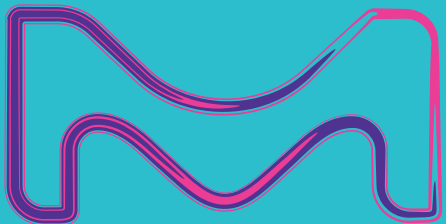


LIFE SCIENCE AND HEALTHCARE DRIVING PROFITABLE GROWTH

Merck Q3 2019 results

Marcus Kuhnert, CFO
Udit Batra, CEO Life Science

November 14, 2019



MERCK

Disclaimer

Cautionary Note Regarding Forward-Looking Statements and financial indicators

This communication may include “forward-looking statements.” Statements that include words such as “anticipate,” “expect,” “should,” “would,” “intend,” “plan,” “project,” “seek,” “believe,” “will,” and other words of similar meaning in connection with future events or future operating or financial performance are often used to identify forward-looking statements. All statements in this communication, other than those relating to historical information or current conditions, are forward-looking statements. We intend these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements in the Private Securities Litigation Reform Act of 1995. These forward-looking statements are subject to a number of risks and uncertainties, many of which are beyond control of Merck KGaA, Darmstadt, Germany, which could cause actual results to differ materially from such statements.

Risks and uncertainties include, but are not limited to: the risks of more restrictive regulatory requirements regarding drug pricing, reimbursement and approval; the risk of stricter regulations for the manufacture, testing and marketing of products; the risk of destabilization of political systems and the establishment of trade barriers; the risk of a changing marketing environment for multiple sclerosis products in the European Union; the risk of greater competitive pressure due to biosimilars; the risks of research and development; the risks of discontinuing development projects and regulatory approval of developed medicines; the risk of a temporary ban on products/production facilities or of non-registration of products due to non-compliance with quality standards; the risk of an import ban on products to the United States due to an FDA warning letter; the risks of dependency on suppliers; risks due to product-related crime and espionage; risks in relation to the use of financial instruments; liquidity risks; counterparty risks; market risks; risks of impairment on balance sheet items; risks from pension obligations; risks from product-related and patent law disputes; risks from antitrust law proceedings; risks from drug pricing by the divested Generics Group; risks in human resources; risks from e-crime and cyber attacks; risks due to failure of business-critical information technology applications or to failure of data center capacity; environmental and safety risks; unanticipated contract or regulatory issues; a potential downgrade in the rating of the indebtedness of Merck KGaA, Darmstadt, Germany; downward pressure on the common stock price of Merck KGaA, Darmstadt, Germany and its impact on goodwill impairment evaluations as well as the impact of future regulatory or legislative actions.

The foregoing review of important factors should not be construed as exhaustive and should be read in conjunction with the other cautionary statements that are included elsewhere, including the Report on Risks and Opportunities Section of the most recent annual report and quarterly report of Merck KGaA, Darmstadt, Germany. Any forward-looking statements made in this communication are qualified in their entirety by these cautionary statements, and there can be no assurance that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected consequences to, or effects on, us or our business or operations. Except to the extent required by applicable law, we undertake no obligation to update publicly or revise any forward-looking statement, whether as a result of new information, future developments or otherwise.

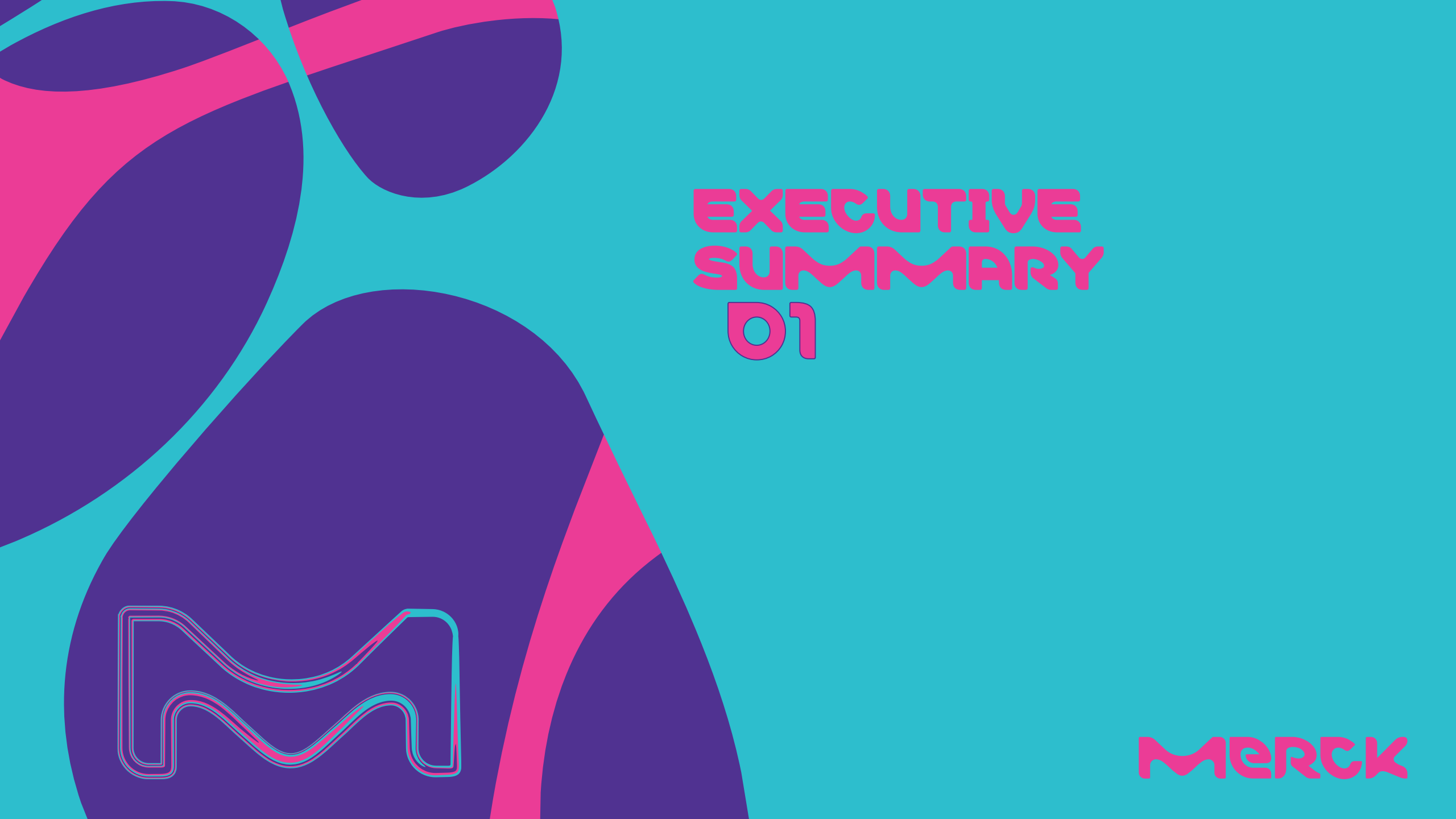
This presentation contains certain financial indicators such as EBITDA pre exceptionals, net financial debt and earnings per share pre exceptionals, which are not defined by International Financial Reporting Standards (IFRS). These financial indicators should not be taken into account in order to assess the performance of Merck in isolation or used as an alternative to the financial indicators presented in the consolidated financial statements and determined in accordance with IFRS. The figures presented in this statement have been rounded. This may lead to individual values not adding up to the totals presented.

Agenda

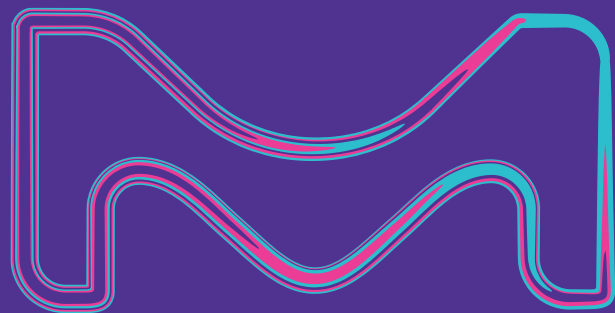
01 Executive summary

02 Financial overview

03 Guidance



EXECUTIVE SUMMARY 01



MERCK

Highlights



Operations

Healthcare – Mavenclad[®] ramp-up and core business drive strong organic growth

Life Science – All businesses and regions fuel double-digit growth; Process Solutions again the strongest driver

Performance Materials – LC back to negative underlying trajectory; market slowdown in Semiconductor Solutions and Surface Solutions



Financials

Q3 2019 organic sales growth of +5.7%;
Q3 2019 organic EBITDA pre growth of +9.8%

Versum acquisition successfully closed¹ –
Group guidance impact:
net sales: ~€270 m; EBITDA pre: €80 to 90 m

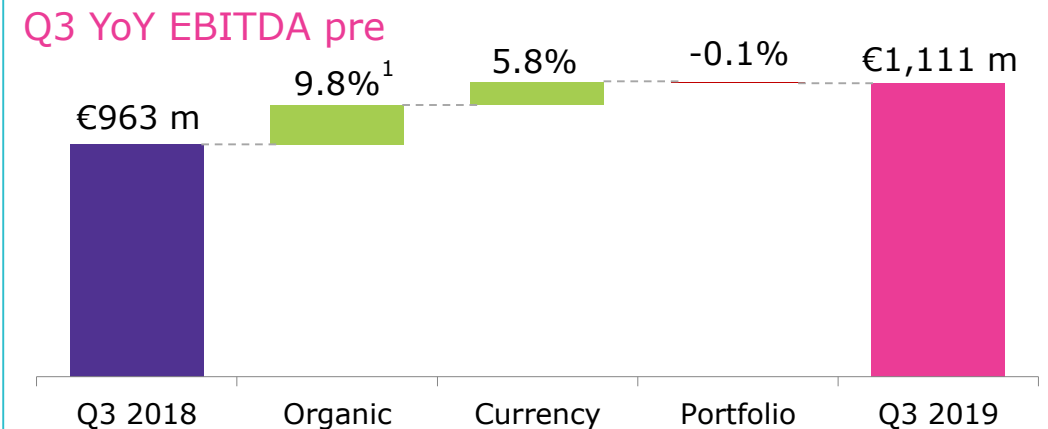
Full-year 2019 guidance upgraded incl. Versum:
net sales: €15.7 to 16.3 bn;
EBITDA pre: €4,230 to 4,430 m

¹Closing of the transaction to acquire Versum Materials, Inc. ("Versum") for approximately € 5.8 billion on October 7th, 2019

Life Science and Healthcare drive organic growth of top- and bottom-line, supported by FX tailwinds

Q3 2019 YoY net sales	Organic	Currency	Portfolio	Total
Healthcare	8.0%	2.0%	0.0%	10.0%
Life Science	10.0%	3.0%	-0.7%	12.3%
Performance Materials	-10.6%	3.7%	0.0%	-6.9%
Merck Group	5.7%	2.7%	-0.3%	8.1%

- Strong growth in Healthcare driven by sound uptake of Mavenclad® and strong demand for General Medicine mainly in China
- Life Science posts double-digit growth fueled by all businesses and regions
- Performance Materials reflects decline in LC despite strong demand in OLED; soft market demand in Semiconductor and Surface Solutions

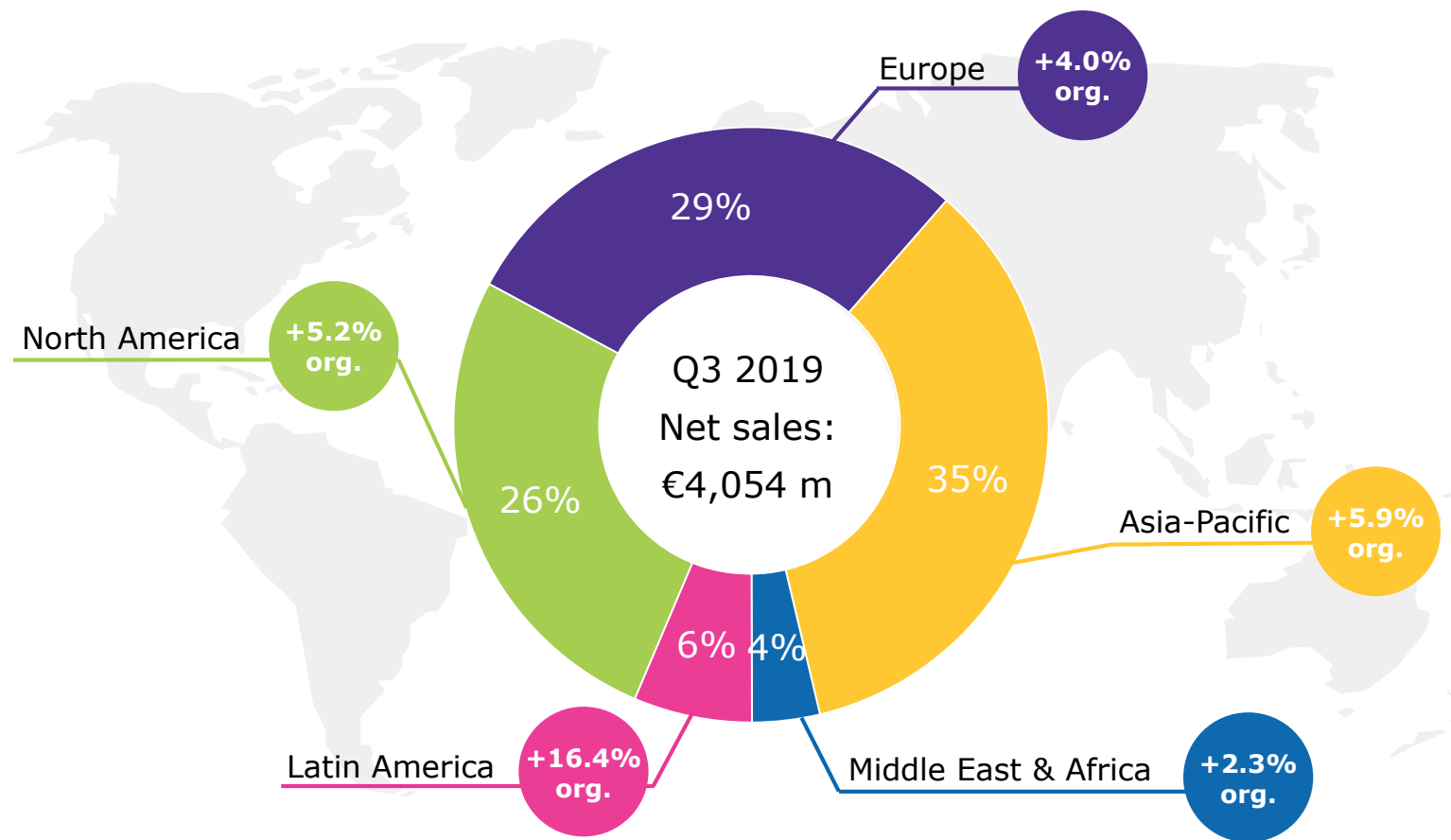


- Increased organic EBITDA pre due to strong top-line growth, cost consciousness and GSK income in Healthcare; Life Science with sustained strong performance
- Positive FX impact on EBITDA pre due to US dollar and Japanese yen

¹Thereof IFRS 16 effect with +3.4% (+€33 m); Totals may not add up due to rounding

Solid organic growth driven by all regions

Regional breakdown of net sales [€m]

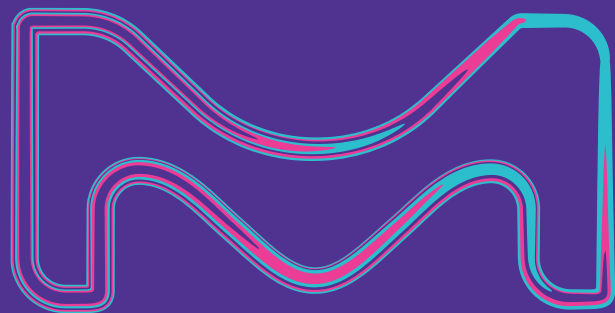


Regional organic development

- Solid APAC due to double-digit growth of Life Science, Glucophage[®] and Erbitux[®] offset by decline in PM amid strong OLED
- Europe solid growth reflects strong demand in Life Science; strong Mavenclad[®] and GM more than offset Rebif[®] and Erbitux[®] decline
- Solid North America driven by strong Life Science; GM, Fertility and Mavenclad[®] ram-up outweighing double-digit decline of Rebif[®]
- Double-digit growth in LATAM due to strong performance of Healthcare core business and Life Science



FINANCIAL OVERVIEW 02



MERCK

Q3 2019: Overview

Key figures

[€m]	Q3 2018	Q3 2019	Δ
Net sales	3,749	4,054	8.1%
EBITDA pre	963	1,111	15.4%
Margin (in % of net sales)	25.7%	27.4%	
EPS pre	1.32	1.35	2.3%
Operating cash flow	731	931	27.3%

[€m]	Dec. 31, 2018	Sept. 30, 2019	Δ
Net financial debt	6,701	7,320	9.2%
Working capital	3,486	3,980	14.2%
Employees	51,749	54,042	4.4%

Comments

- Net sales growth driven by Healthcare and Life Science, offsetting Performance Materials decline
- EBITDA pre & margin reflect GSK deferred income (~€30 m), cost consciousness in HC and strong operating leverage in LS
- Strong operating cash flow due to higher EBITDA and Bavencio[®] milestone payment
- Working capital reflects increased inventory levels and FX
- Higher net financial debt driven by IFRS 16 adoption, dividends and temporary investment of cash proceeds from CH divestment

Reported figures

Reported results

[€m]	Q3 2018	Q3 2019	Δ
EBIT	491	608	23.8%
Financial result	-56	-135	141.1%
Profit before tax	435	473	8.7%
Income tax	-112	-134	19.8%
<i>Effective tax rate</i>	25.7%	28.3%	
Net income ¹	340	343	0.8%
EPS (€)	0.78	0.79	1.3%

Comments

- Higher EBIT due to strong top-line contribution from LS and HC, cost consciousness, and GSK deferred income
- Increase in financial result reflects higher LTIP² provisions, increased interest expense due to Versum financing and interest effect on long term provisions
- Effective tax rate reflects a higher tax reserve for tax audits

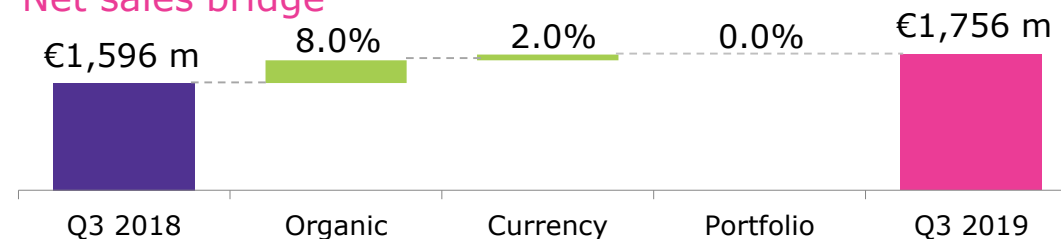
¹From continuing and discontinued operations; ²LTIP = Long term incentive plan;
Totals may not add up due to rounding

Healthcare: Prominent contribution from Mavenclad[®] and Bavencio[®]; solid core business

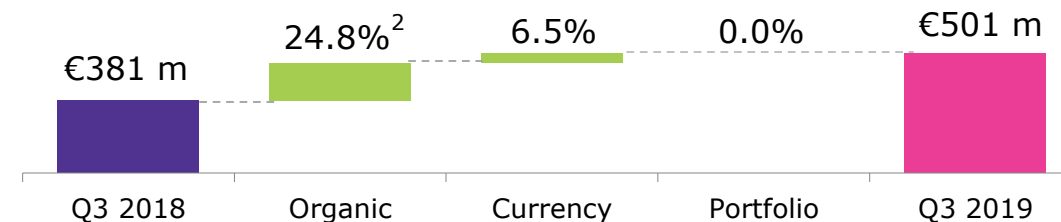
Healthcare P&L

[€m]	Q3 2018 ¹	Q3 2019
Net Sales	1,596	1,756
Marketing and selling	-573	-561
Administration	-81	-82
Research and development	-409	-429
EBIT	191	325
EBITDA	372	504
EBITDA pre	381	501
Margin (in % of net sales)	23.9%	28.5%

Net sales bridge



EBITDA pre bridge



Comments

- Strong growth in Healthcare reflects solid core business and all franchises contributing, N&I franchise back to growth globally
- Mavenclad[®] with continued strong uptake globally (+45% vs. Q2)
- Solid Erbitux[®] benefiting from China reimbursement; Bavencio[®] on track
- M&S decrease due to resource reallocation from core business to new product launches and stringent cost management
- Higher EBITDA pre driven by strong top-line performance, cost consciousness, GSK deferred income (~€30 m) and IFRS 16

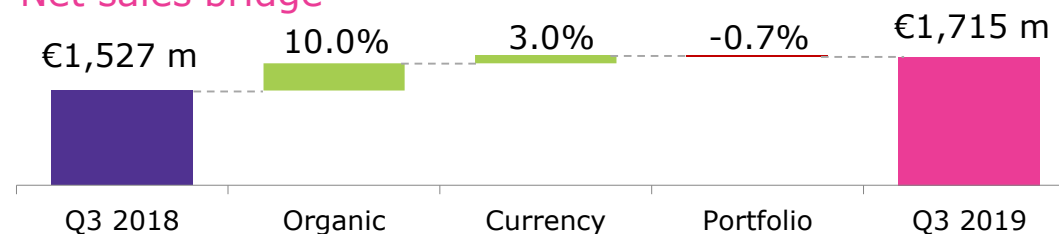
¹LY numbers have been modified, due to disclosure changes of adjustments; ²Thereof IFRS 16 effect with +3.1% (+€12 m); Totals may not add up due to rounding

Life Science: All major businesses and regions fuel double-digit growth

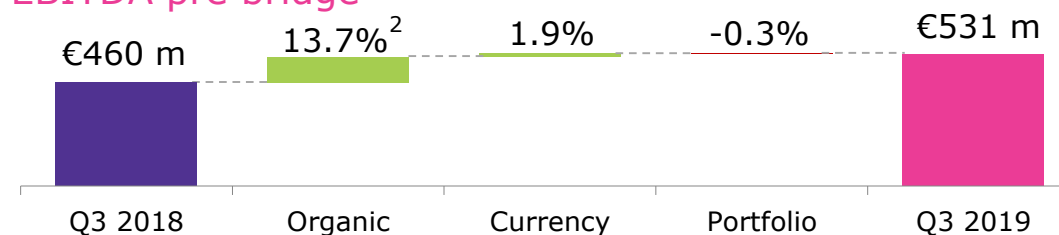
Life Science P&L

[€m]	Q3 2018 ¹	Q3 2019
Net Sales	1,527	1,715
Marketing and selling	-443	-474
Administration	-85	-83
Research and development	-59	-67
EBIT	277	316
EBITDA	449	511
EBITDA pre	460	531
Margin (in % of net sales)	30.1%	31.0%

Net sales bridge



EBITDA pre bridge



Comments

- Strong demand for Process Solutions drives double-digit growth, especially filtration and single-use, across all regions
- Solid organic growth of Applied Solutions mainly driven by advanced analytical and lab water
- Research Solutions with solid organic growth reflecting strong demand for lab separation and workflow tools, especially APAC and North America
- Strong volume growth and investments in eCommerce drive higher M&S
- EBITDA pre and margin increase driven by sustained strong top line, operating leverage and IFRS 16

¹LY numbers have been modified, due to disclosure changes of adjustments; ²Thereof IFRS 16 effect with +3.0% (+€14 m); Totals may not add up due to rounding

The Life Science tools market is attractive and dynamic

Attractive market...

€170 Bn

4-6%¹⁰
CAGR

23-25%

average margin

...with robust trends



Research

~€45-50 bn
~2-3% CAGR⁹



- Increase in **NIH Funding and Pharma R&D**^{1,2}
- Increase in **novel technologies**³
- Increase in **research outsourcing**⁴



Process

~€55-60 bn
~8% CAGR⁹



- Increase in **biologics pipeline**⁵
- More **novel modalities** (>30% CAGR)
- Greater **production outsourcing**⁶



Applied

~€60-65 bn
~4-5% CAGR⁹



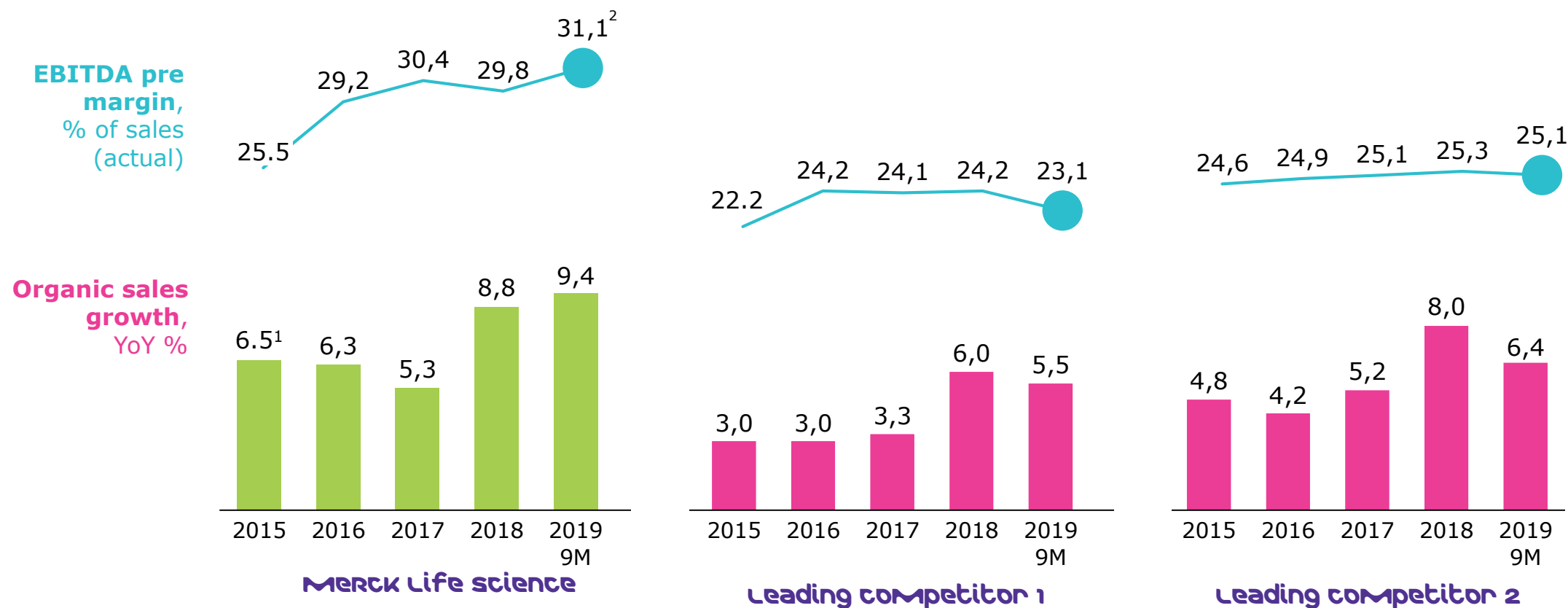
- Higher **Drug standards** (e.g. in China)⁷
- Tighter **F&B regulations** (e.g. US FSMA⁸)
- More **novel assays/diagnostics**

¹CAGR 2015-2019; ²PhRMA members, CAGR 2013-2017; ³CAGR 2014-2018 VC investment into platform technologies; ⁴CAGR 2015-2022. Discovery outsourcing market;

⁵CAGR through 2020; ⁶CAGR 2016-2020; ⁷International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use; ⁸Food Safety Modernization Act implementation through 2024; ⁹Total market CAGR; ¹⁰Company estimate based on industry forecast over 5 year horizon;

Acronyms: NIH = National Institutes of Health, US FSMA = FDA Food Safety Modernization Act

We continue to set the benchmark for industry performance



¹6.5% for EMD Millipore; 6.0% for SIAL calculated from first 9 months of 2015; ²excl. CO

Life Science: Ongoing strong demand driving Q3 performance of Process, Applied and Research Solutions



**Research
Solutions**

**+5.2 %
org.**

- Lab Separation and Workflow Tools driving growth, especially with filtration based products in protein research
- eCommerce growing at 2x the rate of offline
- Synthia: Retrosynthesis tool in Lab and Specialty Chemicals

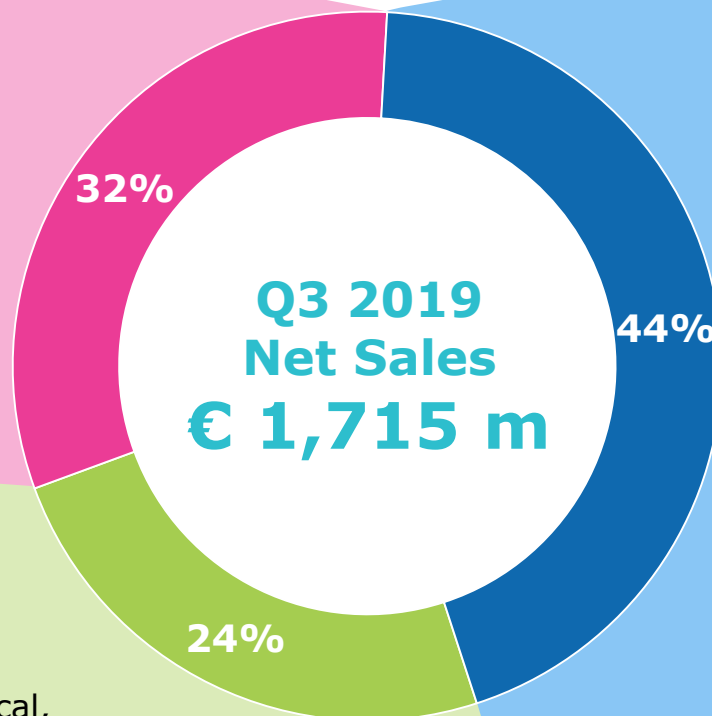


**Applied
Solutions**

**+6.8 %
org.**

- Double-digit growth for Advanced Analytical, and high single-digit growth for Lab Water Solutions
- High single-digit growth in APAC and Emerging markets, with double-digit growth in China
- Acquisition of BSSN Software to accelerate customers' digital transformation in the lab

**Net sales by BU,
in %**

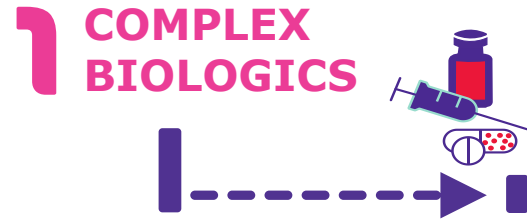


**Process
Solutions**

**+15.6 %
org.**

- BioProcessing growth driven by Single-Use, CDMO, and Process Solutions Services
- All regions growing in the double-digits, with Asia and Americas in the high-teens and Europe/MEA in the low-teens
- Acquisition of ProcessPad technology to advance our BioContinuum™ platform
- >20 New product launches in 2019 so far

Acting to capitalize on three life science trends



Single Use / End to End

Opened Wuxi site in 2018,
and expanded Danvers facility

Viral Vectors

Expanded Carlsbad viral
vector manufacturing site in
2016

Antibody Drug Conjugates (ADC)

Launched ADC Express™ for
the rapid production of ADCs



#1 eCommerce site in Life Science¹

- **>90%** of
Millipore products on
eCommerce platform
- **x2** net sales growth
of eCommerce vs.
non-eCommerce²



Manufacturing/Distribution
Nantong, Wuxi Single use

Commercial expansion
Tier 2 cities

eCommerce partnership

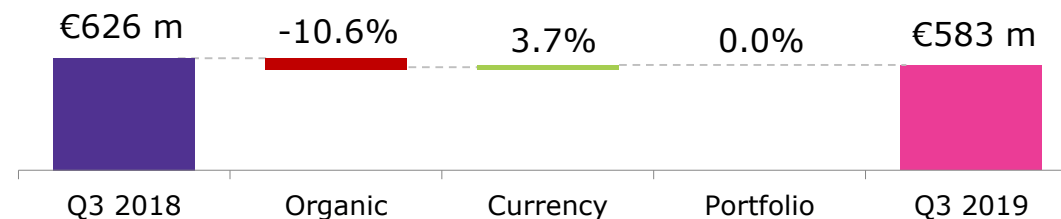


Performance Materials: Expected LC decline starts to materialize amid continued market slowdown in Semiconductor and Surface

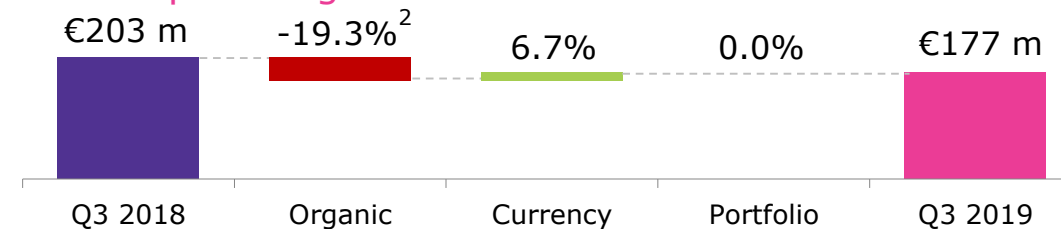
Performance Materials P&L

[€m]	Q3 2018 ¹	Q3 2019
Net Sales	626	583
Marketing and selling	-62	-61
Administration	-23	-30
Research and development	-65	-48
EBIT	142	98
EBITDA	202	169
EBITDA pre	203	177
Margin (in % of net sales)	32.5%	30.5%

Net sales bridge



EBITDA pre bridge

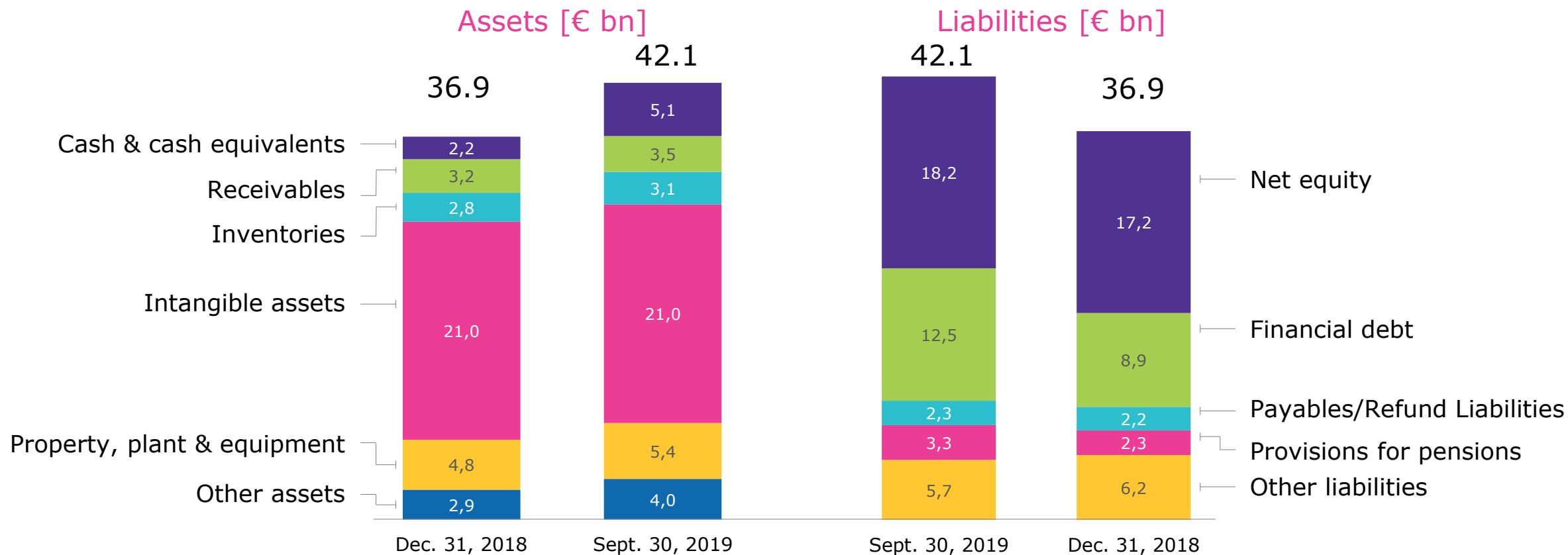


Comments

- Double-digit decline of Display Solutions: LC back to negative underlying trajectory with high last year base, OLED again strong
- Ongoing softness of Semiconductor Solutions due to market slowdown
- Surface Solutions decline reflects weak demand of automotive market increased industrials portfolio-focus amid Bright Future transformation
- Provisions related to Bright Future program drive admin expense
- Lower R&D reflects strong cost focus and impact of Bright Future program
- EBITDA pre margin decline reflects reduced top line and negative business mix

¹LY numbers have been modified, due to disclosure changes of adjustments; ²Thereof IFRS 16 effect with +1.1% (+€2 m); Totals may not add up due to rounding

Balance sheet – Reflecting bond placements and IFRS 16 adoption



- Higher cash & cash equivalents reflects bond placements and repayment of a due bond (~€2.8 bn)
- Increase in property, plant and equipment mainly due to IFRS 16 adoption
- Other assets reflect temporary investment of cash proceeds from Consumer Health divestment

- Increase in equity reflects profit after tax (equity ratio of 43.2%)
- Higher financial debt due to bond placements (~€3.5 bn) and IFRS 16 reclassification of lease liabilities
- Increase in provisions for pensions reflects decline in interest rate

Totals may not add up due to rounding

Cash flow statement

Q3 2019 – cash flow statement

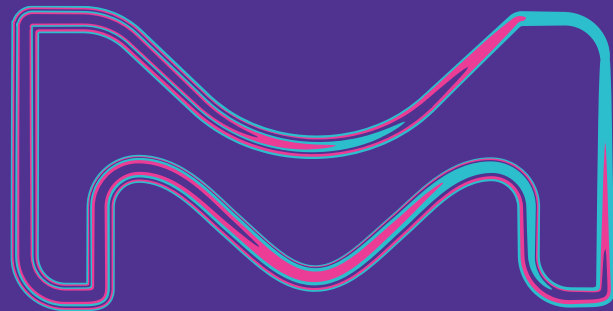
[€m]	Q3 2018	Q3 2019	Δ
Profit after tax	345	342	-3
D&A	428	464	37
Changes in provisions	69	81	12
Changes in other assets/liabilities	6	129	123
Other operating activities	-9	9	18
Changes in working capital	-107	-94	13
Operating cash flow	731	931	199
Investing cash flow	-218	-209	9
thereof Capex on PPE	-215	-193	23
Financing cash flow	-287	934	1,221

Cash flow drivers

- D&A increase mainly due to IFRS 16 reclassification
- Changes in other assets/liabilities driven by Bavencio[®] milestone payment; last years' low base due to neutralization of receivables
- Higher financing cash flow reflects the issuance of new bonds (€2 bn) partially offset by repayment of a due bond (€800 m)



GUIDANCE 03



MERCK

Merck Group

Key earnings drivers to remember for 2019



EBITDA¹-supporting factors

- Strong sales contribution from Mavenclad[®] ramp-up and Bavencio[®]

new

Ongoing strength in Life Science with 8% to 9% organic above-market net sales growth and 20-30 bps underlying margin progression

- Successful partnering of bintrafusp alfa with ~€100 m of deferred income from upfront payment recognized as other operating income in Q2 to Q4 2019
 - Income from milestones and management of pipeline (part of operating business in Healthcare) materializing in Q2 and Q4 2019
 - Lower expected license payments for Erbitux[®]
 - High level of cost consciousness and prioritization
 - Adoption of IFRS 16 contributes ~€130 m² to organic growth YoY
- new
- new
- new
- Positive FX impact: Emerging market currencies remain weak but offset by favorable EUR/USD development (range 2019: 1.11-1.15)
- 86 days of Versum contribution
- About stable R&D costs budgeted for Healthcare and decrease as % of sales (actual development will be subject to clinical data outcome of priority projects and prioritization decisions)



EBITDA¹-reducing factors

- Healthcare underlying margins negatively impacted by product mix
- Performance Materials sales and earnings reaching trough due to expected decline in Liquid Crystals in H2; economic environment may lead to moderate decline in Semiconductors, returning to growth in 2020

Merck Group

Full-year 2019 guidance

Merck guidance for 2019, including Versum for 86 days

Net sales:

Organic +3% to +5% YoY
FX +1% to +2% YoY

~ €15.7 – 16.3 bn

thereof Versum: ~ €270 m

EBITDA pre:

Organic +10% to +13% YoY¹
FX 0% to +2% YoY

~ €4,230 – 4,430 m

thereof Versum: ~ €80 – 90 m

EPS pre:

~ €5.30-5.65

thereof Versum: ~ €0.11 – 0.14

Merck Group

2019 business sector guidance¹ without Versum

Healthcare



Net Sales

- Solid organic growth +4% to +6%
- Base business at least stable organically
- Strong contributions from launches including Mavenclad

EBITDA pre²

- Organic +19% to +23% YoY
- FX 0% to +2% YoY
- ~ €1,830 – 1,940 m

Life Science



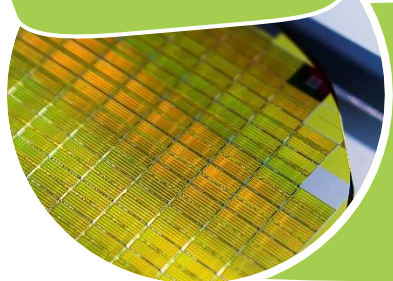
Net Sales

- Organic growth +8% to +9%, above expected market growth
- Main growth driver Process Solutions but all businesses contributing

EBITDA pre²

- Organic +12% to +14% YoY
- FX +0% to +2% YoY
- ~ €2,040 – 2,140 m with 20-30 bps³ underlying margin progression

Performance Materials



Net Sales

- Organic decline -4% to -7%
- LC resuming decline, following temporary capacity ramp-up in China
- Economic environment may lead to moderate decline in Semicon, return to growth in 2020

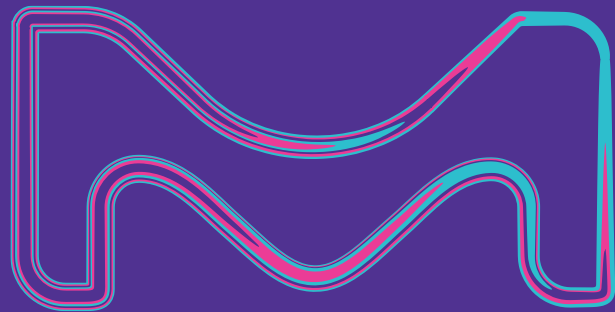
EBITDA pre^{2,4}

- Organic -9% to -13% YoY
- FX +3% to +5% YoY
- ~ €695 – 755 m

¹Divisional guidances are only support to the group guidance and do not have to add up; ²Incl. ~€130 m YoY contribution from adoption of IFRS 16 (Healthcare ~40%, Life Science ~40%, PM ~10%, CO ~10%); ³bps = basis points; ⁴Merck stand-alone, i.e. without acquisition of Versum Materials and Intermolecular Inc.



APPENDIX



MERCK

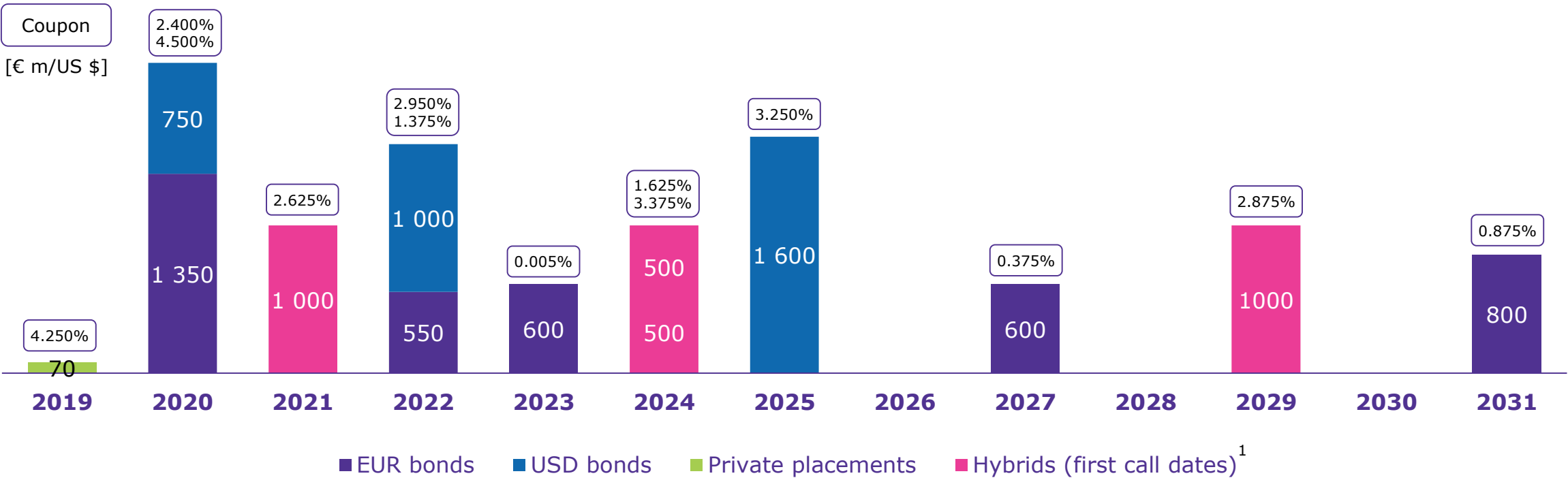
Additional financial guidance 2019

Further financial details

Corporate & Other EBITDA pre*	~ -€460 – -490 m
Interest result	~ -€260 – -280 m
Effective tax rate	~ 24% to 26%
Capex on PPE	~ €1.0 bn – 1.1 bn
Hedging/USD assumption	FY 2019 hedge ratio ~60% at EUR/USD ~1.20
2019 Ø EUR/USD assumption	~ 1.11 – 1.15

Maturity profile reflects Sigma-Aldrich and Versum financing transactions

Maturity profile as of Sept. 30, 2019



Balanced maturity profile in upcoming years avoids refinancing risks; Merck will become a more frequent issuer

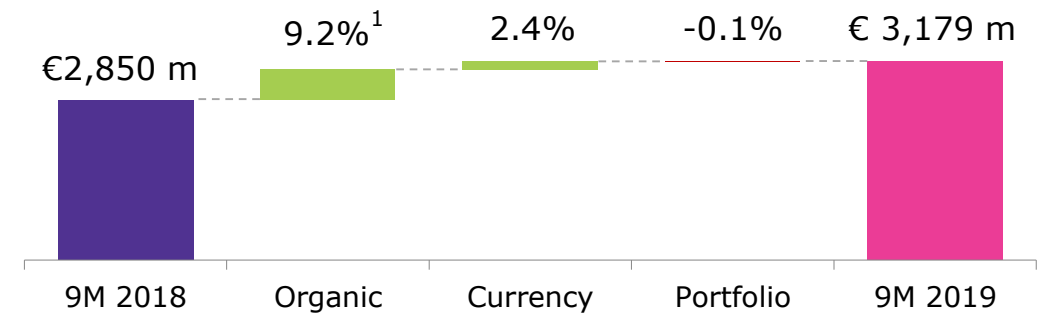
¹No decision on call rights taken yet

Healthcare and Life Science more than offset decline of Performance Materials supported by FX tailwinds

9M 2019 YoY net sales	Organic	Currency	Portfolio	Total
Healthcare	5.4%	1.0%	0.0%	6.5%
Life Science	9.4%	2.6%	-0.6%	11.5%
Performance Materials	-3.4%	3.3%	0.0%	0.0%
Merck Group	5.7%	2.1%	-0.2%	7.5%

- Solid growing Healthcare due to General Medicine, Mavenclad[®], Fertility, Erbitux[®] and Bavencio[®], offsetting strong Rebif[®] decline
- Life Science with above-market growth due to strong momentum across all business units and regions
- Performance Materials with LC back to negative underlying trajectory and softer Surface and Semiconductor Solutions; OLED strong

9M YoY EBITDA pre



- Increased organic EBITDA pre driven by sustained strong performance of Life Science, milestone payments and deferred income in Healthcare, mitigated by ongoing LC price decline
- Positive FX effects on EBITDA pre reflects mainly US Dollar development

¹Thereof IFRS 16 effect with +3.4% (+€97 m); Totals may not add up due to rounding

9M 2019: Overview

Key figures

[€m]	9M 2018	9M 2019	Δ
Net sales	10,949	11,771	7.5%
EBITDA pre	2,850	3,179	11.5%
Margin (in % of net sales)	26.0%	27.0%	
EPS pre	3.89	4.02	3.3%
Operating cash flow	1,479	2,166	46.5%

[€m]	Dec. 31, 2018	Sept. 30, 2019	Δ
Net financial debt	6,701	7,320	9.2%
Working capital	3,486	3,980	14.2%
Employees	51,749	54,042	4.4%

Comments

- Net sales reflect sales growth of Healthcare and Life Science supported by FX tailwinds
- EBITDA pre & margin increase due to operational leverage in LS, milestone payments and deferred income in HC
- Strong operating cash flow reflects GSK upfront, Peg-Pal and Bavencio[®] milestone payment
- Working capital reflects increased inventory levels and FX
- Higher net financial debt mainly due to IFRS 16 adoption, dividends and temporary investment of cash proceeds from CH disposal

Reported figures

Reported results

[€m]	9M 2018	9M 2019	Δ
EBIT	1,386	1,605	15.9%
Financial result	-182	-309	69.8%
Profit before tax	1,204	1,297	7.7%
Income tax	-303	-337	11.1%
<i>Effective tax rate</i>	25.2%	26.0%	
Net income ¹	928	1,002	8.0%
EPS (€)	2.13	2.31	8.5%

Comments

- Higher EBIT reflects strong topline contribution from Life Science and non-recurring income in Healthcare
- Increased financial result driven by revaluation of F-Star purchase option (-€45 m), higher LTIP² provisions, increased interest expense due to Versum financing and interest effect on long term provisions
- Effective tax rate within guidance range of ~24-26%
- Higher net income and EPS due to increased EBIT, mitigated by lower financial result

¹From continuing and discontinued operations; ²LTIP = Long term incentive plan;
Totals may not add up due to rounding

Healthcare: Solid growth of core business and increasing contribution of launches

Healthcare P&L

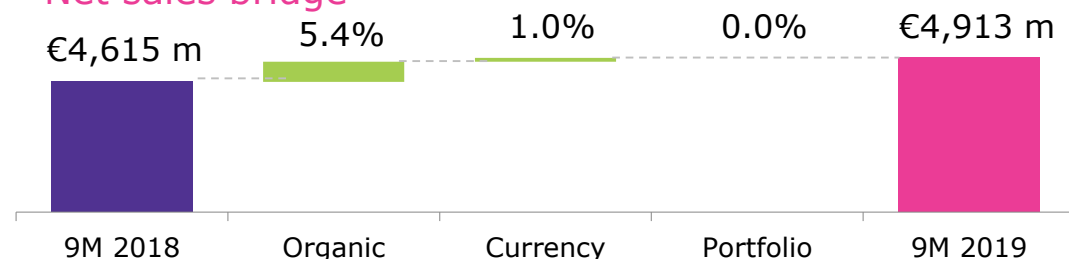
[€m]	9M 2018 ¹	9M 2019
Net Sales	4,615	4,913
Marketing and selling	-1,715	-1,710
Administration	-241	-254
Research and development	-1,194	-1,204
EBIT	541	798
EBITDA	1,089	1,355
EBITDA pre	1,141	1,361
Margin (in % of net sales)	24.7%	27.7%

Comments

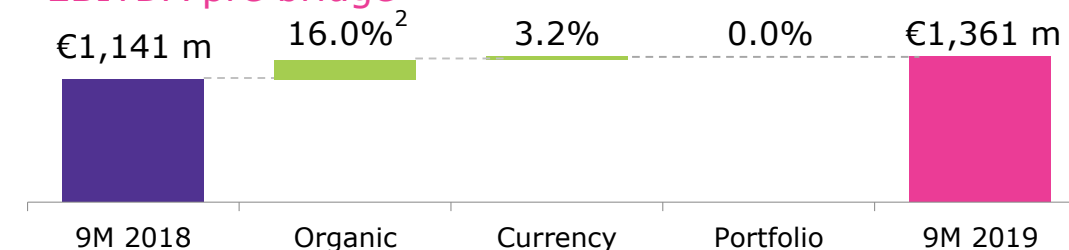
- Solid foundation due to growing core business, further supported by acceleration of Mavenclad[®] and Bavencio[®] launches
- Mavenclad[®] with continued strong uptake across all regions is overcompensated by strong Rebif[®] decline
- Bavencio[®] ramp-up on track; Erbitux[®] benefitting from China reimbursement, still facing ongoing competition and price pressure in major markets

¹LY numbers have been modified, due to disclosure changes of adjustments; ²Thereof IFRS 16 effect with +3.2% (+€37 m); Totals may not add up due to rounding

Net sales bridge



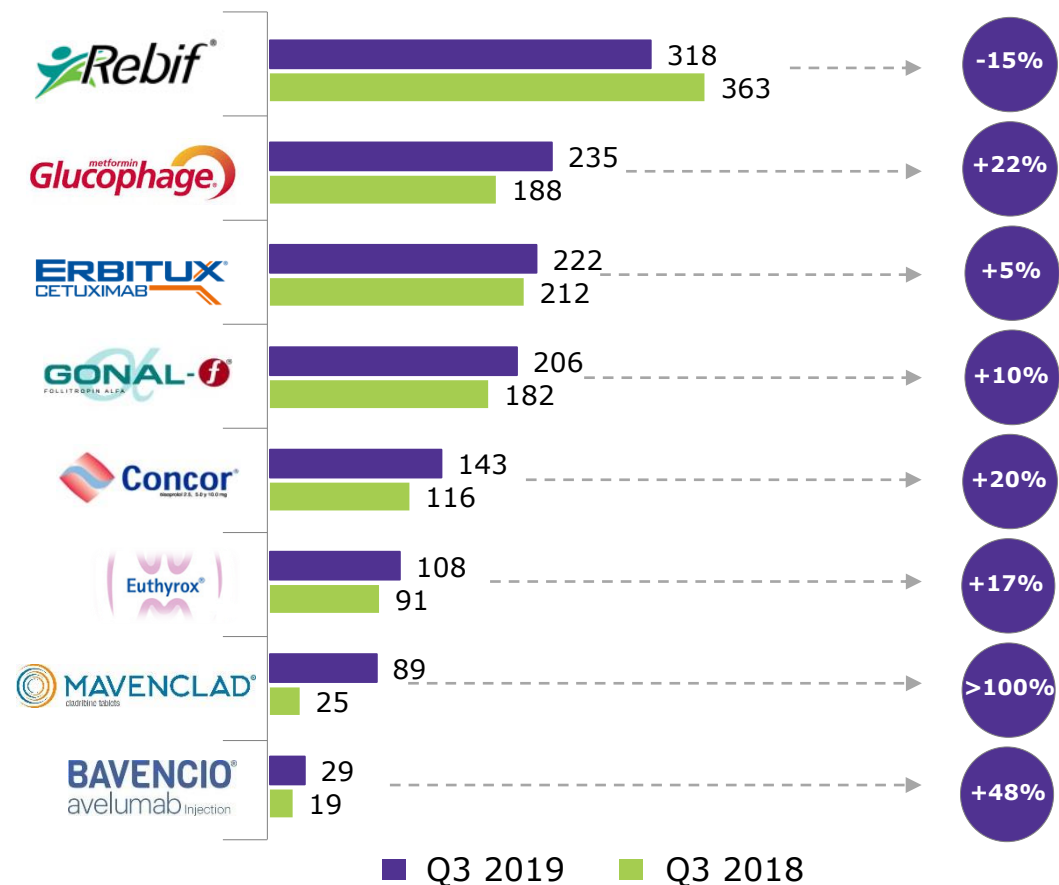
EBITDA pre bridge



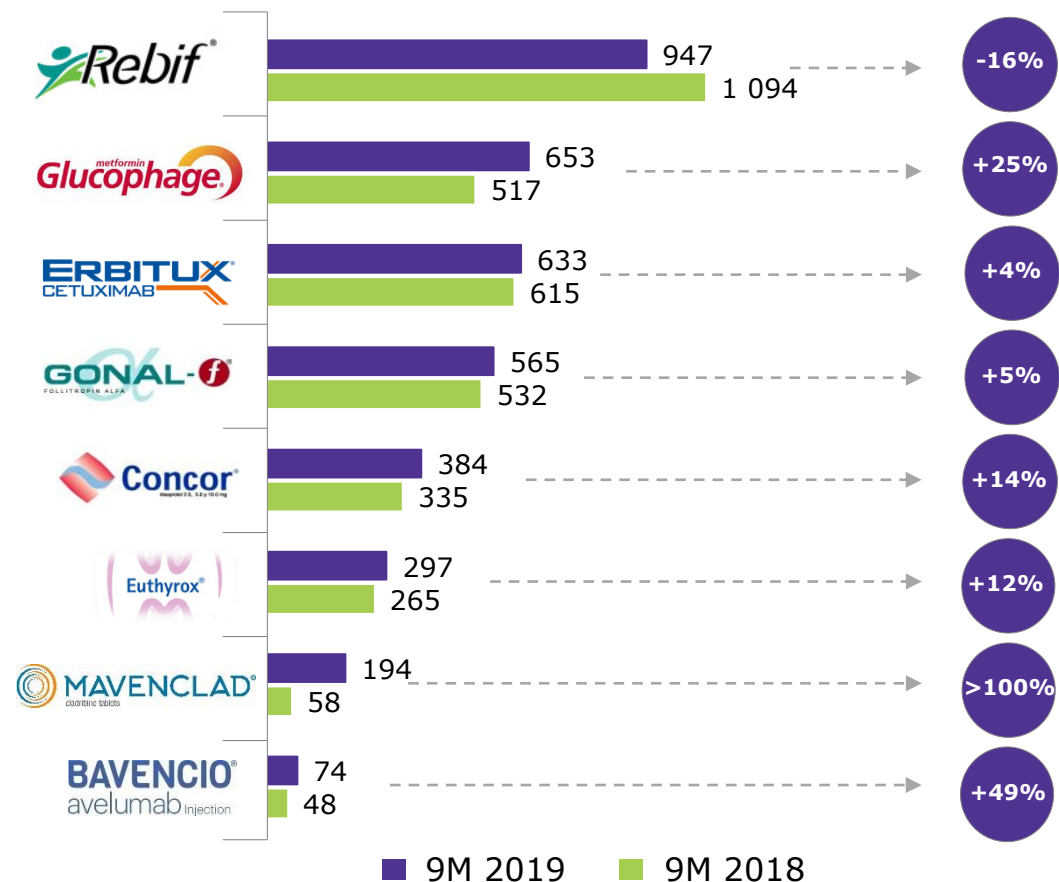
- M&S decrease due to stringent cost management and strategic resource reallocation benefitting launches
- Higher EBITDA pre driven by solid top line contribution, non recurring income [Bavencio[®] (~€35 m) milestone, GSK deferred income (~€60 m) and Peg-Pal (~€75 m)] and IFRS 16 effect, outweighing last years' Peg-Pal milestone (~€50 m)

Healthcare organic growth by franchise/product

Q3 2019 organic sales growth [%]
by key product [€m]

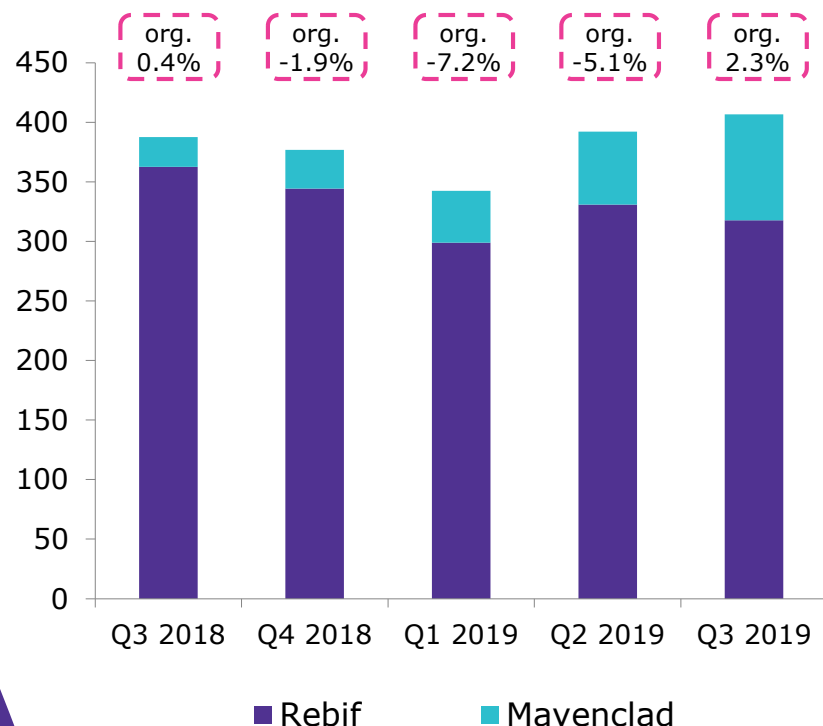


9M 2019 organic sales growth [%]
by key product [€m]

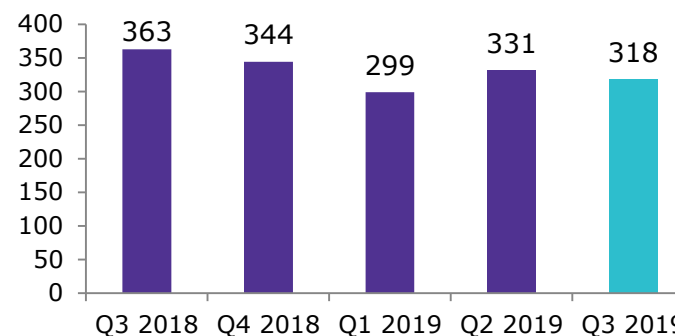


Neurodegenerative Diseases: Strong growth of Mavenclad® starts to offset Rebif® decline

Sales development NDI, [€m]

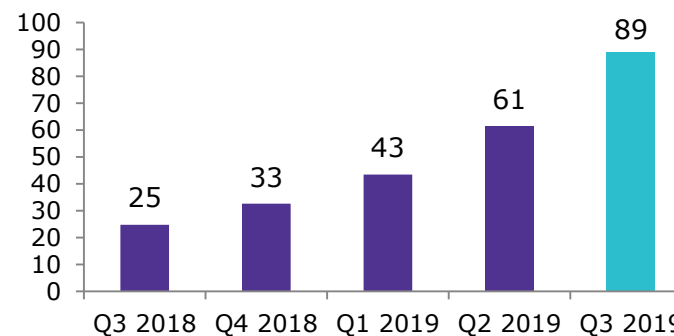


Rebif® net sales, [€m]



- Rebif® sales of €318 m in Q3 2019 reflects organic decline of -15.1% mitigated by FX effect of +2.8%
- U.S. and European volume decline mainly due to competition
- U.S. decline in line with IFN market dynamics

Mavenclad® net sales, [€m]

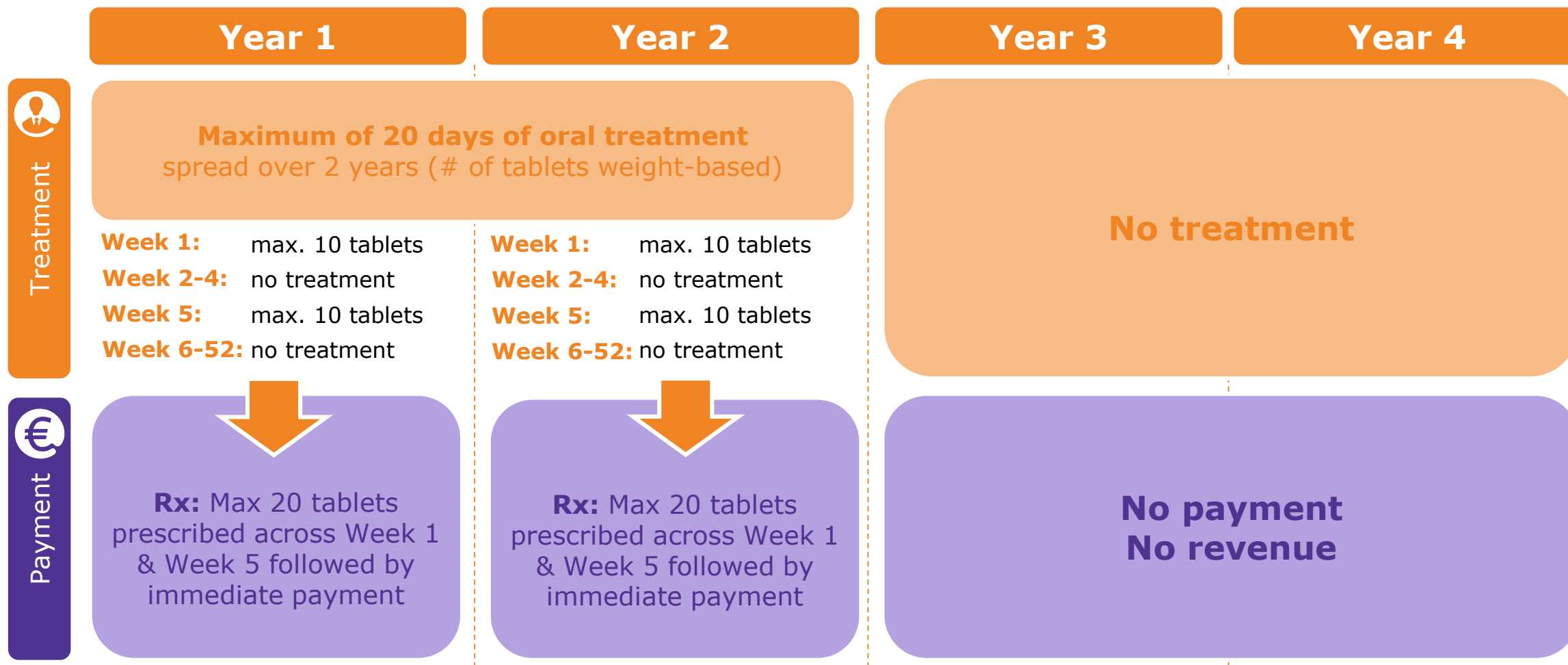


Mavenclad® ramp up accelerating across all regions

FY 2019 guidance of ~€300 m

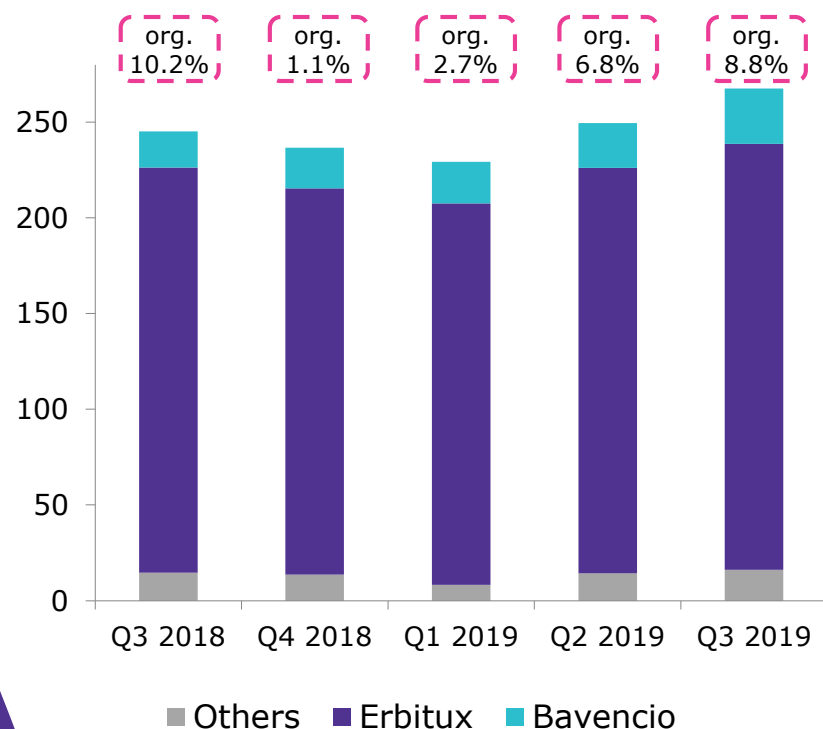
Neurodegenerative Diseases: Mavenclad[®] dosing regimen and revenue recognition

Simplified for
illustrative purposes

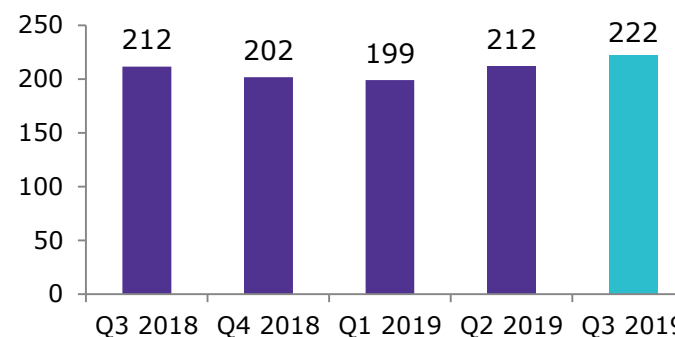


Oncology: Solid organic growth reflects strong demand for Erbitux® in China and Bavencio® ramp up

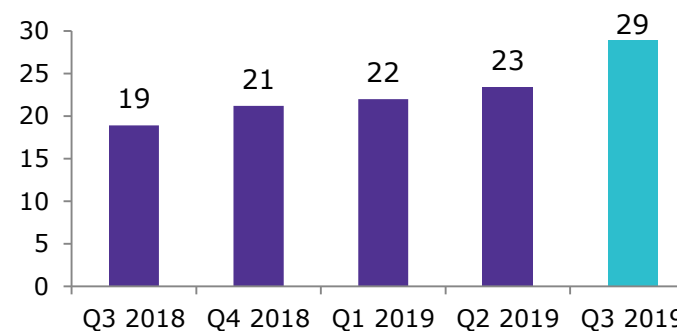
Sales development Oncology, [€m]



Erbitux® net sales, [€m]



Bavencio® net sales, [€m]



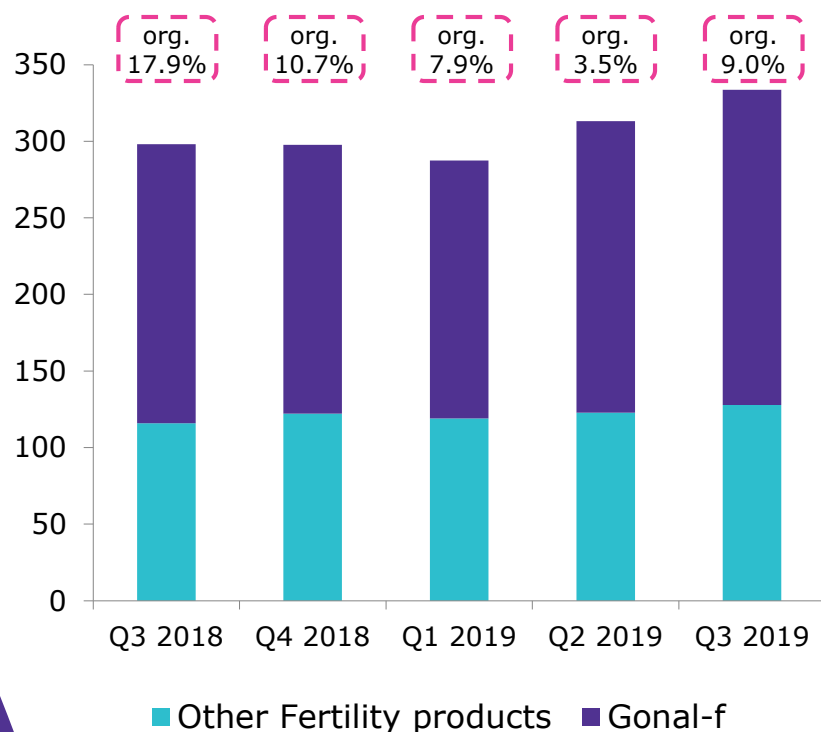
- Absolute sales of €222 m reflect solid growth (org. 5.1%; FX 0.0%)
- Strong APAC mainly driven by China reimbursement recognition
- LATAM strong, while MEA affected by tender phasing due to import permit
- Decline in Europe reflects ongoing competition, price reductions and shrinking market size

Bavencio® approved for RCC in US mid May 2019

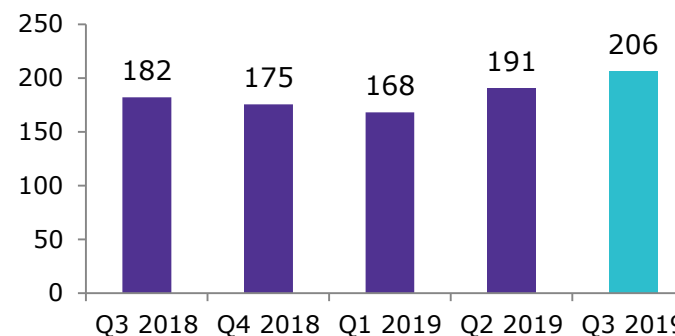
FY 2019 guidance of ~ €100 m

Fertility: Strong organic growth driven by ongoing demand for Gonal-f in the U.S. and China

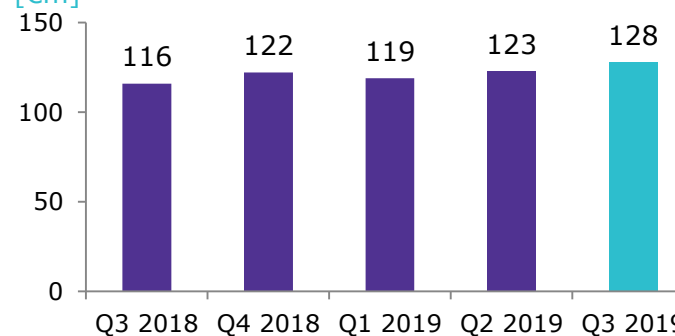
Sales development Fertility, [€m]



Gonal-f[®] net sales, [€m]



Other Fertility products net sales, [€m]

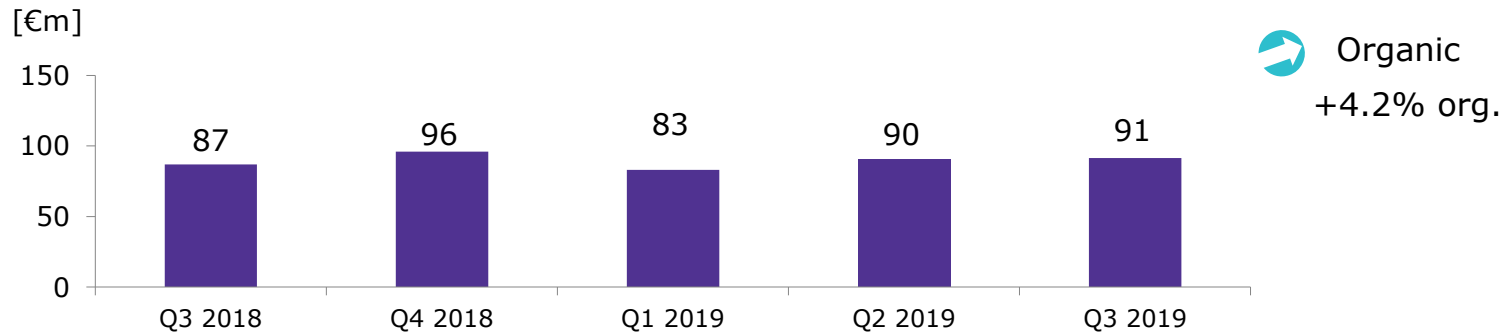


- Fertility posts strong organic growth driven by APAC, North America and MEA
- Double-digit growth of Gonal-f[®] results in €206 m absolute sales (org. 10.0%; FX 3.2%)
- Gonal-f[®] driven by ongoing strong demand in the U.S. and China
- Other Fertility products with strong growth mainly driven by APAC and LATAM

China, Europe and LATAM fuel double-digit growth of General Medicine

Sales evolution

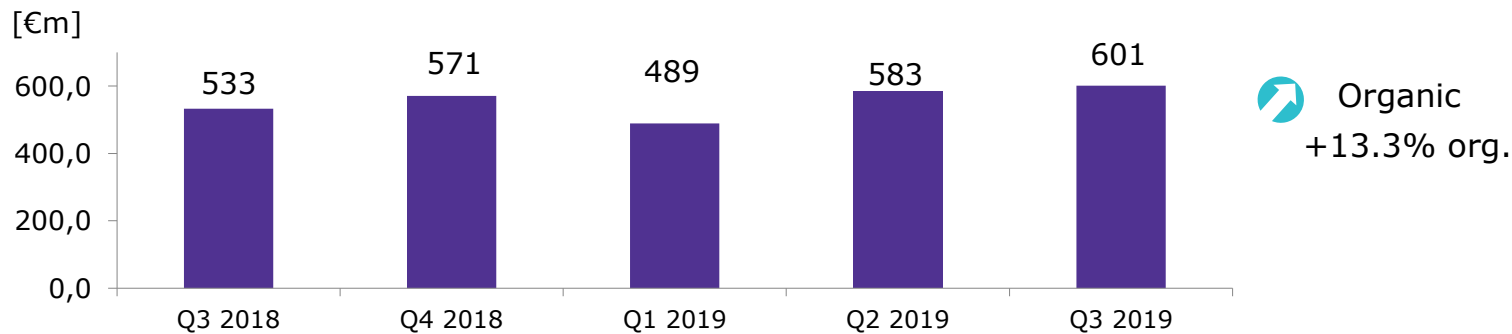
Endocrinology



Q3 2019 organic drivers

- Endocrinology with solid organic growth driven by all major regions, especially LATAM

General Medicine*



- Ongoing strong demand for Glucophage[®], Concor[®] and Euthyrox[®] especially in China, Europe and LATAM drive double-digit growth of General Medicine

*includes CardioMetabolic Care & General Medicine and Others

Merck Pipeline

November 8, 2019

Phase I

M3258
LMP7 inhibitor
Multiple myeloma

M3541
ATM inhibitor
Solid tumors

M3814
DNA-PK inhibitor
Solid tumors¹

M4344
ATR inhibitor
Solid tumors

M6620
ATR inhibitor
Solid tumors

M7583
BTK inhibitor
Hematological malignancies

M8891
MetAP2 inhibitor
Solid tumors

avelumab
anti-PD-L1 mAb
Solid tumors

bintrafusp alfa
TGFbeta trap/anti-PD-L1
Solid tumors

M9241 (NHS-IL12)
Cancer immunotherapy
Solid tumors¹

M5049
Immune receptor inhibitor
Immunology

M6495
anti-ADAMTS-5 nanobody
Osteoarthritis

M5717
PeEF2 inhibitor
Malaria

Phase II

tepotinib
MET kinase inhibitor
Non-small cell lung cancer

tepotinib
MET kinase inhibitor
Hepatocellular cancer

M3814
DNA-PK inhibitor
Rectal cancer

abrituzumab²
pan-αv integrin inhibiting mAb
Colorectal cancer 1L

bintrafusp alfa
TGFbeta trap/anti-PD-L1
Non-small cell lung cancer 1L

bintrafusp alfa
TGFbeta trap/anti-PD-L1
Non-small cell lung cancer 1L/2L

bintrafusp alfa
TGFbeta trap/anti-PD-L1
Locally advanced non-small cell lung cancer

bintrafusp alfa
TGFbeta trap/anti-PD-L1
Biliary tract cancer 1L

bintrafusp alfa
TGFbeta trap/anti-PD-L1
Biliary tract cancer 2L

avelumab
anti-PD-L1 mAb
Merkel cell cancer 1L

avelumab
anti-PD-L1 mAb
Solid tumors³

avelumab
anti-PD-L1 mAb
Non-small cell lung cancer³

avelumab
anti-PD-L1 mAb
Urothelial cancer³

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

sprifermin
fibroblast growth factor 18
Osteoarthritis

M1095 (ALX-0761)⁴
anti-IL-17 A/F nanobody
Psoriasis

Phase III

avelumab
anti-PD-L1 mAb
Non-small cell lung cancer 1L

avelumab
anti-PD-L1 mAb
Urothelial cancer 1L-M

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

evobrutinib
BTK inhibitor
Multiple sclerosis

Registration

avelumab
anti-PD-L1 mAb
Renal cell cancer 1L⁵

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

1L, first-line treatment; 1L-M, first-line maintenance treatment; 2L, second-line treatment.

¹ Includes studies in combination with avelumab.

² 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.

³ Avelumab combination studies with talazoparib, axitinib, ALK inhibitors, cetuximab, chemotherapy, or novel immunotherapies.

⁴ 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.

⁵ As announced on October 28 2019, the European Commission (EC) approved avelumab in combination with axitinib for the first-line treatment of patients with advanced renal cell carcinoma.

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.

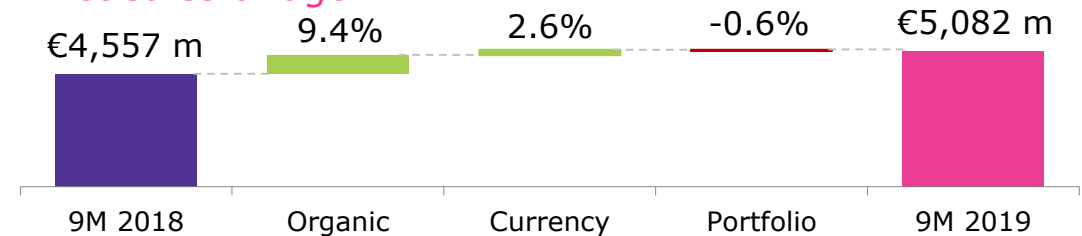
MERCK

Life Science: All businesses across all regions drive ongoing strong top and bottom line performance

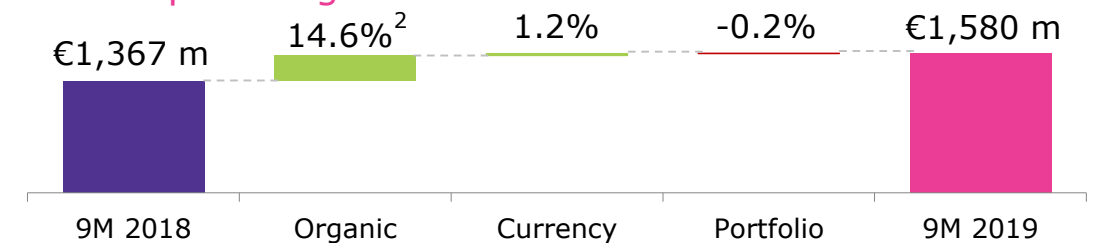
Life Science P&L

[€m]	9M 2018 ¹	9M 2019
Net Sales	4,557	5,082
Marketing and selling	-1,304	-1,434
Administration	-228	-239
Research and development	-180	-199
EBIT	804	951
EBITDA	1,333	1,536
EBITDA pre	1,367	1,580
Margin (in % of net sales)	30.0%	31.1%

Net sales bridge



EBITDA pre bridge



Comments

- Double-digit growth of Process Solutions due to ongoing strong demand in all businesses across all major regions, especially North America
- Continued strength in Advanced Analytical and Lab Water fuel solid organic growth of Applied Solutions

- Solid growth in Research Solutions driven by ongoing strong demand in APAC and North America, especially specialty chemicals and workflow tools
- Higher M&S in line with volume growth and driven by investments in eCommerce and strategic initiatives
- EBITDA pre reflects operational leverage from strong top-line growth and IFRS 16 effect

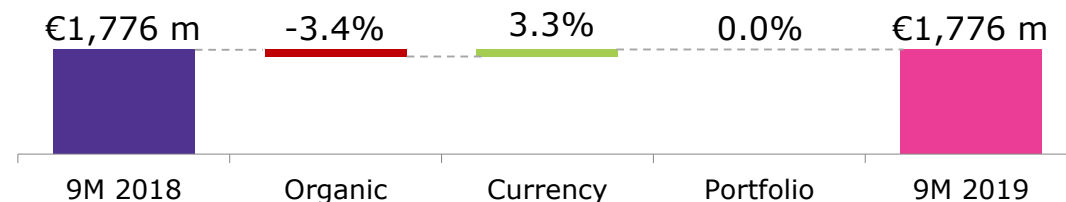
¹LY numbers have been modified, due to disclosure changes of adjustments; ²Thereof IFRS 16 effect with +2.9% (+€39 m); Totals may not add up due to rounding

Performance Materials: LC back to negative underlying trajectory amid softness in Semiconductor and Surface

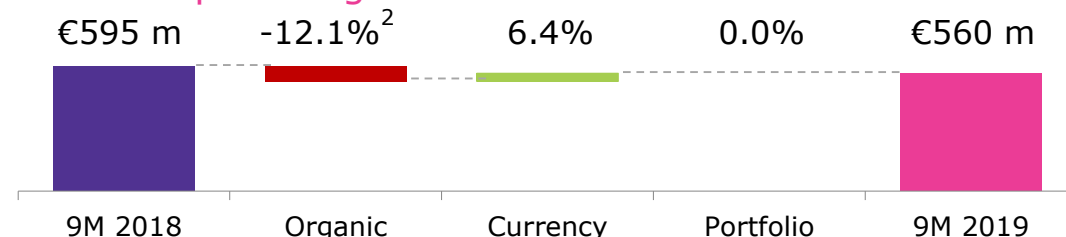
Performance Materials P&L

[€m]	9M 2018 ¹	9M 2019
Net Sales	1,776	1,776
Marketing and selling	-183	-193
Administration	-72	-78
Research and development	-183	-194
EBIT	409	293
EBITDA	586	488
EBITDA pre	595	560
Margin (in % of net sales)	33.5%	31.6%

Net sales bridge



EBITDA pre bridge



Comments

- Display Solutions below prior year reflecting strong demand for OLED, overcompensated by declining LC
- Market slowdown drives softness of Semiconductor Solutions
- Surface Solutions decline reflects weak demand of automotive market increased industrials portfolio-focus amid Bright Future transformation

- Provisions related to Bright Future program drive M&S, Admin and R&D increase; adjusted for EBITDA pre - decrease in R&D reflecting cost control
- EBITDA pre margin decline reflects reduced top line and negative business mix

¹LY numbers have been modified, due to disclosure changes of adjustments; ²Thereof IFRS 16 effect with +1.2% (+€7 m); Totals may not add up due to rounding

Cash flow statement

9M 2019 – cash flow statement

[€m]	9M 2018	9M 2019	Δ
Profit after tax	938	1,002	64
D&A	1,304	1,391	87
Changes in provisions	119	134	15
Changes in other assets/liabilities	-472	14	486
Other operating activities	6	-46	-51
Changes in working capital	-416	-330	86
Operating cash flow	1,479	2,166	687
Investing cash flow	-631	-1,408	-778
thereof Capex on PPE	-611	-566	45
Financing cash flow	-585	2,175	2,760

Cash flow drivers

- Profit after tax reflects higher EBIT
- D&A increase mainly due to IFRS 16 reclassification
- Changes in other assets/liabilities reflects GSK upfront, Peg-Pal and Bavencio® milestone payment
- Increased investing cash flow due to temporary investment of cash proceeds from Consumer Health divestment
- Higher financing cash flow reflects the issue of new bonds (€3.5 bn) partially compensated by repayment of a due bond (€800 m)

Adjustments in Q3 2019

Adjustments in EBIT

[€m]	Q3 2018		Q3 2019	
	Adjustments	thereof D&A	Adjustments	thereof D&A
Healthcare	9	0	-3	0
Life Science	16	5	20	0
Performance Materials	1	0	16	8
Corporate & Other	23	0	13	0
Total	49	5	47	8

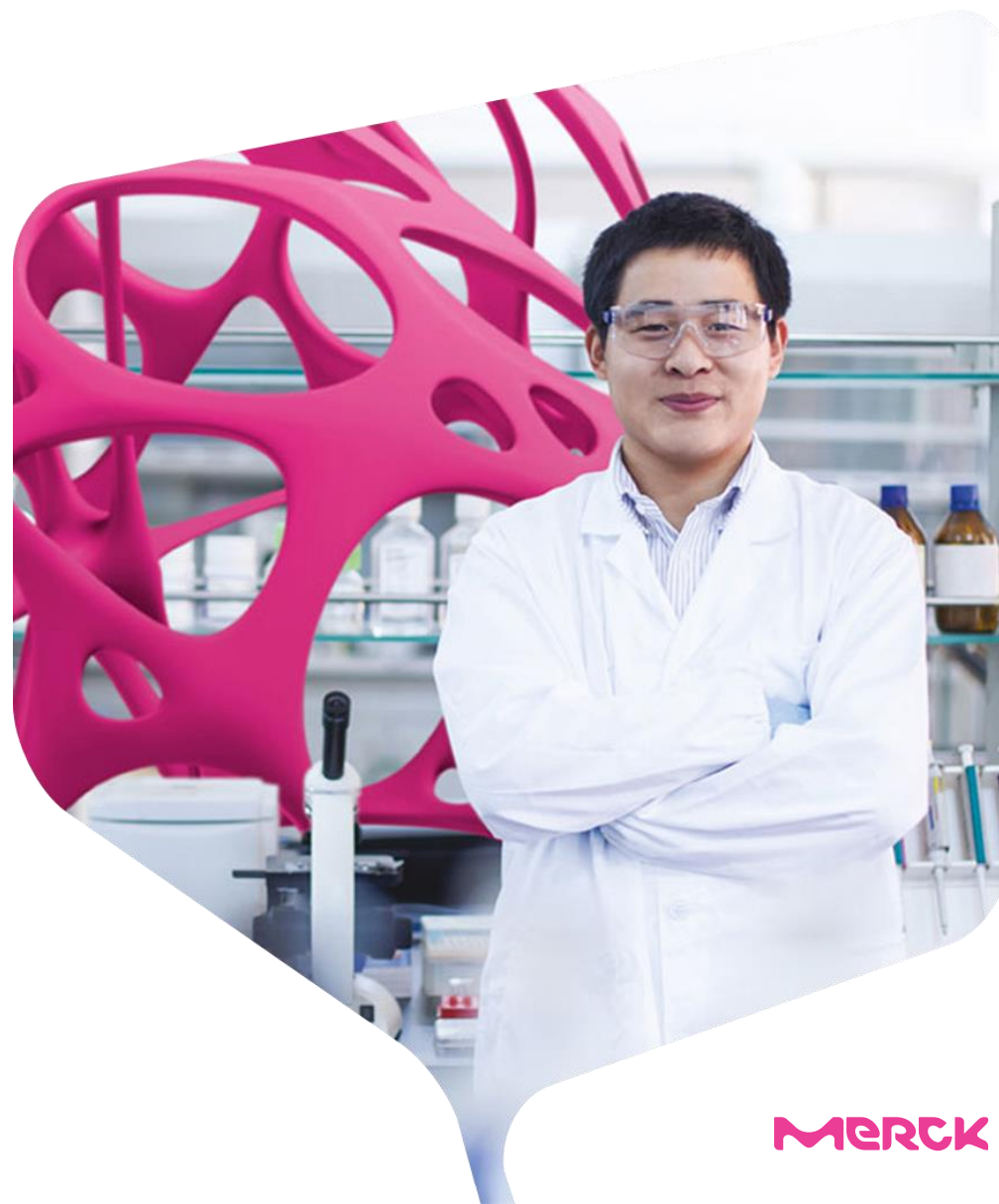
Adjustments in 9M 2019

Adjustments in EBIT

[€m]	9M 2018		9M 2019	
	Adjustments	thereof D&A	Adjustments	thereof D&A
Healthcare	52	0	5	0
Life Science	54	21	44	0
Performance Materials	10	1	81	8
Corporate & Other	73	0	58	0
Total	189	22	188	8

Financial calendar

Date	Event
March 5, 2020	FY 2019 Earnings release
April 24, 2020	Annual General Meeting
May 14, 2020	Q1 2020 Earnings release
August 6, 2020	Q2 2020 Earnings release



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