Merck KGaA
Germany; Innovative Pharma, Specialty Chemicals, Life Sciences

A STABLE

Key metrics

			Scope estimates	
Scope credit ratios	**2020**	**2021**	**2022E**	**2023E**
Scope-adjusted EBITDA/interest cover	12x	27x	29x	25x
Scope-adjusted debt/EBITDA	2.4x	1.5x	1.1x	1.2x
Scope-adjusted funds from operations/debt	30%	53%	76%	69%
Scope-adjusted free operating cash flow/debt	20%	39%	42%	40%

Rating rationale

Scope Ratings GmbH has upgraded the issuer ratings of Merck KGaA and its financing subsidiaries Merck Financial Services GmbH and EMD Finance LLC to A/Stable from A-/Positive.

The upgrade is driven by Merck's strong growth, which has also led to improved credit metrics with Scope-adjusted debt/EBITDA leverage expected to be sustained at around 1.5x. Growth of the group's three divisions will also continue to improve, driven by further investment in capacity expansion and the reinforcement of the supply chain to accommodate available demand. The group's portfolio of products is anticipated to show resilience to macroeconomic challenges.

Outlook and rating-change drivers

The Outlook is Stable and incorporates our view of growth driven by the main assets within the three divisions. Furthermore, the Stable Outlook reflects Scope's expectation that Merck will maintain its conservative financial policy and leverage will remain at the current level, at a Scope-adjusted debt/EBITDA of around 1.5x on average, as a result of continuing investment to support growth.

A negative rating action could occur if Scope-adjusted debt/EBITDA were sustained at close to 2x, for example, due to a major acquisition that cannot be absorbed despite robust cash flow.

A positive rating action could be warranted if Scope-adjusted debt/EBITDA were sustained at around 1x, which is unlikely given the acquisition target of EUR 15bn to EUR 20bn from 2023.

Rating history

Date	Rating action/monitoring review	Issuer rating & Outlook
17 Oct 2022	Upgrade	A/Stable
19 Aug 2022	No action (Monitoring review)	A-/Positive
11 Oct 2021	Outlook change	A-/Positive
9 Oct 2020	Affirmation	A-/Stable

Ratings & Outlook

Issuer	A/Stable
Short-term debt	S-1
Senior unsecured debt	A
Subordinated hybrid debt	BBB+

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Related Methodologies

Corporate Rating Methodology: July 2022

Rating Methodology: European Pharmaceuticals January 2022

Rating Methodology: Chemical Corporates April 2022

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Positive rating drivers	Negative rating drivers
• Diversified group structure benefiting internal risk balancing • Strong growth achievable from Merck's identified 'Big 3' segments • Potential pharma blockbuster in development • Significant cash flow generation • High efficiency in product innovation and development that results in constant development of products that foster human health and well-being (ESG factor)	• Healthcare division in transition • High regulatory and reputational risks in pharmaceutical segment (ESG factor) • Challenging macroeconomic environment

Positive rating-change drivers	Negative rating-change drivers
• Leverage sustained around 1.0x	• Leverage sustained at close to 2.0x

Corporate profile

Merck KGaA was founded by Friedrich Jacob Merck in 1668 and is headquartered in Darmstadt, Germany. The Merck family holds 70% of the voting rights with the remainder in public ownership. After several acquisitions and divestments, the group is now strongly diversified, consisting of three divisions: Healthcare, Life Science and Electronics (formerly Performance Materials). In 2015, Merck acquired the US-based life science company Sigma Aldrich for USD 17bn, becoming a diversified industry leader in life science. In pharmaceuticals, it is a medium-sized producer of specialised drugs, relying on two blockbuster products, but has developed a new focus on immuno-oncological products, mainly represented by its antibody drug avelumab, already marketed as Bavencio. At the end of 2014, US big pharma company Pfizer gained partial ownership of the molecule and US distribution rights for USD 850m. In 2019, Merck bought US electronic materials producer Versum Materials Inc for about EUR 6bn to strengthen its Electronics division.

Financial overview

				Scope estimates		
Scope credit ratios	**2019**	**2020**	**2021**	**2022E**	**2023E**	**2024E**
Scope-adjusted EBITDA/interest cover	14x	12x	27x	29x	25x	25x
Scope-adjusted debt/EBITDA	3.0x	2.4x	1.5x	1.1x	1.2x	1.8x
Scope-adjusted funds from operations/debt	23%	30%	53%	76%	69%	45%
Scope-adjusted free operating cash flow/debt	17%	20%	39%	42%	40%	24%
Scope-adjusted EBITDA in EUR m	**2019**	**2020**	**2021**	**2022E**	**2023E**	**2024E**
EBITDA	4,064	4,499	5,918	6,983	6,900	7,670
Operating lease payments in respective year	0	0	0	0	0	0
Other items	0	0	0	0	0	0
Scope-adjusted EBITDA	4,064	4,499	**5,918**	**6,983**	**6,900**	**7,670**
Funds from operations in EUR m	**2019**	**2020**	**2021**	**2022E**	**2023E**	**2024E**
Scope-adjusted EBITDA	4,064	4,499	5,918	6,983	6,900	7,670
less: (net) cash interest paid	-256	-329	-216	-220	-260	-290
less: cash tax paid per cash flow statement	-958	-866	-1,045	-1,081	-1,054	-1,206
add: depreciation component, operating leases	0	0	0	0	0	0
Funds from operations	**2,850**	**3,304**	**4,657**	**5,682**	**5,586**	**6,174**
Free operating cash flow in EUR m	**2019**	**2020**	**2021**	**2022E**	**2023E**	**2024E**
Funds from operations	2,850	3,304	4,657	5,682	5,586	6,174
Change in working capital	-170	-162	-349	-668	-201	-484
Non-operating cash flow	176	334	308	0	0	0
less: capital expenditure (net)	-728	-1,235	-1,020	-1,750	-2,050	-2,300
less: Lease amortisation	-109	-112	-117	-115	-115	-115
Free operating cash flow	**2,019**	**2,129**	**3,479**	**3,149**	**3,220**	**3,275**
Net cash interest paid in EUR m	**2019**	**2020**	**2021**	**2022E**	**2023E**	**2024E**
Net cash interest per cash flow statement	256	329	216	220	260	290
add: interest on pensions	60	70	39	50	50	50
less: equity share of hybrid interest	-30	-35	-35	-31	-31	-31
Net cash interest paid	**286**	**364**	**220**	**239**	**279**	**309**
Scope-adjusted debt in EUR m	**2019**	**2020**	**2021**	**2022E**	**2023E**	**2024E**
Reported gross financial debt	13,194	12,142	10,801	9,270	9,770	15,270
less: subordinated (hybrid) debt	-1,493	-1,494	-1,495	-1,495	-1,495	-1,495
less: cash and cash equivalents	-781	-1,355	-1,899	-1,732	-1,617	-1,507
add: non-accessible cash	300	300	300	300	300	300
add: pension adjustment	1,206	1,452	1,154	1,125	1,125	1,125
Other items	-75	-102	-35	0	0	0
Scope-adjusted debt	**12,351**	**10,943**	**8,826**	**7,468**	**8,083**	**13,693**

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Environmental, social and governance (ESG) profile[1]

Environment		Social		Governance	
Resource management (e.g. raw materials consumption, carbon emissions, fuel efficiency)		Labour management		Management and supervision (supervisory boards and key person risk)	Grey leaf
Efficiencies (e.g. in production)		Health and safety (e.g. staff and customers)	Green leaf	Clarity and transparency (clarity, quality and timeliness of financial disclosures, ability to communicate)	Grey leaf
Product innovation (e.g. transition costs, substitution of products and services, green buildings, clean technology, renewables)		Clients and supply chain (geographical/product diversification)		Corporate structure (complexity)	Grey leaf
Physical risks (e.g. business/asset vulnerability, diversification)		Regulatory and reputational risks	Red leaf	Stakeholder management (shareholder payouts and respect for creditor interests)	Grey leaf

Legend
Green leaf (ESG factor: credit positive)
Red leaf (ESG factor: credit negative)
Grey leaf (ESG factor: credit neutral)

Industry-related ESG factors

Merck's long record of providing products that contribute to human health and well-being is credit-positive.

However, the high regulatory and reputational risks inherent to the pharmaceuticals sector are credit-negative. The main regulatory risk relates to the potential for large litigation cases, especially in the US. Reputational risk is linked to the perception of unethical pricing and sustainability issues regarding the balancing of patent expiry with new products.

[1] These evaluations are not mutually exclusive or exhaustive as ESG factors may overlap and evolve over time. We only consider ESG factors that are credit-relevant, i.e. those that have a discernible, material impact on the rated entity's cash flow and, by extension, its credit quality.

Business risk profile: A

We have assessed each of Merck's divisions individually to take their specificities into account, in accordance with our corporate ratings methodology. By applying weights based on each division's contribution to group profits, the group's business risk profile falls within the A category.

Based on a long-term commitment to a diversified healthcare and chemicals exposure, Merck has built its group structure around three sizeable divisions, each of which hold significant shares of their markets: Healthcare, Life Science and Electronics (formerly Performance Materials). The 2015 acquisition of US-based Sigma Aldrich to strengthen Life Science positioned Merck as a global top three player in laboratory equipment and related products. After a weakening of the liquid crystals business, the Electronics division was rebalanced, mainly via the Versum acquisition (semiconductor solutions). Merck's Healthcare division is a medium-sized drug producer relative to competitors and only recently gained approval for novel pipeline projects, ending years of no innovation.

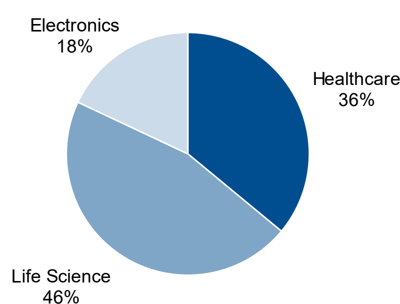
Diverse and resilient business mix

Merck's mix of industries is very credit-supportive, showcasing resilience to macroeconomic cycles. Demand in Life Science and Healthcare has been supported by ageing societies and unhealthy lifestyles as well as innovation. The Electronics division supplies specialty products for a diverse set of industries, meaning a sharp downturn in one industry is less likely to affect the overall division. Liquid crystals performance has been weak and is unlikely to recover but has been addressed by a focus on semiconductors via the Versum acquisition.

Focus on the Big 3 assets for future growth

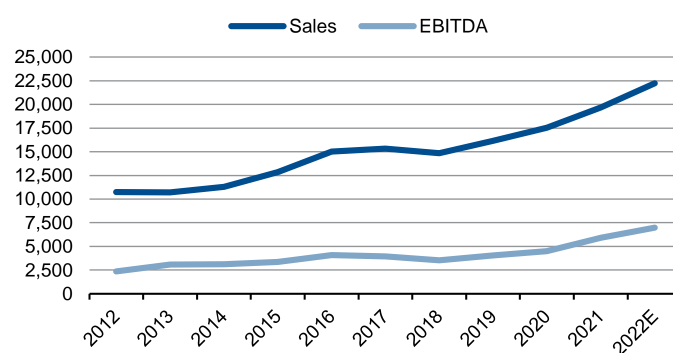
Merck remains committed to increasing group sales to EUR 25bn by 2025, which would require more than EUR 1bn in organic sales growth every year. The main drivers will likely be its 'Big 3' segments: 'Process Solutions and Life Science Services' in Life Science, 'New Medicines' in Healthcare, and 'Semiconductor Solutions' in Electronics. These are targeted to generate around 80% of sales growth and more than 50% of sales in 2025.

Figure 1: Breakdown of sales for 2021 in %



Source: Merck, Scope

Figure 2: Acceleration of group performance in EUR m



Source: Merck, Scope estimates

Healthcare: relying on new products

Merck's pharmaceutical activities suffer from an older and smaller product portfolio than those of big pharma peers. Patents on its two mature blockbusters, Erbitux (oncology) and Rebif (multiple sclerosis), have already expired in major markets. Apart from these two flagship products, Merck's core business is stable, consisting mostly of off-patent, mature drugs including Glucophage (diabetes), Concor (hypertension) and Gonal-F (fertility).

The declining sales of mature blockbuster Rebif are likely being offset by the full recovery in performance of fertility drugs and a rebound in the cardiovascular, metabolism and

endocrinology portfolio, where price pressure in China on Glucophage should ease. Recent launches will be needed to offset the squeeze on divisional margins stemming from Rebif's declining contribution. Commercialised products are likely to contribute to growth and to leadership in targeted treatment areas such as multiple sclerosis. Recent launches Mavenclad, Bavencio and Tepmetco continue to ramp up. The pipeline includes Xevinapant and Evobrutinib which are in phase 3 and will soon be launched.

Looking at key treatment areas under healthcare:

- The fertility market benefits from structural tailwinds: delayed parenthood and lifestyle habits are making infertility more prevalent, while increasing awareness and access to treatment are boosting demand. Merck is building on GONAL-f (world's most prescribed r-hFSH treatment) with Pergoveris (only recombinant FSH+ LH product in the market).
- In neurology, the Rebif therapy platform still holds a significant share of the interferon market. Mavenclad is gaining market share in Europe and is well positioned for growth. The recovery of the high-efficacy multiple sclerosis market remains a focus for Merck. Evobrutinib is still to be launched.
- In oncology, Bavencio (bladder cancer, first-line treatment) still has growth potential from label expansion and as the global roll-out continues. The European approval of Bavencio is positive given its large underlying market; previous approvals were for more niche segments (Merkel cell carcinoma, bladder-second line, renal cell carcinoma). Erbitux continues to contribute while Tepmetko (a MET inhibitor to treat adults with metastatic non-small cell lung cancer) is yet to deliver sufficient sales.

Initially, peak sales of EUR 2bn by 2022 were targeted cumulatively for Bavencio, Mavenclad and Tepmetko. However, based on the slow ramp-up of Bavencio's sales and headwinds in Mavenclad's performance, management guidance reduced to between EUR 1.6bn and EUR 1.8bn.

With around 30% EBITDA margin, Healthcare is weak relative to pharma peers. Pipeline prospects are credit-supportive as Merck continues to invest heavily in R&D. However, the rating is held back by the division's small market shares and high product concentration, with the top three generating about 38% of pharmaceutical revenues in 2021.

Life Science: strongly accelerating

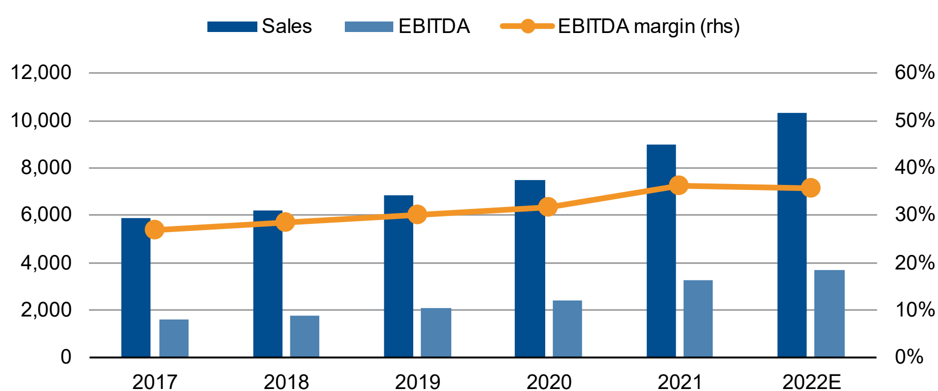
Life Science remains the group's largest division in terms of sales and profitability. This division has grown strongly over recent years, initially due to the acquisition of Sigma Aldrich in 2015 and then based on underlying market growth and market share gains by Merck. The recent Covid-19 crisis created significant demand for laboratory testing and related equipment. Demand also benefited from the pharma industry's growing demand for oncology and immunology-related R&D, which drove specific product demand for the development of monoclonal antibodies and biosimilars as well as for the cell and gene therapy markets.

Merck drastically scaled up activity in custom lipids. Demand for lipids is increasing as they are critical to the delivery systems of mRNA therapies and vaccines. Merck is one of the very few companies worldwide that can produce custom lipids in significant volumes. To provide customers with a one-stop shop across the manufacturing processes for mRNA, Merck acquired two biopharmaceutical contract development and manufacturing organisations: Exelead (in February 2022 for around USD 780m), which specialises in injectable formulation and technologies, and AmpTec, a contract development and manufacturing company (CDMO) based in Germany and specialised in mRNA technology.

Life Science is likely to continue to lead the industry despite fading demand for Covid-19 related products. Further investment in the portfolio is helping to expand the offerings, leaving the underlying business, particularly in Process Solutions and Life Science Services, well positioned to capitalise on favourable market trends.

Diversification is key to our assessment of this division's competitive position. The division is active in all major product categories except diagnostic instruments. Furthermore, the division's industry-leading EBITDA margin (around 36% in 2021), strong cash generation and accelerating revenue growth all strongly support the rating.

Figure 3: Accelerating growth in Life Science (in EUR m)



Source: Merck, Scope estimates

Electronics: Versum stabilised profits

The competitive position of Electronics has improved. It is now less dependent on liquid crystals and more balanced by electronics and semiconductor activities, which make up around 60% of divisional sales. The recent change in the divisional mix has also replaced the lost liquid crystals profits with strong contributions from Versum. While operating margins for liquid crystals have fallen from above 45% in 2013 to below 30% due to structural market changes (heavy price pressure and only moderate sales growth), growth has been provided by the acquisitions of Versum and Intermolecular, producers of electronics materials mainly for the semiconductor industry. Merck's credit profile also benefits from demand growth in semiconductors due to increased digitalisation in many industries. This is very likely supported by the recent global shortage of semiconductors following the significant additional demand from the automotive industry (for batteries for new-generation electric cars and for navigation and entertainment). The division's prospects are also helped by significant growth potential in Merck's OLED activities, which are expected to surpass liquid crystals in the medium term and support Display Materials growth.

Electronics continues to have good market shares and margins, attesting to its products' highly specialised nature. Only Surface Solutions was negatively affected by the coronavirus crisis as it is exposed automotive and cosmetics, two industries especially hit by the pandemic. Even so, the division accounts for only about 10% of Electronics, limiting the overall impact.

Financial risk profile: A

We have upgraded the financial risk profile assessment to A from A-. This is based on the material deleveraging and financial flexibility bolstered by solid cash generation. Credit metrics improved significantly in 2021 and are expected to continue to improve in 2022 to below 1.5x in terms of Scope-adjusted debt/EBITDA.

Merck KGaA

Germany; Innovative Pharma, Specialty Chemicals, Life Sciences

Credit metrics improving strongly excluding the effect of a potential large acquisition

Key credit metrics recovered strongly in 2021 and 2020 after deteriorating in 2019 following the Versum acquisition. This was due to the supportive financial policy (cost control, no large acquisitions, stable dividend) and improving operating conditions, especially with adequate operating cash flows in Life Science and Healthcare.

2022 results will lead to higher financial flexibility

Favourable market dynamics allowed Merck to reach the upper bound of its 2021 guidance. Merck's good performance in H1 2022 was again underpinned by Life Science, which grew strongly despite tempering pandemic-related demand. Management reiterated its operational guidance, though stronger currency-related tailwinds could boost consensus revenue and adjusted EBITDA. We expect this to continue in the second half of 2022, which would mark another year of solid performance and provides higher financial flexibility for strategic growth. Merck remains committed to increasing group sales by EUR 25bn by 2025, which would require more than EUR 1bn in organic sales growth every year.

For the medium term, our rating case conservatively reflects the potential impact in 2023 of macroeconomic challenges on profitability. We assume acquisitions of around EUR 3bn in 2023 and EUR 8bn in 2024. A large acquisition may cause Scope-adjusted debt/EBITDA to spike above 1.5x.

M&A as an option to accelerate growth

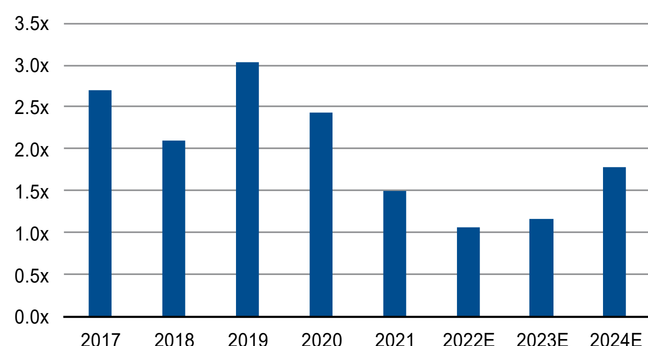
Management is seeking inorganic growth, targeting EUR 15bn to EUR 20bn of strategically aligned acquisitions from 2023 onwards. Merck would ideally fund such deals with cash, followed by issuing debt, using hybrid bonds and finally by divesting existing assets that no longer align with strategy. While a large acquisition may increase leverage, the group is committed to fast deleveraging as shown after previous acquisitions.

Robust free operating cash flow

As a result of the increasing EBITDA, cash flow cover is expected to remain strong despite a higher guidance for capital expenditure for the next years. Free operating cash generation has been good in recent years (see Figure 5 below). The peak in 2021 was mainly due to a higher group EBITDA and lower capital expenditures compared to the years before. For the next years, we expect free operating cash flow of around EUR 3bn as the group will continue to invest in expansion.

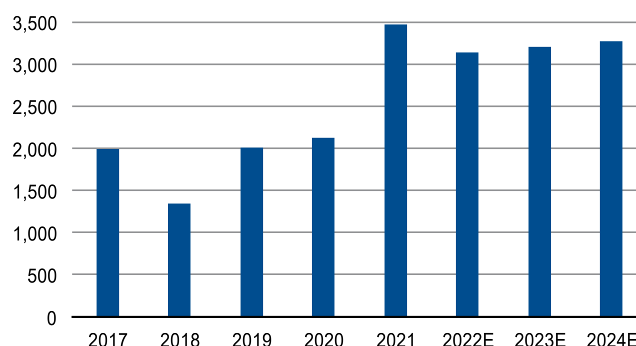
Rising cash generation, declining relative cost positions and the deleveraging commitment lay the groundwork for solid credit metrics over the coming years unless a large acquisition reduces overall cash flow.

Figure 4: Accelerated deleveraging (Scope-adjusted debt/EBITDA)



Source: Scope estimates

Figure 5: Free operating cash flow in EUR m



Source: Scope estimates

Adequate liquidity

Liquidity is adequate. Short-term debt of EUR 2.4bn should be covered by a cash buffer of EUR 1.6bn (both as at end-June 2022) and free operating cash flow similar to its 2021 level. Merck also has committed undrawn credit lines of EUR 2bn.

Supplementary rating drivers: 0 notches

Financial policy underpinning quick deleveraging after an acquisition

Among the supplementary rating drivers, financial policy is the most important for Merck. Management is committed to a strong investment-grade rating and deleveraging after the significant Sigma Aldrich acquisition. After this acquisition, management stated publicly that it would enter a phase of consolidation and organic growth, with a focus on reducing debt quickly, not least motivated by the intention to keep ratings stable. It implemented the same strategy after acquiring Versum.

Long-term and short-term debt ratings

Senior unsecured debt rating: A

Senior unsecured debt has been rated at A, the same level as the issuer rating.

Hybrid debt rating: BBB+

Contractually subordinated debt that qualifies as hybrid debt (deferability of coupon payments, structural subordination, perpetual duration) is rated BBB+, two notches below the issuer rating.

Short term debt rating: S-1

Short-term debt is rated S-1. It is supported by adequate internal liquidity and reflects strong access to external funding through capital markets and bank debt as signalled by the frequent issuance of bonds, commercial paper and hybrid debt.

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