0%
Erbitux	261.1	249.0	-4.6%	-0.6%	-4.0%	0.0%
Bavencio	121.2	171.6	41.6%	39.3%	2.3%	0.0%
Gonal-F	190.2	205.4	8.0%	4.8%	3.2%	0.0%
Glucophage	224.6	247.7	10.3%	5.6%	4.7%	0.0%
All other products	642.7	717.0	11.6%	8.0%	3.6%	0.0%
Electronics	952.0	1,023.7	7.5%	2.4%	5.2%	0.0%
Semiconductor Solutions	600.9	710.8	18.3%	11.5%	6.8%	0.0%
Display Solutions	251.3	205.2	-18.4%	-20.9%	2.6%	0.0%
Surface Solutions	99.7	107.7	8.0%	6.1%	2.0%	0.0%

*acronyms: org. = organic; PF = portfolio

Group Net Sales details FY 2022

€ m	FY 2021	FY 2022	% YoY	% YoY org.	% YoY FX	% YoY PF
Group	19,686.6	22,232.3	12.9%	6.4%	6.1%	0.4%
Life Science	8,991.8	10,380.3	15.4%	8.2%	6.4%	0.8%
Process Solutions	3852.8	4525.8	17.5%	10.9%	6.6%	0.0%
Research Solutions	771.7	956.1	23.9%	6.1%	8.0%	9.8%
Applied Solutions	4367.2	4898.3	12.2%	6.2%	6.0%	0.0%
Healthcare	7,088.9	7,838.7	10.6%	5.5%	5.1%	0.0%
Rebif	951.9	887.4	-6.8%	-13.2%	6.4%	0.0%
Mavenclad	692.7	855.9	23.6%	16.9%	6.6%	0.0%
Erbitux	986.9	1022.8	3.6%	2.7%	1.0%	0.0%
Bavencio	373.4	611.5	63.8%	57.9%	5.8%	0.0%
Gonal-F	767.2	825.1	7.5%	3.1%	4.4%	0.0%
Glucophage	864.0	929.7	7.6%	0.4%	7.2%	0.0%
All other products	2452.8	2706.4	10.3%	5.2%	5.1%	0.0%
Electronics	3,605.9	4,013.2	11.3%	3.7%	7.6%	0.0%
Semiconductor Solutions	2149.8	2674.1	24.4%	15.4%	9.0%	0.0%
Display Solutions	1045.7	899.6	-14.0%	-20.1%	6.1%	0.0%
Surface Solutions	410.1	439.4	7.1%	3.2%	3.9%	0.0%

*acronyms: org. = organic; PF = portfolio

Group

P&L Group	Q4 2021	Q4 2022	% YoY
Net sales	5,213.0	5,660.4	8.6%
Cost of sales	-1,958.8	-2,284.2	16.6%
thereof: intangibles amortization	-47.6	-51.3	7.6%
Gross profit	3,254.2	3,376.2	3.7%
Marketing and selling expenses	-1,194.7	-1,209.4	1.2%
thereof: intangibles amortization	-152.3	-158.1	3.8%
Administration	-350.3	-360.8	3.0%
Impairment losses / reversals (IFRS9)	6.7	1.9	-72.1%
Other operating income/expenses	-85.3	-224.6	>100%
Research and development	-591.9	-693.7	17.2%
EBIT	1,038.7	889.6	-14.4%
Depreciation and amortization	474.0	598.5	26.3%
EBITDA	1,512.7	1,488.1	-1.6%
Adjustments in EBITDA	-48.5	139.8	n.m.
EBITDA pre	1,464.2	1,627.9	11.2%
Financial result	-46.8	-50.5	7.8%
Profit before tax	991.9	839.1	-15.4%
Income tax	-185.4	-179.7	-3.0%
Income tax rate	18.7%	21.4%	
Profit after tax	806.6	659.3	-18.3%
Non-controlling interests	-4.4	-4.4	-1.5%
Net income	802.1	655.0	-18.3%
Number of theoretical shares in million	434.8	434.8	
EPS in €	1.84	1.51	-17.9%
EPS pre in €	2.06	2.32	12.6%

Totals may not add up due to rounding

Life Science

P&L Life Science	Q4 2021	Q4 2022	% YoY
Net sales	2,386.4	2,606.4	9.2%
Cost of sales	-940.9	-1,192.1	26.7%
thereof: intangibles amortization	-11.0	-15.1	36.8%
Gross profit	1,445.4	1,414.4	-2.1%
Marketing and selling expenses	-584.0	-605.4	3.7%
thereof: intangibles amortization	-99.8	-107.7	7.9%
Administration	-85.4	-93.4	9.4%
Impairment losses / reversals (IFRS9)	3.6	-0.9	n.m.
Other operating income/expenses	-50.9	-7.7	-84.8%
Research and development	-100.5	-106.8	6.3%
EBIT	628.2	600.2	-4.5%
Depreciation and amortization	208.6	244.9	17.4%
EBITDA	836.8	845.0	1.0%
Adjustments in EBITDA	3.4	5.3	54.4%
EBITDA pre	840.2	850.3	1.2%

Totals may not add up due to rounding

Healthcare

P&L Healthcare	Q4 2021	Q4 2022	% YoY
Net sales	1,874.6	2,030.3	8.3%
Cost of sales	-476.6	-499.4	4.8%
thereof: intangibles amortization	-1.2	-1.3	11.7%
Gross profit	1,398.0	1,530.8	9.5%
Marketing and selling expenses	-452.2	-438.9	-3.0%
thereof: intangibles amortization	-5.5	1.1	n.m.
Administration	-83.9	-77.5	-7.7%
Impairment losses / reversals (IFRS9)	3.2	2.2	-31.7%
Other operating income/expenses	-46.0	-155.8	>100%
Research and development	-395.1	-464.8	17.6%
EBIT	424.0	396.1	-6.6%
Depreciation and amortization	94.4	177.9	88.4%
EBITDA	518.4	573.9	10.7%
Adjustments in EBITDA	-19.9	59.1	n.m.
EBITDA pre	498.4	633.1	27.0%

Totals may not add up due to rounding

Electronics

P&L Electronics	Q4 2021	Q4 2022	% YoY
Net sales	952.0	1,023.7	7.5%
Cost of sales	-540.0	-591.8	9.6%
thereof: intangibles amortization	-35.4	-34.9	-1.6%
Gross profit	412.0	431.8	4.8%
Marketing and selling expenses	-154.1	-171.1	11.0%
thereof: intangibles amortization	-47.0	-51.4	9.4%
Administration	-34.8	-33.6	-3.4%
Impairment losses / reversals (IFRS9)	-0.9	-0.1	-87.9%
Other operating income/expenses	-10.1	-10.4	3.5%
Research and development	-72.4	-81.7	12.8%
EBIT	139.8	134.9	-3.4%
Depreciation and amortization	141.8	147.7	4.1%
EBITDA	281.6	282.7	0.4%
Adjustments in EBITDA	18.1	25.5	40.7%
EBITDA pre	299.7	308.2	2.8%

Totals may not add up due to rounding

Consensus deviation Q4 2022

	Actual	Consensus (mean) 6.02.2023	Difference to estimate
[€m]	Q4 2022A	Q4 2022 E	%
Group			
Sales	5,660.4	5,147.2	-0.3%
EBITDA pre	1,627.9	1,484.4	-3.8%
EBITDA pre-margin (%)	28.8	28.8	-1.1pp
EPS pre (€)	2.32	2.08	-5.4%
Life Science			
Sales	2,606.4	2,358.7	-0.6%
Process Solutions	1,135.7	631.3	0.3%
Life Science Services	250.3	475.7	-12.0%
Science & Lab Solutions	1,220.5	1,247.7	0.1%
EBITDA pre	850.3	845.1	-5.5%
EBITDA pre-margin (%)	32.6	35.8	-1.7pp
Healthcare			
Sales	2,030.3	1,849.4	-0.4%
Rebif	219.2	241.8	1.3%
Mavenclad	220.3	208.9	-7.2%
Erbitux	249.0	237.2	-7.8%
Bavencio	171.6	116.4	-1.9%
Gonal-F	205.4	193.5	-3.7%
Glucophage	247.7	209.3	6.9%
All other products	717.0	642.4	3.2%
EBITDA pre	633.1	512.2	-3.8%
EBITDA pre-margin (%)	31.2	27.7	-1.2pp
Electronics			
Sales	1,023.7	930.9	1.6%
Display Solutions	205.2	267.4	-2.8%
Surface Solutions	107.7	104.4	-1.6%
Semiconductor Solutions	710.8	558.1	3.3%
EBITDA pre	308.2	285.3	0.9%
EBITDA pre-margin (%)	30.1	30.7	-0.2pp
Corporate/Other			
EBITDA pre	-163.7	-160.7	-2.1%

Consensus deviation FY 2022

	Actual	Consensus (mean)	Difference to estimate
		6.02.2023	
[€m]	FY 2022A	FY 2022 E	%
Group			
Sales	22,232.3	22,249.9	-0.1%
EBITDA pre	6,849.1	6,916.2	-1.0%
EBITDA pre-margin (%)	30.8	31.1	-0.3pp
EPS pre (€)	10.05	10.20	-1.4%
Life Science			
Sales	10,380.3	10,396.6	-0.2%
Process Solutions	4,525.8	4,522.5	0.1%
Life Science Services	956.1	990.6	-3.5%
Science & Lab Solutions	4,898.3	4,896.9	0.0%
EBITDA pre	3,759.6	3,808.7	-1.3%
EBITDA pre-margin (%)	36.2	36.6	-0.4pp
Healthcare			
Sales	7,838.7	7,845.7	-0.1%
Rebif	887.4	884.2	0.4%
Mavenclad	855.9	872.4	-1.9%
Erbitux	1,022.8	1,044.0	-2.0%
Bavencio	611.5	614.6	-0.5%
Gonal-F	825.1	832.6	-0.9%
Glucophage	929.7	914.0	1.7%
All other products	2,706.4	2,683.8	0.8%
EBITDA pre	2,476.6	2,504.5	-1.1%
EBITDA pre-margin (%)	31.6	31.9	-0.3pp
Electronics			
Sales	4,013.2	3,997.4	0.4%
Display Solutions	899.6	905.7	-0.7%
Surface Solutions	439.4	441.2	-0.4%
Semiconductor Solutions	2,674.1	2,651.2	0.9%
EBITDA pre	1,192.2	1,189.4	0.2%
EBITDA pre-margin (%)	29.7	29.8	0.0pp
Corporate/Other			
EBITDA pre	-579.2	-582.7	-0.6%