Corporate and Instrument Rating
BASF SE
Germany, Specialty Chemicals

A STABLE
Corporate Rating

Corporate profile

BASF SE is a chemicals company which also operates in related areas such as agriculture, nutrition, and the exploration and production of oil and natural gas. The company is organised into five business segments: Chemicals, Performance Products, Functional Materials and Solutions, Agricultural Solutions, and Oil and Gas. The five business segments include 13 divisions organised around sectors or products with over 300 production sites worldwide. About half of the company's revenues are generated by speciality chemicals while the remainder come from the commodity chemicals and Oil and Gas segments.

Ratings

Corporate rating:	A
Outlook:	Stable
Senior unsecured debt rating:	A/Stable
Short-term rating:	S-1
Sector:	Speciality chemicals
Monitoring:	Monitored

Analysts

Werner Stäblein (Lead analyst)
E-mail w.staeblein@scoperatings.com

Rating rationale

Scope Ratings affirms a corporate credit rating of A for Germany-based chemicals company BASF SE and its financing subsidiary BASF Finance Europe N.V.. Senior unsecured debt issued by either BASF SE or BASF Finance Europe N.V. is rated A. The short-term rating is S-1. The rating Outlooks are Stable.

The corporate credit rating of A assigned to BASF primarily reflects our view of the group's strong position in the global chemical market, its high degree of diversification into different end markets, notably in the speciality chemical segment, as well as our expectation that free cash flow generation and the management's commitment to a conservative financial policy will continue. Scope considers BASF's business risk profile to be better than its financial risk profile. The company's business risk profile is supported by: i) BASF's large share of business in different speciality chemical end markets, representing more than half of operating income (EBIT); ii) its broad geographical reach; iii) high customer diversification; iv) strong market positions; and v) cost advantages in its upstream chemicals business resulting from the integrated 'Verbund' strategy. The business risk profile is also enhanced by diversification benefits from the economically-resilient agricultural chemicals division. Over the past decade, BASF has made a number of acquisitions in speciality chemicals and divested commodity chemicals assets. This portfolio shift has improved the company's share of customised products and functionalised materials, eventually leading to greater protection against cyclicality risks and an improved share of business generated in emerging markets. BASF's business risk profile is constrained by: i) its dependence on highly cyclical end markets such as the automotive, construction and electronics markets; ii) the strong correlation between global chemical markets and GDP and industrial production; and iii) risks related to volatile feedstock and energy prices. In view of the shift of global chemical consumption towards Asia, we view BASF's strong presence in the rather stagnant European market as a constraint. The company's oil and gas business is subject to earnings and cash flow volatility due to changes in the price of oil and natural gas.

Our assessment of BASF's financial risk profile reflects the management's stated financial policy and credible track record of maintaining moderate leverage. Credit ratios such as Scope-adjusted debt (SaD)/EBITDA have been maintained below 2.0x over the past six years, with the exception of 2016 when SaD/EBITDA was 2.0x due to the conclusion of the Chemetall transaction.

Results for 2016 have been in line with our previous estimates. BASF reported positive first half results for 2017 leading us to undertake a slight upward revision of our forecast for 2017. We now expect SaD/EBITDA for 2017 to be significantly below 2.0x, at levels of about 1.5x, while FFO/SaD should be close to 50%. Free cash flow (as reported by BASF) was EUR 2.2bn in H1 2017, supporting our belief that free cash flow for the full year should substantially exceed dividend payments, eventually leading to a slight improvement in credit metrics in 2017. Our base case includes EUR 500m of bolt-on acquisitions in both 2017 and 2018, and we would not rule out the possibility that BASF continues to realign its portfolio. We do not, however, believe that any such acquisition will eventually prove to be significantly larger than the Chemetall acquisition (USD 3.2bn). The rating and outlook would accommodate a purchase of this magnitude. We now have a more positive view of free cash flow development which suggests further mild deleveraging in 2018.

Outlook

The Outlook is Stable and incorporates our expectation that BASF should achieve debt protection measures such as SaD/EBITDA of about 2.0x and FFO/SaD of 40% in the medium term. A positive rating action would be warranted if BASF were to significantly increase its share in the speciality chemicals business, thus considerably improving its business risk profile. We consider this scenario unlikely in the medium term given the company's stated acquisition policy and financial targets. For 2018, our forecast suggests increasing room to manoeuvre within the current rating but insufficient to justify a change in outlook, notably because we believe that BASF will use some of its financial headroom to complete larger bolt-on acquisitions.

A rating upgrade may also be considered if BASF were to improve its debt protection measures (SaD/EBITDA, FFO/SaD) sustainably to levels of about 1.5x and 50% respectively. A negative rating action could result if the company's financial risk profile were to weaken to levels of roughly 2.5x (SaD/EBITDA) and 30% (FFO/SaD).

Rating drivers

Positive	Negative
Strong market position, holding between first and third position for about 70% of its business	High dependence on general economic environment and on economic development in emerging markets in particular
Large share of speciality chemicals that are less subject to cyclicality risks and changing feedstock prices	Risks of sudden negative changes in feedstock prices and exposure to changes in global commodities and food prices
Broad and globally diversified business; one of the largest integrated chemical companies globally; diversification benefits from presence in agrochemicals, bulk and speciality chemicals	Still some overrepresentation of business in Europe, a region that is projected to show lower growth rates for chemicals
History of solid, resilient free cash flow generation, high financial flexibility and proven management commitment to rating	Exposure to very cyclical end markets, such as transportation (automotive) and construction, in the functional materials and solutions division
Benefits from large integrated sites worldwide providing higher product yields ('Verbund' concept)	Dependence on oil price changes for highly cash-generative oil and gas division; oil and gas operations not fully controlled and subject to political risks
Substantial coverage of future pension payments with accumulated pension plan assets covering payments for far more than a decade	

Rating-change drivers

Positive	Negative
Sustainable improvement of debt protection measures to levels of about 1.5x (SaD/EBITDA) and 50% (FFO/SaD)	Sizeable debt-funded acquisitions leading to a material deterioration in debt protection measures
Substantial increase in share of speciality chemicals or agrochemicals and reduction in oil-production exposure – we view this as unlikely	Risks of global oversupply of commodity chemicals, leading to price pressure and margin squeeze in chemicals division
	Deterioration in credit protection measures such as SaD/EBITDA to levels of about 2.5x and FFO/SaD of roughly 30%

Financial overview

		Scope estimates		
Scope credit ratios	**2015**	**2016**	**2017F**	**2018F**
EBITDA/interest cover (x)	12x	12x	14x	14x
SaD/EBITDA	1.7x	2.0x	1.6x	1.4x
Scope-adjusted FFO/SaD	45%	39%	49%	54%
FOCF/SaD	29%	27%	29%	31%

		Scope estimates		
Scope-adjusted EBITDA in EUR m	**2015**	**2016**	**2017F**	**2018F**
EBITDA	10,445	10,259	11,834	12,089
Operating lease payment in respective year	471	446	360	360
less: disposal gains fixed assets included in EBITDA	-525	-667	-500	-500
Scope-adjusted EBITDA	**10,391**	**10,038**	**11,694**	**11,949**

		Scope estimates		
Scope funds from operations in EUR m	**2015**	**2016**	**2017F**	**2018F**
EBITDA	**10,445**	**10,259**	**11,834**	**12,089**
less: (net) cash interest as per cash flow statement	-458	-459	-450	-460
less: cash tax paid as per cash flow statement	-1,550	-1,495	-1,850	-1,900
less: pension interest	-199	-190	-195	-195
add: depreciation component operating leases	405	381	297	297
add: dividends received from equity	219	225	225	225
less: disposal gains fixed assets included in EBITDA	-525	-667	-500	-500
less: capitalised interest	-149	-92	-150	-150
Change in provisions	-221	-183	-250	-250
Scope funds from operations	**7,967**	**7,779**	**8,961**	**9,155**

		Scope estimates		
Scope-adjusted debt (SaD) in EUR m	**2015**	**2016**	**2017F**	**2018F**
Reported gross financial debt	15,197	16,312	16,812	17,312
less: cash, cash equivalents	-2,262	-1,911	-3,645	-5,324
Cash not accessible	400	400	400	400
add: pension adjustment	2,121	2,773	2,422	2,422
add: operating lease obligation	1,316	1,270	1,270	1,270
add: asset retirement obligations	950	973	973	973
Scope-adjusted debt	**17,721**	**19,816**	**18,231**	**17,052**

Business risk profile

Two broad categories with 4% growth historically

The global chemical industry (excluding pharmaceuticals) is worth about EUR 3,500bn and can be split into two broad categories:

(i) 'Commodity chemicals' (base chemicals or upstream chemicals) such as petrochemicals, fertilisers, and inorganics. Commodity chemicals represent about a quarter of the global market and are sold on the basis of their chemical composition. Commodity chemicals are readily interchangeable and have limited options for differentiation.

(ii) 'Speciality chemicals' (downstream chemicals). Speciality chemicals are sold on the basis of their function and performance and require investments in R&D, special knowledge and innovation.

Historically, the global chemical market has shown annual growth rates of 4%, slightly higher than GDP growth.

Some cyclicality risks from end markets

Demand for speciality chemicals is closely correlated to the general economic environment, industrial production, regulatory requirements, and rising living standards, notably in emerging markets. The market is not homogeneous and speciality chemicals are produced for a variety of end markets. The largest segment (automotive) is prone to substantial cyclicality risks; construction and electronics represent further major cyclical end markets. Cyclicality can also be affected by supply-demand imbalances that result from capacity additions in the industry. Cyclicality risks are mitigated by lower price competition vis-à-vis the commodity chemicals industry given the differentiated nature of the product (versus interchangeable commodities) and the ability of most players to pass on vacillations in raw material costs by means of price-escalation clauses. Raw materials and energy account for a large share of operating expenses in the speciality chemicals industry and price fluctuations for input factors can have adverse effects on industry players.

Barriers result from R&D and customer relationships

Entry barriers to the speciality chemicals industry are considerable. The key barriers are investments in R&D for customised speciality chemicals and, to a lesser extent, capital investments. Customised solutions and applications generally result in long-term customer relationships that are difficult for new entrants to break. Speciality chemicals account for only a small part of the final product costs. Therefore, customer stickiness and switching costs for customers are prevalent in the speciality chemicals industry. In addition to commercial entry barriers, the industry is subject to tight regulation in areas such as environmental protection, safety and health. Entry barriers to the commodity chemicals industry are substantially lower, and limited to capital investments for new plants.

Outlook suggests global growth rates of 4%

We expect the global chemical industry to maintain faster than projected GDP growth. In the past, various chemicals such as petrochemicals, engineering plastics, coatings, and agrochemicals have outpaced GDP growth by a factor of 1.2x to 1.5x, and we believe that market expansion will continue to be driven by customised, value-added downstream chemicals such as engineering plastics or agrochemicals. Our base case includes an increase in global chemical volume consumption of 4% in the medium term. Growth will be fuelled by consumption in emerging markets, notably China, while volume in developed regions such as western Europe, North America and Japan is expected to swell at a moderate annual rate of 2%. Growth rates for speciality chemicals in emerging markets are driven by rising consumer spending and increasing industrialisation.

Shift towards Asia expected to continue

We believe that the global chemicals business will continue to move eastwards. The substantial growth and industrialisation of emerging markets, notably in Asia and the Middle East, have led to a shift in chemical production to these regions. The production of upstream chemicals is supported by lower feedstock, energy and labour costs. Asia's share of the global chemical market is expected to keep rising in the next few years. Established players in the market have reacted accordingly, allocating substantial future capital expenditures to the region.

Strong market position in a variety of end markets

BASF holds a position between first and third on the market for about 70% of its business. The company is a global market leader in construction materials, automotive catalysts, plastic additives and paper chemicals. Following the takeover of Cognis in 2010, BASF has also become a market leader in personal and home care ingredients. It enjoys certain competitive advantages due to its large integrated production sites ('Verbund' strategy).

End-market diversification is credit supportive

BASF is present in almost all countries. The company's broad, diversified business setup as one of the largest integrated chemicals companies in the world is credit-supportive. Diversification is also enhanced by the spread of business into bulk chemicals, speciality chemicals and agrochemicals. The large proportion of business in the speciality chemicals segment, which is less subject to cyclicality risks or changing feedstock prices, supports our positive view of the company's diversification.

Financial risk profile

Committed financial policy

Scope views BASF's commitment to a conservative financial policy as credible, supported by its track record over the past years. So far, BASF's management has been cautious with regard to acquisitions. Public comments on deals announced in the industry have stated that valuations were too high, particularly in the agrochemicals industry.

Scope believes that BASF is prepared to conclude further bolt-on acquisitions, roughly comparable in size to the Chemetall acquisition, representing a continuation of the portfolio realignment that has taken place over the past decade. Potential acquisition targets may become available due to disposals resulting from the Dow/DuPont or Bayer/Monsanto mergers. Any such bolt-on acquisitions are very likely to be EBITDA and cash-generative and we anticipate that BASF will continue to apply its long-standing acquisition criteria when evaluating potential acquisition targets.

Credit metrics to improve slightly assuming no larger bolt-on acquisition

Scope believes that BASF's credit metrics, notably SaD/EBITDA and FFO/SaD should improve somewhat in 2017. Our projected credit metrics for 2017 are broadly in line with the levels that we have observed over the past few years. The improvement in key credit metrics is the result of projected free operating cash flow exceeding regular dividend payments. For 2018, our forecast suggests increasing room to manoeuvre within the current rating but insufficient to justify a change in outlook, notably because we believe that BASF will use some of its financial headroom to complete larger bolt-on acquisitions.

Liquidity is strong

Scope views BASF's liquidity and financial flexibility as strong. BASF has good bank relationships, as evidenced, for instance, by the broad syndication of its committed credit lines. The company also has a solid standing in public debt markets. In 2017, BASF issued various bonds in different currencies to refinance bonds maturing that year and to secure long-term financing for the Chemetall acquisition. BASF's bond and corporate loan maturities are spread over a long horizon with no significant refinancing (greater than EUR 1.8bn annually) due within the next decade.

Liquidity is supported by:

- Unrestricted cash balances of EUR 1.4bn and marketable securities of EUR 0.5bn as of 31 December 2016. BASF has about EUR 400m in cash which is not immediately accessible as of 31 December 2016.
- Two committed and undrawn revolving credit facilities of EUR 3.0bn, each due in 2020 and 2022. The revolving credit facilities are free of financial maintenance covenants and serve as backstop facilities for the USD 12.5bn commercial paper programme that BASF uses extensively to fund intra-year swings in working capital. Drawdowns under the commercial paper (CP) programme have been substantially lower than the notional maximum. Furthermore, drawdowns have always been covered by the volume of the backstop facility. We note that BASF was able to tap the CP market during the financial market crisis in 2009.
- Our projected free operating cash flow as defined and reported by BASF of about EUR 4.4bn in 2017 and above EUR 4.5bn in 2018.

Liquidity uses are as follows:

- Short-term debt of EUR 3.8bn as of 31 December 2016, of which EUR 1.0bn was related to CP debt. We believe that CP debt is rolled over. The remaining financial maturities for 2017 mainly relate to bonds repaid in 2017 and due in Dec. 2017.
- Dividend payments of about EUR 2.8bn-EUR 3.0bn in both 2017 and 2018.
- Assumed bolt-on acquisitions of EUR 500m in both 2017 and 2018.

Short-term rating is S-1

Scope has assigned BASF a short-term rating of S-1 based on the above analysis and the company's solid investment grade rating. The rating reflects Scope's perception that the company's cash generation is both solid and sustainable. Short-term debt is safely covered by internal and external sources of liquidity.

Senior unsecured debt rated at same level as corporate rating

The senior unsecured bonds issued under BASF's EUR 20bn debt issuance programme are rated A, in line with the corporate credit rating.

BASF Finance Europe N.V.

The corporate credit rating of A for BASF Finance Europe N.V. is derived from the corporate rating for the parent company (BASF SE) reflecting the unconditional and irrevocable guarantee given to bond holders of its financing subsidiary, BASF Finance Europe N.V..

Important information

Information pursuant to Regulation (EC) No 1060/2009 on credit rating agencies, as amended by Regulations (EU) No. 513/2011 and (EU) No. 462/2013

Responsibility

The party responsible for the dissemination of the financial analysis is Scope Ratings AG, Berlin, District Court for Berlin (Charlottenburg) HRB 161306 B, Executive Board: Torsten Hinrichs (CEO), Dr. Stefan Bund.

The rating analysis was prepared by Werner Stäblein, Lead Analyst
Responsible for approving the rating: Olaf Tölke, Committee Chair

Rating history | BASF SE

Date	Rating Action	Rating
6 September 2016	New	A/Stable/S-1

Rating history | BASF Finance Europe N.V.

Date	Rating Action	Rating
23 December 2016	New	A/Stable/S-1

Rating history | senior unsecured

Date	Rating Action	Rating
6 September 2016	New	A

The rating outlook indicates the most likely direction in which the rating would move if it were to change within the next 12 to 18 months.
A rating change is, however, not automatically ensured.

Information on interests and conflicts of interest

The rating was prepared independently by Scope Ratings but for a fee based on a mandate of the rated entity. The issuer participated in the rating process.

As at the time of the analysis, neither Scope Ratings AG nor companies affiliated with it hold any interests in the rated entity or in companies directly or indirectly affiliated to it. Likewise, neither the rated entity nor companies directly or indirectly affiliated with it hold any interests in Scope Ratings AG or any companies affiliated to it. Neither the rating agency, the rating analysts who participated in this rating, nor any other persons who participated in the provision of the rating and/or its approval hold, either directly or indirectly, any shares in the rated entity or in third parties affiliated to it. Notwithstanding this, it is permitted for the above-mentioned persons to hold interests through shares in diversified undertakings for collective investment, including managed funds such as pension funds or life insurance companies, pursuant to EU Rating Regulation (EC) No 1060/2009. Neither Scope Ratings nor companies affiliated with it are involved in the brokering or distribution of capital investment products. In principle, there is a possibility that family relationships may exist between the personnel of Scope Ratings and that of the rated entity. However, no persons for whom a conflict of interests could exist due to family relationships or other close relationships will participate in the preparation or approval of a rating.

Key sources of information for the rating

- Website of the rated entity
- Detailed information provided on request
- Data provided by external data providers
- Current performance record
- External market reports
- Audited annual financial statements
- Press reports/other public information

Scope Ratings considers the quality of the available information on the evaluated company to be satisfactory. Scope ensured as far as possible that the sources are reliable before drawing upon them, but did not verify each item of information specified in the sources independently.

Examination of the rating by the rated entity prior to publication

Prior to publication, the rated entity was given the opportunity to examine the rating and the rating drivers, including the principal grounds on which the credit rating or rating outlook is based. The rated entity was subsequently provided with at least one full working day, to point out any factual errors, or to appeal the rating decision and deliver additional material information. Following that examination, the rating was not modified.

Methodology

The methodology applicable for this rating (Corporate Rating Methodology, Jan. 2017) is available on www.scoperatings.com. The historical default rates of Scope Ratings can be viewed on the central platform (CEREP) of the European Securities and Markets Authority (ESMA): http://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml. A comprehensive clarification of Scope's default rating, definitions of rating notations and further information on the analysis components of a rating can be found in the documents on methodologies on the rating agency's website.

Conditions of use / exclusion of liability

Rating issued by

Scope Ratings AG, Lennéstrasse 5, 10785 Berlin