MOODY'S INVESTORS SERVICE

SECTOR PROFILE
25 February 2021

Rate this Research

TABLE OF CONTENTS

Contacts

Egor Nikishin, CFA +44.20.7772.8737
Analyst
egor.nikishin@moodys.com

Richard Etheridge +44.20.7772.1035
Associate Managing Director
richard.etheridge@moodys.com

Danh Nguyen-Thanh +44.20.7772.5585
Associate Analyst
danh.nguyen-thanh@moodys.com

Speculative-grade nonfinancial corporates - Europe

An overview of sector credit trends

This report provides an overview of the key credit trends affecting the largest European speculative-grade sectors. It also compares the rating positioning and most important forward-looking credit metrics of individual companies within each sector.

Unless stated otherwise, all comments throughout the report are specific to European speculative-grade companies, and therefore may not apply to other regions or higher rated companies.

E-mail us: hyresearch.emea@moodys.com (analyst contact details are also available at the end of each sector credit trends section)

Macro credit trends summary

Global macro outlook (February 2021): We project 5.3% GDP growth for the G-20 economies in 2021 following a 3.3% contraction in 2020. However, real GDP in key euro area countries and the UK will not reach pre-pandemic levels until sometime in 2022 and 2023.

Global industry sector outlook (ISO, December 2020): EMEA-focused ISOs have largely moved to stable from negative since mid-2020. As a result, only two sectors (8%) currently have a negative outlook, compared with 19 (73%) in June. The stabilisation of various ISOs largely assumes stable or improving revenue and earnings in 2021 versus 2020, but starting from a very weak base.

Sector credit trends summary

Business services: The sector encompasses a wide range of service lines and business models with varying levels of resilience to the effects of the pandemic and related restrictions. Facility management companies have been severely affected by lockdown measures, notably via the closure of customers' premises, as employees typically need to be physically present at customers' sites to perform their tasks. On the other hand, we expect the impact on customer relationship management companies, as well as fund and corporate services companies, to be limited. Challenging economic conditions will weigh on organic revenue growth across these three sub-segments of the wider business services industry.

Chemicals: Our outlook on the global chemical industry is stable, reflecting our expectation that EBITDA generation will gradually improve from extremely weak levels in the second quarter of 2020. Conditions have further improved since we changed the sector's outlook to stable, and demand in key customer industries such as the auto industry has grown.

Gaming: The recovery in the retail gaming segment remains tenuous. Liquidity remains the main focus for land-based gaming companies, and government measures to support the economy are still critical to this part of the sector. By contrast, online gaming operators benefited from an acceleration in revenue growth in the fourth quarter of 2020, with the resumption of sports events and the shift from retail players to the digital channel underpinning higher growth rates. Social risk is fuelling consolidation as companies seek larger scale and ways to gain the upper hand in technology to strengthen their business profiles and enter new markets.

Healthcare: Operating performance will vary by sub-sector in 2021. Following record high revenue growth and margin expansion for laboratories in 2020, we expect the sector's operating performance to remain strong in 2021. We forecast that the boost from COVID-19 testing will continue in 2021, even if the need for polymerase chain reaction (PCR) tests is likely to decline as vaccines become more widely available. Private hospitals will continue to benefit from government support for at least part of the year, which will help offset declining volumes and occupancy, as well as pandemic-related cost increases. We expect M&A to fully resume in 2021 across all sub-sectors and countries. Strategic rationale, acquisition multiples and funding will be key drivers of credit quality.

Manufacturing: We changed our outlook for the global manufacturing sector to stable from negative in September 2020, driven by our expectation of a strong, if only partial, recovery in 2021. We forecast single-digit EBITDA growth in 2021 following a double-digit decline in 2020. However, this is the midpoint of a very wide range of forecasts among multiple manufacturing segments and regions. While the resolution of the pandemic still faces many uncertainties and risks, we believe the sector has overcome the worst of the coronavirus-induced recession and is on the path to recovery. This assumes, however, that the recent resurgence in coronavirus cases is manageable and that vaccines will likely be widely available to the general public after summer this year. We also expect fiscal and monetary policies to remain accommodative until the economic recovery can sustain itself.

Packaged goods: We have a stable outlook on the global packaged goods sector, based on our expectation that profit will bounce back in 2021 following a projected 3.3% drop in 2020. We forecast that operating profit will grow by 7% in 2021 and by 5% in 2022. However, this will follow a weak 2020, while uncertainty over the global economic recovery and the risk of a prolonged pandemic remain high. Recovery will also be uneven, with companies generating most of their sales from daily essentials continuing to fare well. Those exposed to disrupted sectors, such as travel retail and food services, continue to suffer and will take longer to recover, though the magnitude of their rebound may be greater following plunging sales in 2020 and early 2021.

Packaging: With partial lockdowns, social distancing measures and travel restrictions likely to remain in place throughout the first quarter of 2021 and potentially beyond, packaging volumes will continue to be correlated to end-market exposures. Although a minority within the European rated group, companies serving more discretionary end-markets or the hospitality and travel industries will remain vulnerable, at least during the first part of the year. Rising input and freight costs may result in margin headwinds, depending on the ability to increase prices, the level of volumes on pass-through contracts and the associated lag. Growing awareness of sustainability issues may drive investments but also further consolidation, particularly in the highly fragmented plastic packaging segment. Liquidity in the sector remains adequate, with no significant debt maturities in 2021 and 2022.

Pharmaceuticals: Operating performance has remained relatively resilient to volume declines, but lockdowns and social distancing measures reduce patient visits and elective procedures which drive drug volumes. While around half of companies will still have grown revenue and EBITDA organically in 2020, the pandemic's likely continued adverse impact on operating performance in 2021 increases downside risk to our expectation of stronger growth this year compared with historical levels. Speculative-grade companies have been able to defend their margins rather successfully, while cash flow generation remains solid for most companies and liquidity at least adequate. Acquisitions will continue to supplement organic growth, likely aided by debt funding despite healthy cash flow.

Retail & apparel: The pandemic continues to disrupt normal consumer behaviour for now. However, we expect economic growth in the wake of a gradual relaxation of restrictions and social distancing requirements as vaccines are rolled out. Food demand will wane from lockdown highs, as will online demand in both food and non-food. High competition and online shift versus pre-pandemic levels will suppress margins, while recovery will be uneven across countries, segments and issuers. Winners – as always – execute strongly, excite and differentiate, which is harder to do in the mid-market than in the luxury or value segments.

Software: We expect organic revenue growth in the low-to-mid-single digits in percentage terms, with a shift to Software as a Service (SaaS)/Cloud likely to remain the key driver of growth. The performance of rated software companies has remained broadly resilient since the pandemic began, thanks to the high degree of recurring revenue. However, while we expect growth in 2021, substantial risks remain around the extent of the recovery. We expect EBITDA margins to improve slightly over 2021 as tight cost controls will continue and daily processes and operations have become more virtual. Bolt-on acquisitions, most likely debt-funded, will start to supplement organic growth again after M&A activity slowed materially following the coronavirus outbreak. Leveraged buyouts (LBOs) will continue to account for most of the new debt volume, with headline leverage multiples often higher than the average LBO in other industries.

Telecommunications: We expect only marginal revenue growth of 1% for the European high-yield telecoms companies we rate in 2021. Structural deficiencies, including excessive competition, will mostly offset the positive impact from recovering GDP. At the same time, the high-yield telecoms sector has shown resilience since the coronavirus outbreak, with flat average revenue forecast for 2020 compared with the previous year. We expect average Moody's leverage for the cohort to remain elevated at 5.1x through 2021 compared with an estimated 5.2x in 2020. Limited EBITDA growth and high capital spending needs will constrain deleveraging. However, consolidation could be a catalyst for top-line improvement, and we expect regulation to become more supportive and tolerant of M&A.

Travel-related services: The pandemic continues to have a severe impact on the travel sector as a whole. European markets are at risk from increasing travel restrictions as governments seek to control new variants of the virus, which could limit the hoped-for recovery in the second half of 2021. Recovery in Europe will lag the US, and international travel will remain more depressed compared with domestic. Global air travel volumes could gradually recover toward 50% of 2019 levels by the end of 2021, but a full recovery is unlikely until 2023 or beyond.

Macro credit trends

Global macro outlook 2021-22

Pace of economic recovery will vary widely as COVID-19 risks remain high

Madhavi Bokil, Vice President - Senior Credit Officer

» **Global recovery will remain unbalanced.** The pandemic's toll on global economic activity has been staggering, even as the global economy has also shown a remarkable degree of resilience, but the effects on individual businesses, sectors and regions have varied widely. The coronavirus crisis will endure as a challenge to the world's economies well beyond our two-year forecast horizon.

» **Governments' approach to dealing with the virus will evolve further.** Vaccines will be key in suppressing the virus' spread and reducing fatalities. While new vaccines are likely to become available and production of existing vaccines will scale up, lack of cooperation among countries means that some nations without an assured supply of effective vaccines or production capacity will struggle to overcome the pandemic.

» **For most G-20 economies, real GDP will not return to 2019 levels before 2022.** The G-20 economies will collectively grow by 5.3% in 2021 and 4.5% in 2022 after contracting by 3.4% in 2020, but economic recovery will be slow and uneven among euro area countries. We project that euro area real GDP growth will rebound to 3.7% in 2021 and 3.9% in 2022, following our expectation of a 7.3% contraction in 2020. Continued expansionary fiscal and monetary policy, and good access to credit for households and businesses, will continue to support economic recovery in 2021. As in other regions, consumer spending is likely to increase in the second half of this year as households release savings accumulated during lockdowns. However, growth rates will vary across the region and much will depend on pandemic developments, including the availability and distribution of vaccines.

» **Near-term risks remain firmly to the downside**, **but successful virus containment could provide an upside.** Persistent virus fears remain the main threat to a recovery in demand, with the risk of scarring higher in countries at risk of repeated outbreaks. The longer the crisis lasts, the higher the risk of business insolvencies will become, particularly for small and medium-sized companies. Alternatively, the economy could improve faster if vaccines bring forward a normalisation of activity.

Exhibit 1

GDP growth forecasts for G-20 countries, 2020-22*

	2020E	2021E	2022E
G20-advanced	**-4.7%**	**4.2%**	**4.3%**
Euro area	-7.1%	3.7%	3.9%
Germany	-5.0%	3.0%	4.0%
UK	-9.9%	4.7%	4.8%
France	-8.3%	4.8%	4.0%
Italy	-8.9%	3.7%	4.1%
G-20 Emerging	**-0.9%**	**7.0%**	**4.7%**
G-20 All	**-3.3%**	**5.3%**	**4.5%**

*Forecasts as of the February 2021 macro board outlook
Source: Moody's Investors Service

This article is a summary of our latest Global Macro Outlook, published on 23 February 2021. The full report can be found here. Our Global Macro Outlook is updated quarterly.

Global and EMEA industry sector outlooks

Both global and EMEA-focused ISOs have been largely stabilised

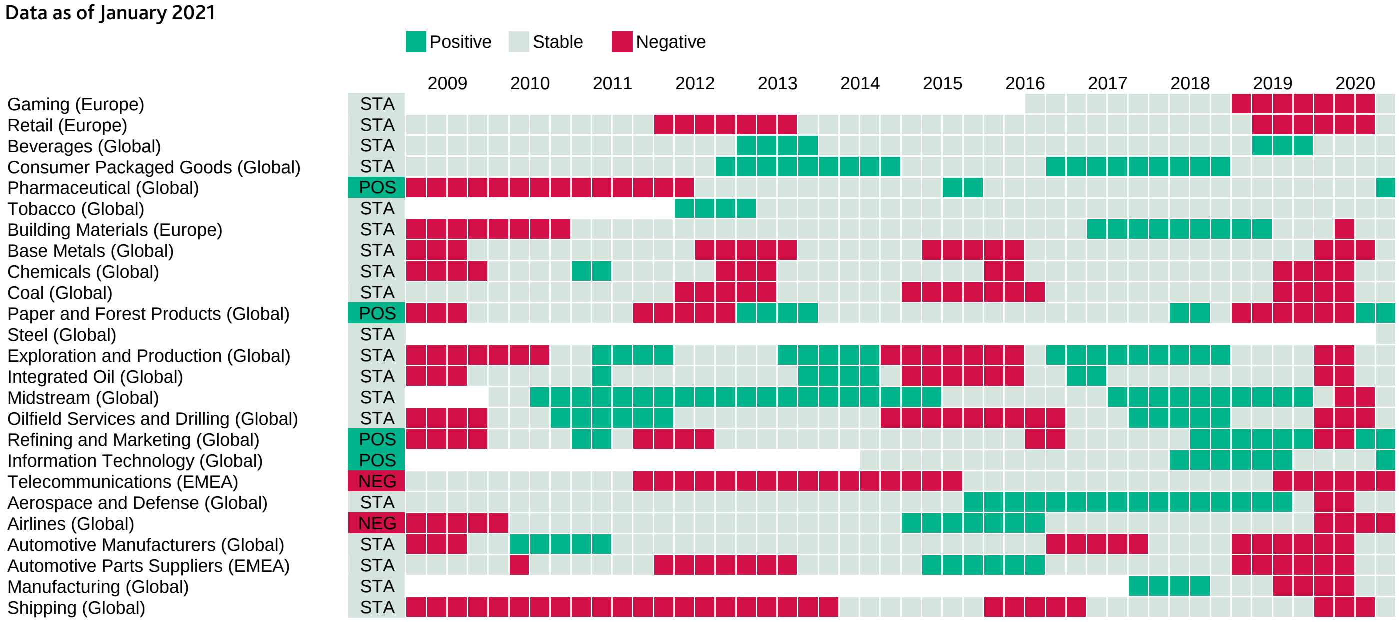
Richard Morawetz, Vice President - Senior Credit Officer

- A number of global industry sector outlooks (ISOs) have been returned to stable or positive from negative, including auto manufacturers, shipping, exploration and production, integrated oil and gas, manufacturing, aerospace and defence, and paper and forest products. Global shipping was revised to stable from negative in November and has performed better than our expectations. The container shipping segment has benefitted from capacity cutbacks leading to higher freight rates, lower bunker prices and strong cross-border demand for manufactured goods.
- EMEA-focused ISOs where the outlook has been stabilised from negative since mid-2020 include building materials, retail, gaming, chemicals and automotive parts suppliers. As a result, only two sectors (8%) currently have a negative outlook, compared with 19 (73%) in June. The stabilisation of various ISOs largely assumes stable or improving revenues and earnings in 2021 versus 2020, but starting from a very weak base.
- We retain a negative outlook for EMEA airlines, where passenger volumes will remain significantly depressed in 2021, and telecoms. Although relatively more resilient to the pandemic, the negative outlook for telecoms reflects projected flat to marginal revenue growth in 2021 as increasing data consumption is offset by deflationary pricing trends, while the sector also requires substantial investments to carry out network-enhancing projects.
- Defaults are at their highest level since 2009 and are expected to peak at around 6% in March before stabilising. The distribution of defaults in 2020 largely reflects exposure to the pandemic, with retail, transport, services and energy heading the list of defaulters.

Exhibit 2

EMEA-focused ISOs have followed the global trend toward stable

Data as of January 2021



Nonfinancial corporations – Global and Europe/EMEA ISOs

Source: Moody's Investors Service

This article is a summary of "Nonfinancial Companies – EMEA 2021 Outlook" published on 1 December 2020. The full report can be found here.

Sector credit trends

Business services

Prolonged disruption from the pandemic will hinder earnings recovery of facility management companies in 2021

Eric Kang, Vice President – Senior Analyst

» **The coronavirus pandemic has disrupted the operations of business services companies differently, given the wide range of service lines and business models that the sector encompasses.** Unless otherwise specified, the comments herein refer to companies operating either in the facility management (FM), customer relationship management (CRM) or fund and corporate services (FCS) sectors, the largest three sub-segments of the wider business services sector in the EMEA speculative-grade universe.

» **The economic fallout from the pandemic will likely result in increased price pressure across all three of these sub-segments because certain customers will be in a weaker financial position than before the crisis.** This will likely be the case for customers operating in the sectors that have been most affected by the pandemic, such as aeronautics, hospitality, and nonfood retail. Services companies with greater exposure to small and medium-sized enterprises (SMEs) may also do less well because SMEs are typically more vulnerable during a macroeconomic downturn. Conversely, weaker economic conditions can lead to greater outsourcing to reduce costs, which would offset increased price pressure to some extent.

» **Lockdowns and other sanitary measures will continue to cause the greatest disruptions for FM companies, notably because of the closure of customer premises.** FM employees have typically needed to be physically present at customer sites to perform their tasks. We expect the effect will gradually subside for companies whose services do not directly depend on occupancy levels at clients' premises, such as cleaning. By contrast, providers of services that depend heavily on client occupancy levels, such as contract catering, will find it much harder to return to pre-crisis levels of earnings because of the increase in remote working and learning. These most hardest-hit companies will need to adjust their business model and cost base to offset lower revenue. Remote working could also have a negative effect on other FM companies through lower office space, but this could be offset by greater outsourcing or market share gains at the expense of smaller competitors.

» **The pandemic has had a limited impact on the operations of FM companies Blitz 20-486 Gmbh (Apleona, B2 stable) and Rekeep S.p.A. (B2 negative).** This is because Rekeep has a high exposure to the healthcare industry while Apleona mainly focuses on technical facility management services, which have continued irrespective of occupancy levels at buildings, and recurring property management and lease management services.

» **FCS companies such as Intertrust N.V. (Ba2 stable), Saphilux S.a.r.l. (IQ-EQ, B3 stable) and TMF Sapphire Midco B.V. (TMF, B3 stable) have suffered less from the pandemic because of the high share of contracted recurring revenue for existing structures.** However, new business in the industry has declined, particularly in the corporate and private wealth segments. While we believe the pandemic's recessionary impact will dampen the market's organic growth prospects in the next 12-18 months, companies in the sector are likely to purse more M&A to bolster growth. However, this could result in weaker credit metrics if acquisitions are funded with debt.

» **We expect CRM companies Marnix French TopCo SAS (Webhelp, B2 stable) and Transcom Holding AB (B3 stable) to deliver stronger trading in 2020 despite the pandemic and some negative currency impact.** While the first lockdowns in early 2020 initially threatened business continuity, especially for offshore locations, enough employees were able to work remotely or from safe sites and meet client quality standards to maintain capacity. Profit margins improved in the second half of the year despite exceptional costs linked to preventative measures. Sharp declines in demand in sectors such as brick-and-mortar retail, travel and leisure have been offset by increasing demand in others (e-commerce, technology) for which the pandemic has accelerated the existing transition.

Business services: rating positioning and rationale

Exhibit 3

Company	Rating	Rating Positioning	Rationale	Liquidity
Intertrust	Ba2 Sta	Adequate	The Ba2 CFR reflects the company's leading market position; its resilient business model, with high revenue visibility with long-standing client relationships; and our expectation that the company will continue to balance shareholder returns. The rating is constrained by relatively high leverage, high exposure to legal and regulatory risks, and the company's relatively small size and geographical concentration.	Good
Elis	Ba2 Neg	Weak	The negative outlook reflects the risk that Elis' credit metrics will remain sustainably outside our guidance to maintain the Ba2 CFR because of the potentially longer-lasting effects of the pandemic on some of the company's end-markets, notably in hospitality.	Adequate
Spie	Ba3 Sta	Weak	The Ba3 CFR with a stable outlook reflects our current expectation that the lockdown will have only a temporary impact on revenue and margins. However, we view the Ba3 CFR as weakly positioned given current pressure on margins, as well as the company's high Moody's-adjusted gross debt/EBITDA, which we expect to be around 6.5x in 2021.	Good
Elior	Ba3 Neg	Weak	The negative outlook reflects the risk that a slower recovery in the business and industry end-market will hinder an improvement in credit metrics commensurate with a Ba3 CFR. There is also execution risk related to Elior's ability to adjust its cost structure in a timely manner.	Adequate
Almaviva	B2 Sta	Weak	The B2 CFR is constrained by the company's limited scale and geographical diversification, significant customer concentration, the competitive nature of the CRM and IT services industries, the loss-making CRM business in Italy and exposure to currency fluctuations. The rating is supported by the company's leading positions in the IT services sector in Italy, and in CRM and BPO in Brazil; the resilient nature of the CRM-BPO industry; the company's long-standing relationship with large customers; and good revenue visibility.	Adequate
Apleona	B2 Sta	Weak	The CFR is supported by good earnings visibility and a good-credit-quality and diversified client base, coupled with a strong track record of contract renewals and a stable and moderately growing market. The rating is constrained by high financial leverage, the competitive and fragmented nature of the building and facility services markets, and the company's limited size and regional concentration.	Adequate
Konecta	B2 Sta	Adequate	Konecta is adequately positioned in the B2 category. The company is a leader in Latin American and Spanish-speaking CRM markets, which are regions with high growth opportunities. However, customer concentration is high and the company is exposed to high country risk and foreign-exchange volatility. Enabling employees to work from home was more costly and challenging in certain Latin American countries, but we expect a stable operating performance despite the pandemic.	Adequate
Webhelp	B2 Sta	Adequate	Webhelp is adequately positioned in the B2 category, having deleveraged from 6.5x to 5.9x in 2019 following the GBL acquisition, and having delivered a relatively stable operating performance despite the pandemic. Given Webhelp's market-leading competitive position and improved customer diversification, we expect its operating performance and credit metrics to be commensurate with the B2 rating over the next 18 months (subject to M&A), despite a modest increase in leverage in 2020.	Adequate
Rekeep	B2 Neg	Weak	Rekeep is weakly positioned in the B2 rating category primarily because of the risk of potential negative consequences from the Santobono-Pausilipon ban, the FM4 fine and other pending litigation, which could prevent it from reducing and maintaining its financial leverage and generating positive free cash flow (FCF). The B2 rating also reflects high leverage, limited geographic diversification and the underlying competitive trading environment, with continued pressure on prices, mitigated by Rekeep's leading position in the fragmented and stable facility management sector in Italy and a degree of revenue visibility.	Adequate
IQ-EQ	B3 Sta	Adequate	The B3 rating balances high financial leverage of around 8x against the company's resilient business model, with a very high level of recurring revenue. The change in outlook to stable in February 2020 reflected a recent positive trend in its operating performance and FCF generation, combined with the expectation of further credit metric improvements, supported by a change in the treatment of the €374 million shareholder loans from debt to equity.	Adequate

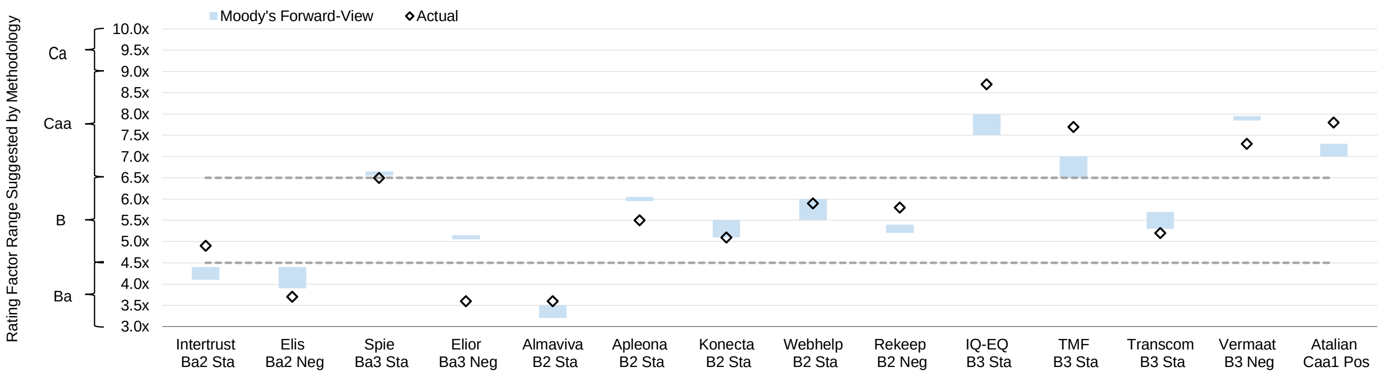
TMF	B3 Sta	Adequate	The stable outlook reflects our expectation that improvements in TMF's operational performance will be sustained over the next 12-18 months, allowing Moody's-adjusted debt/EBITDA (excluding overdrafts) to improve below 7.0x. We also expect TMF to continue to generate positive FCF and maintain its adequate liquidity.	Adequate
Transcom	B3 Sta	Adequate	Transcom is adequately positioned in the B3 category. Relative to B2-rated peers, it has a smaller scale, higher customer concentration, lower profitability and lower cash generation. Transcom deleveraged significantly in 2019 and is nearing the completion of a multiyear turnaround plan. We expect profitability and cash generation to improve gradually and that performance will remain relatively stable despite the pandemic.	Adequate
Vermaat	B3 Neg	Weak	The negative outlook reflects the pandemic's protracted impact on earnings because of more frequent remote working, a slow ramp-up in air passenger traffic and low visitor numbers for some of the company's leisure locations such as museums. This could lead to credit metrics remaining sustainably weak for the B3 CFR.	Adequate
Atalian	Caa1 Pos	Strong	The positive outlook reflects the less severe impact of the pandemic on the company's operating performance and liquidity than we initially anticipated. At the same time, it also reflects uncertainty as to the pace of revenue recovery and the level of margins once the benefits of partial unemployment schemes subside. As Moody's-adjusted EBITDA margins are lower than our expectations this will increase leverage, but also likely lead to negative FCF.	Adequate

Note: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

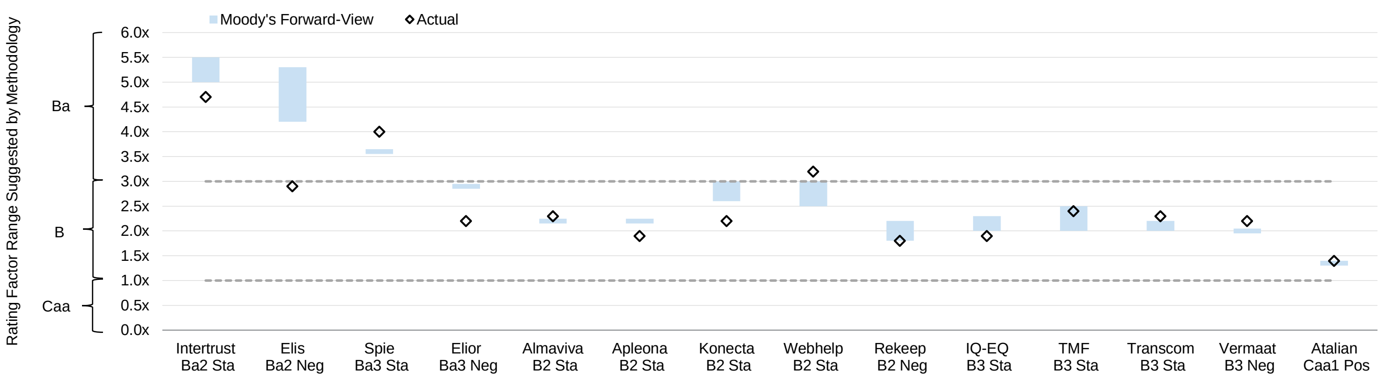
Business services: leverage, interest cover and cash flows

Exhibit 4
Moody's-adjusted debt/EBITDA



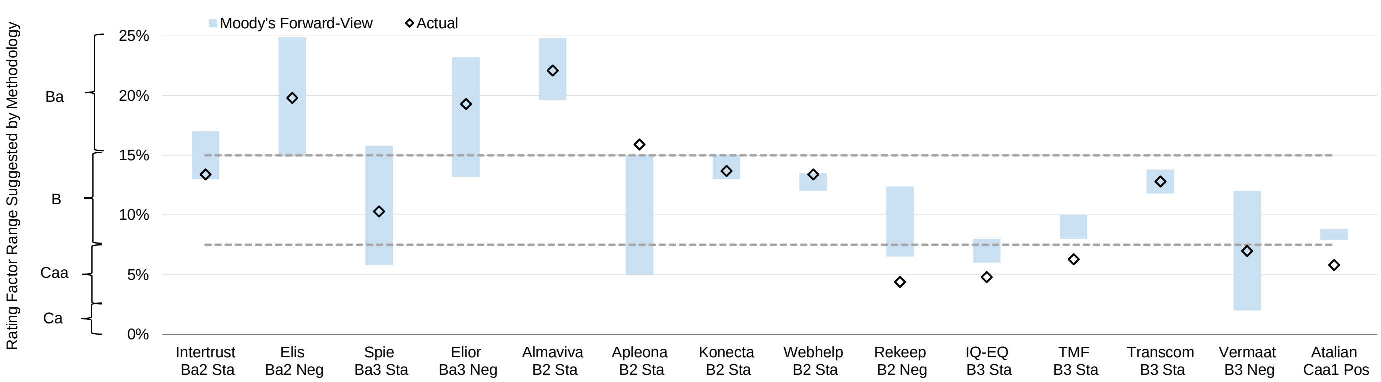
Note: All metrics are based on Moody's last Credit Opinion reports published.
Source: Moody's Investors Service

Exhibit 5
Moody's-adjusted EBITA/interest expense



Note: All metrics are based on Moody's last Credit Opinion reports published.
Source: Moody's Investors Service

Exhibit 6
Moody's-adjusted RCF/net debt



Note: All metrics are based on Moody's last Credit Opinion reports published.
Source: Moody's Investors Service

Global business and consumer service industry rating methodology

Exhibit 7

Global business and consumer service industry rating methodology based on Moody's forward-view

		Business Profile		Scale	Leverage and Coverage				Financial Policy	
Company Name	Actual Rating	Demand Characteristics	Competitive Profile	Revenue ($bn)	EBITA margin	EBITA / Interest	Debt / EBITDA	RCF / Net Debt	Financial Policy	Scorecard indicated rating
Intertrust	Ba2	Ba	Ba	0.6	36.0% - 37.0%	5.0x - 5.5x	4.1x - 4.4x	13.0% - 17.0%	Ba	Ba2
Elis	Ba2	Baa	Baa	3.6 - 3.9	11.1% - 12.2%	4.2x - 5.3x	3.9x - 4.4x	19.9%	Ba	Ba2
Spie	Ba3	Ba	Ba	7.7	5.6%	3.6x	6.6x	10.8%	Ba	Ba3
Elior	Ba3	Baa	Baa	5.4	2.6%	2.9x	5.1x	18.2%	Ba	Ba3
Almaviva	B2	B	B	1.0 - 1.1	9.3% - 9.7%	2.2x	3.2x - 3.5x	19.6% - 24.8%	B	B2
Apleona	B2	Ba	Ba	2.3	6.5%	2.2x	6.0x	10.0%	B	B1
Konecta	B2	Ba	B	0.8	9.4% - 9.6%	2.6x - 3.0x	5.1x - 5.5x	13.0% - 15.0%	B	B1-B2
Webhelp	B2	Ba	B	1.8 - 1.9	11.0% - 12.0%	2.5x - 3.0x	5.5x - 6.0x	12.0% - 13.5%	B	B1
Rekeep	B2	B	Ba	1.2 - 1.3	7.3% - 7.7%	1.8x - 2.2x	5.2x - 5.4x	6.5% - 12.4%	B	B2
IQ-EQ	B3	Ba	B	0.4	25.0% - 27.0%	2.0x - 2.3x	7.5x - 8.0x	6.0% - 8.0%	B	B2
TMF	B3	Ba	B	0.7	20.0% - 23.0%	2.0x - 2.5x	6.5x - 7.0x	8.0% - 10.0%	B	B1
Transcom	B3	Ba	B	0.5 - 0.6	6.8% - 7.2%	2.0x - 2.2x	5.3x - 5.7x	11.8% - 13.8%	B	B2
Vermaat	B3	Ba	B	0.3	n.a.	2.0x	7.9x	7.0%	B	B3
Atalian	Caa1	Ba	Ba	3.1 - 3.3	4.5% - 4.6%	1.3x - 1.4x	7.0x - 7.3x	7.9% - 8.8%	B	B2

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] All metrics are based on Moody's last Credit Opinion reports published.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Business services: analytical coverage

Company	CFR entity	Analyst
Almaviva	AlmavivA S.p.A	Donatella Maso
Apleona	BLITZ 20-486 GMBH	Ana Luz Silva Robles
Atalian	La Financiere ATALIAN S.A.S.	Eric Kang
Elior	Elior Group S.A.	Eric Kang
Elis	Elis S.A.	Eric Kang
Intertrust	Intertrust N.V.	Svitlana Ukrayinets
IQ-EQ	Saphilux S.a.r.l.	Svitlana Ukrayinets
Konecta	Giralda Holding Conexion, S.L.	Brad Gustafson
Rekeep	Rekeep S.p.A.	Donatella Maso
Spie	SPIE SA	Eric Kang
TMF	TMF Sapphire Midco B.V.	Svitlana Ukrayinets
Transcom	Transcom Holding AB	Brad Gustafson
Vermaat	Vincent Midco BV	Eric Kang
Webhelp	Marnix French TopCo SAS	Brad Gustafson

Moody's Investors Service

Business services: analyst contact details

Analyst	Title	Phone	Email
Svitlana Ukrayinets	Analyst	4969-7073-0920	Svitlana.Ukrayinets@moodys.com
Eric Kang	VP-Senior Analyst	33-1-53-30-338	Eric.Kang@moodys.com
Donatella Maso	VP-Senior Analyst	3902-9148-1121	Donatella.Maso@moodys.com
Brad Gustafson	VP-Senior Analyst	33-1-53-301-024	Brad.Gustafson@moodys.com
Ana Luz Silva Robles	AVP-Analyst	4969-7073-0914	Ana.Silva@moodys.com

Chemicals

Industry prospects are improving driven by demand recovery

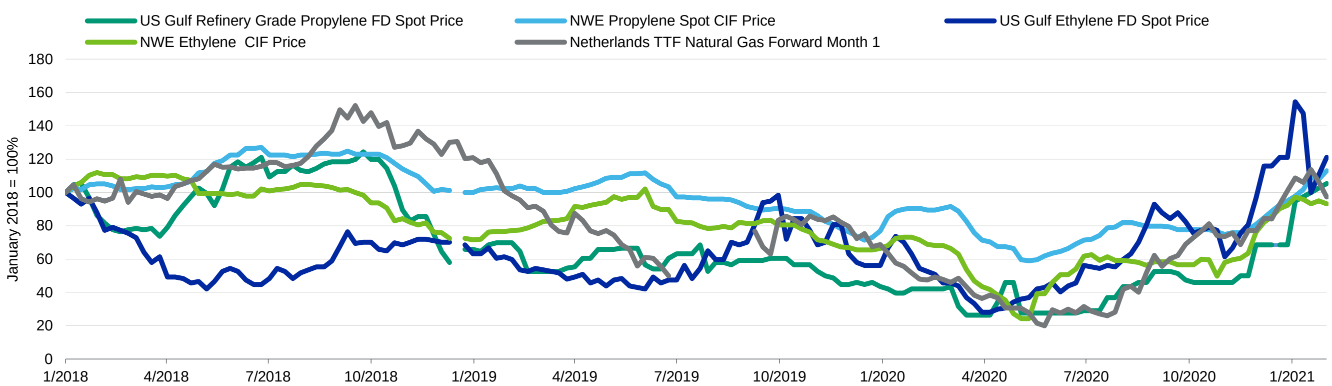
Moritz Melsbach, Assistant Vice President - Analyst

» **We expect most rated high-yield chemical issuers to report solid fourth-quarter 2020 results; prospects for 2021 are improving.** Chemical industry bellwether BASF (SE) (A3 stable) revealed in its preliminary results release that its fourth-quarter 2020 sales were above year-earlier levels. Overall, improving industry conditions and improved pricing for chemical industry outputs should support EBITDA growth in 2021. We expect EBITDA growth to be most pronounced for issuers that have been confronted with a combination of price erosion and high volume losses during the pandemic, such as oxo chemical producers OQ Chemicals International Holding GmbH (formerly known as Oxea, B3 stable) and Perstorp Holding AB (B3 negative).

» **Increasing raw material prices might put pressure on margins, but for many this will be compensated for by higher volumes or increasing prices for their own products.** The prices of important feedstocks, such as propylene and ethylene but also natural gas, have increased considerably since the second half of 2020. This will at least temporarily put pressure on the margins of some chemical producers. Companies that strongly benefitted from lower raw material prices in 2020, such as SPCM S.A. (Ba2 positive), will face some margin pressure from increasing input costs. However, in the context of improving demand conditions, we expect higher raw material prices to remain manageable for the majority of the companies we rate. For some issuers, such as nitrogen fertiliser and methanol producer OCI N.V. (Ba2 negative), higher prices for their end-products will more than compensate for higher input costs. However, we expect time lags in passing through price increases to result in nearer-term margin volatility for many European high-yield chemical producers.

Exhibit 8

Major feedstock prices for European high-yield chemical producers have reached or exceed pre-pandemic levels



Sources: Bloomberg and Moody's Investors Service

» **Rating activity since autumn 2020 has been limited and centred on company-specific drivers.** In December 2020, we downgraded methanol producer Consolidated Energy Limited to B2 negative from B1 negative, reflecting weakening liquidity, nearing debt maturities and high leverage, even when taking into account a methanol price recovery. In December 2020, we upgraded unsaturated polyester resin (UPR) producer Composite Resins Holding BV (B1 stable) from B2, recognising the company's low leverage and improving EBITDA margin. In January 2021, we upgraded Atotech UK Topco Ltd (B2 review for upgrade) because of its improving operating performance. Shortly afterward, Atotech announced its underwritten initial public offering (IPO) and we subsequently placed the rating on review for an upgrade. The company intends to use the IPO proceeds to redeem outstanding PIK toggle notes, which would reduce its leverage by around 2x.

» **INEOS Quattro's acquisition of certain BP assets and INOVYN creates one of the largest rated European high-yield chemical companies.** INEOS Quattro Holdings Ltd (formerly known as INEOS Styrolution) was downgraded to Ba3 following the closing of the acquisition of Inovyn and the acquisition of certain assets of BP p.l.c. (A1 negative). The Ba3 rating reflects INEOS Quattro's large scale and leading market positions across geographies and product groups, but also the significant uncertainty related to the integration of the businesses and the significant risk appetite across the broader INEOS group.

Chemicals: rating positioning and rationale

Exhibit 9

Company	Rating	Rating Positioning	Rationale	Liquidity
SNF	Ba2 Pos	Strong	Global market leading position as a specialty chemicals producer of non-captive polyacrylamide and resilient business model with larger exposure to the water treatment sector. Partly offsetting these strengths are its exposure to raw material price fluctuations and competition from substantially larger and more financially flexible companies.	Good
OCI	Ba2 Neg	Weak	Sizeable and diversified operations, which support leading positions in nitrogen fertilisers and industrial chemicals, and well-invested asset base, with access to low-cost natural gas. Negatively, financial results are inherently vulnerable to industry cycles and high leverage of 7.0x for the 12 months ended June 2020.	Good
Orion	Ba2 Neg	Weak	Strong market position as the global leader in the specialty carbon black segment, one of the five largest producers of rubber carbon blacks, and a global manufacturing footprint that should allow it to benefit from an end-market recovery after 2020. Positives are counterbalanced by fairly modest scale, large exposure to the automotive market, although a significant part is replacement tyre related, and other cyclical end-markets. Feedstock prices are also volatile because they are correlated to oil prices.	Good
INEOS Quattro	Ba3 Neg	Weak	Top market positions globally in a variety of chemical products, diverse product lines and end-markets and a track record of successful acquisition integration by the INEOS Group. On the negative side, uncertainty related to the integration of the legacy and acquired businesses that have limited vertical integration, material underperformance in the aromatics business in the wake of the coronavirus outbreak and expectations of $150 million in synergies yet to be realised.	Adequate
Ineos	Ba3 Neg	Weak	Robust business profile, underpinned by leading market position as one of the world's largest chemical groups across a number of key commodity chemicals, vertically integrated business model, well-invested production facilities and comfortable liquidity. However, the rating also reflects the cyclicality of commodity chemical markets and reduced demand because of the broad economic slowdown globally. Aggressive financial policy, including an expected €300 million dividend in 2021 at the bottom of the cycle, while leverage is above management's target of 3.0x.	Good
SCI	B1 Pos	Strong	Leading market position in the UPR market in both the US and Europe and vertical integration in Europe, good operational and geographic diversification. Constrained by exposure to mature and highly cyclical end-user markets and volatile raw materials linked to oil price movements.	Good
Composite Resins	B1 Sta	Adequate	Strong market position with good degree of operational and geographic diversification as well as good liquidity. Constrained by small scale and exposure to volatile raw materials and low organic growth in mature Western composite resins markets.	Very Good
Ineos Enterprises	B1 Sta	Adequate	Robust business profile which, despite moderate scale, benefits from leading positions underpinned by a well-invested asset base and proprietary technologies, as well as a high degree of product, customer and end-market diversification.	Adequate
Atotech	B2 RUR	Strong	Leading market share in its two markets of printed circuit board plating and metal finishing, high barriers to entry for mission-critical products and well-diversified customer base. Constraints include dependency on cyclical end-markets such as automotive, smaller size compared with its closest competitors and high Moody's-adjusted leverage of 7.5x as of September 2020.	Good
Nouryon	B2 Sta	Strong	Large product range and broad end-market should mitigate exposure to cyclicality, leading global market shares, with well-diversified geographical revenue. Constrained by raw material mix exposed to price fluctuations, high Moody's-adjusted gross leverage of around 7.1x as of the end of June 2020, and part of the product portfolio being exposed to the chemical sector cycle.	Good
Allnex	B2 Sta	Adequate	Diversified business profile with leading positions in industrial coatings globally followed by strong liquidity. History of payouts to shareholders.	Very Good

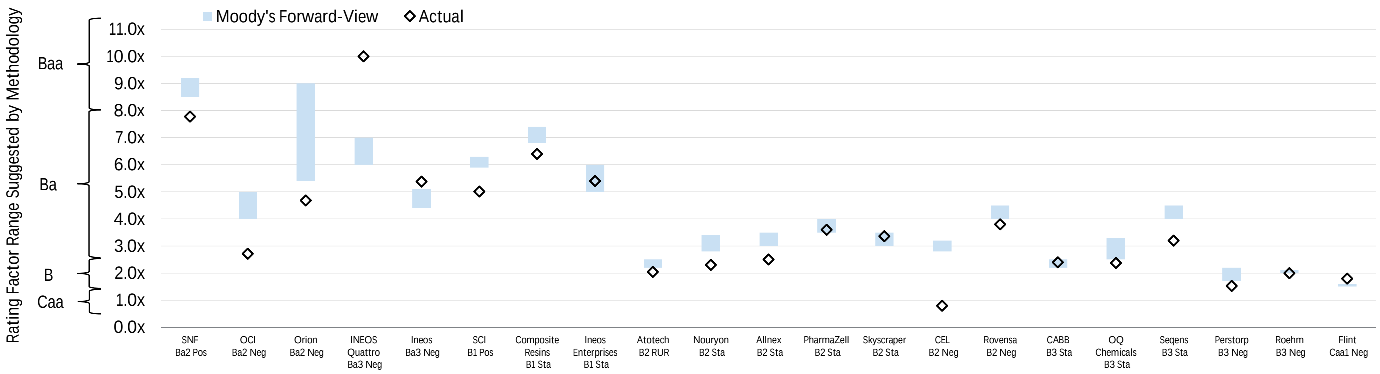
PharmaZell	B2 Sta	Adequate	Attractive active pharmaceutical ingredients product portfolio supplying the growing and resilient pharma end-market; long-term customer relations; regulation and patent portfolio provide high barriers to entry; and strong track record of profitable and sustained growth for more than a decade. However, it has small scale, leading to product and manufacturing concentration, exposing the company to event risk; and is exposed to rigorous regulatory standards and controls, balanced by the company's strong track record of quality and compliance with regulations.	Adequate
Skyscraper	B2 Sta	Adequate	Strong market positions in admixtures and construction systems; future demand will benefit from decarbonisation of production of building materials; balanced regional sales, with an almost equal one-third split among Europe, Americas and Asia Pacific/Middle East and Russia; profitability to improve on the back of lower legacy costs and aligning of performance compensation. Constrained by profitability gap with peers; emerging market exposure seen more as a challenge given demand volatility; and complexity of the carve-out with regard to establishing central functions and internal controls.	Good
CEL	B2 Neg	Weak	Leading position in methanol, which is underpinned by its competitive cost position as demonstrated by its high EBITDA margins and high operating leverage, which will lead to an immediate earnings recovery as soon as methanol prices increase. However, it has a highly leveraged financial profile, exposure to the cyclical pricing and demand for methanol and fertilisers, and a complex group structure with various layers of debt.	Adequate
Rovensa	B2 Neg	Weak	Broad and diversified portfolio of speciality crop nutrition and differentiated crop protection products, strong innovation track record and formulation and registration know-how, underpinning revenue growth and profit margin improvement. Constrained by high financial leverage and exposure to Iberian markets, which is likely to remain high despite a decline because of ongoing international expansion.	Adequate
CABB	B3 Sta	Adequate	The rating is supported by high barriers to entry to the custom manufacturing business, a pipeline of new products and commitment to process development, as well as the realisation of operational efficiencies. Balanced by high leverage of around 6.5x on a Moody's-adjusted basis, modest scale, high level of customer concentration and generation of negative free cash flow (FCF) over the next two years.	Adequate
OQ Chemicals	B3 Sta	Adequate	Leading pure-play merchant producer of oxo chemicals for the global market and continued strength in its higher-margin oxo derivatives business. However, it has exposure to cyclical sectors, such as automotive, construction and industrial, and high variability in raw material prices.	Adequate
Seqens	B3 Sta	Adequate	Good business profile with defensible market positions in Europe in mostly non-cyclical and resilient end-markets, long-term customer relationships and a healthy underlying EBITDA margin. Balanced by moderate size compared with much larger and more diversified global competitors as well as exposure to GDP-linked and some lower-margin products in its solvent and phenol specialties division.	Weak
Perstorp	B3 Neg	Weak	The rating reflects the company's high Moody's-adjusted gross leverage. However, it also takes into account our expectation that the company will take appropriate measures to safeguard liquidity.	Adequate
Roehm	B3 Neg	Weak	Leading market positions in bulk monomers, molding components and acrylic products, and well-diversified manufacturing footprint in Europe, North America and Asia. At the same time, exposure to highly cyclical industries, limited product diversification, history of EBITDA margin volatility and high leverage.	Good
Flint	Caa1 Neg	Weak	The rating reflects very high leverage, which creates challenges for the refinancing of the capital structure after the proposed extended maturity dates. The rating also reflects the group's exposure to print media, a sector in structural decline and affected by price competition.	Adequate

Note: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

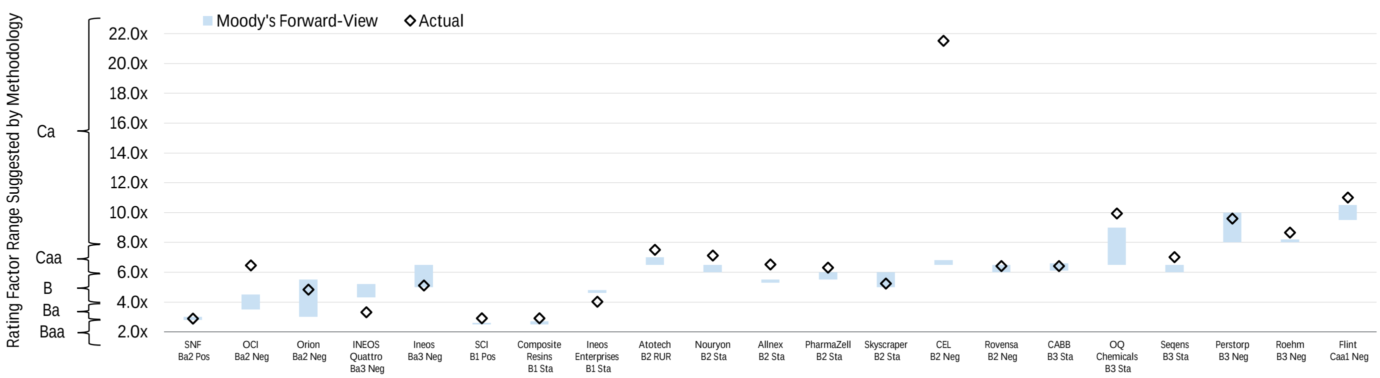
Chemicals: leverage, interest cover and cash flows

Exhibit 10
Moody's-adjusted EBITDA/interest expense



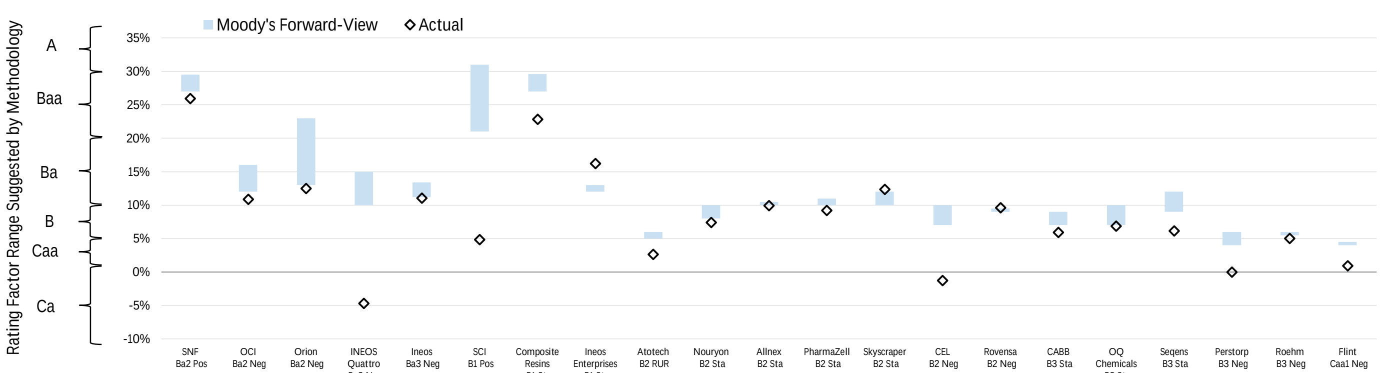
Note: Metrics based on Moody's last published Credit Opinion reports.
Source: Moody's Investors Service

Exhibit 11
Moody's-adjusted debt/EBITDA



Note: Metrics based on Moody's last published Credit Opinion reports.
Source: Moody's Investors Service

Exhibit 12
Moody's-adjusted RCF/debt



Note: Metrics based on Moody's last published Credit Opinion reports.
Source: Moody's Investors Service

Global chemicals industry rating methodology

Exhibit 13

Global chemical industry rating methodology based on Moody's forward-view

		Scale		Business Profile	Profitability		Leverage & Coverage			Financial Policy	
Company Name	Actual Rating	Revenue ($bn)	PP&E (net) ($bn)	Business Profile	EBITDA Margin	ROA - EBIT / Avg Assets	Debt / EBITDA	EBITDA / Interest	RCF / Debt	Financial Policy	Scorecard indicated rating
SNF	Ba2	4.0 - 4.3	2.3 - 2.3	Baa	15% - 17%	9% - 10%	2.8x - 3.0x	8.5x - 9.2x	27% - 30%	Ba	Baa3
OCI	Ba2	3.5 - 4.0	6.1 - 6.4	Ba	24% - 27%	3% - 5%	3.5x - 4.5x	4.0x - 5.0x	12% - 16%	Ba	Ba2
Orion	Ba2	1.1 - 1.4	0.6 - 0.7	Ba	12% - 16%	3% - 10%	3.0x - 5.5x	5.4x - 9.0x	13% - 23%	Ba	Ba2
INEOS Quattro	Ba3	12.0 - 14.0	5.0 - 5.0	Ba	13% - 14%	7% - 8%	4.3x - 5.2x	6.0x - 7.0x	10% - 15%	Ba	Ba2
Ineos	Ba3	13.4 - 15.3	8.0 - 9.0	Baa	12% - 13%	6% - 8%	5.0x - 6.5x	4.4x - 5.1x	11% - 13%	B	Ba2
SCI	B1	2.0 - 2.0	0.6 - 0.7	B	15% - 16%	12% - 13%	2.5x - 2.6x	5.9x - 6.3x	26% - 26%	B	Ba3
Composite Resi	B1	1.0 - 1.0	0.3 - 0.3	B	20% - 21%	24% - 27%	2.5x - 2.7x	6.8x - 7.4x	27% - 30%	B	Ba2
Ineos Enterprise	B1	2.4 - 2.5	0.5 - 1.0	Ba	14% - 15%	5% - 9%	4.6x - 4.8x	5.0x - 6.0x	12% - 13%	Ba	Ba3
Atotech	B2	1.1 - 1.2	0.4 - 0.5	Ba	27% - 28%	5% - 6%	6.5x - 7.0x	2.2x - 2.5x	5% - 6%	B	B1
Nouryon	B2	5.5 - 6.0	3.5 - 4.0	Baa	20% - 22%	3% - 3%	6.0x - 6.5x	2.8x - 3.4x	8% - 10%	B	Ba2
Allnex	B2	2.0 - 2.0	0.6 - 0.6	Ba	18% - 19%	7% - 8%	5.3x - 5.5x	3.0x - 3.5x	10% - 11%	B	B1
PharmaZell	B2	0.2 - 0.2	0.1 - 0.1	Ba	27% - 29%	7% - 9%	5.5x - 6.0x	3.5x - 4.0x	10% - 11%	B	B1
Skyscraper	B2	2.6 - 2.7	0.6 - 0.7	Ba	13% - 14%	5% - 7%	5.0x - 6.0x	3.0x - 3.5x	10% - 12%	B	Ba3
CEL	B2	1.4 - 1.5	3.1 - 3.3	B	33% - 35%	2% - 3%	6.5x - 6.8x	2.8x - 3.2x	7% - 10%	B	B1
Rovensa	B2	0.4 - 0.5	0.1 - 0.1	B	22% - 22%	8% - 9%	6.0x - 6.5x	4.0x - 4.5x	9% - 10%	B	B2
CABB	B3	0.5 - 0.5	0.6 - 0.6	Ba	22% - 23%	2% - 4%	6.1x - 6.6x	2.2x - 2.5x	7% - 9%	B	B1
OQ Chemicals	B3	1.2 - 1.3	1.0 - 1.0	B	11% - 14%	2% - 5%	6.5x - 9.0x	2.5x - 3.3x	7% - 10%	B	B2
Seqens	B3	1.0 - 1.0	0.6 - 0.6	Ba	13% - 15%	3% - 4%	6.0x - 6.5x	4.0x - 4.5x	9% - 12%	B	B1
Perstorp	B3	1.0 - 1.2	0.5 - 0.5	B	10% - 12%	4% - 5%	8.0x - 10.0x	1.7x - 2.2x	4% - 6%	B	B2
Roehm	B3	1.7 - 1.7	0.6 - 0.6	B	17% - 18%	2% - 2%	8.0x - 8.2x	2.0x - 2.1x	6% - 6%	B	B2
Flint	Caa1	2.1 - 2.2	0.4 - 0.4	B	Ba - Ba	Caa - Caa	9.5x - 10.5x	1.5x - 1.6x	4% - 5%	B	B3

Notes: Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red), based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Chemicals: analytical coverage

Company	CFR entity	Analyst
Allnex	Allnex (Luxembourg) & Cy S.C.A.	Martin Kohlhase
Atotech	Atotech UK Topco Ltd	Sven Reinke
Flint	ColourOz MidCo	Moritz Melsbach
Composite Resins	Composite Resins Holding BV	Martin Kohlhase
CEL	Consolidated Energy Limited	Moritz Melsbach
PharmaZell	European Medco Development 3 S.a.r.l.	Janko Lukac
Ineos Enterprises	Ineos Enterprises Holdings Limited	Maria Maslovsky
Ineos	Ineos Group Holdings S.A.	Maria Maslovsky
INEOS Quattro	INEOS Quattro Holdings Ltd	Maria Maslovsky
Skyscraper	LSF11 Skyscraper HoldCo S.a.r.l.	Martin Kohlhase
CABB	Monitchem Holdco 2 S.A.	Janko Lukac
Nouryon	Nouryon Finance B.V.	Moritz Melsbach
OCI	OCI N.V.	Moritz Melsbach
OQ Chemicals	OQ Chemicals International Holding GmbH	Moritz Melsbach
Orion	Orion Engineered Carbons S.A.	Moritz Melsbach
Perstorp	Perstorp Holding AB	Moritz Melsbach
Roehm	Roehm Holding GmbH	Martin Kohlhase
Rovensa	Root Bidco S.a.r.l.	Moritz Melsbach
Seqens	Seqens Group Holding	Janko Lukac
SNF	SPCM SA	Moritz Melsbach
SCI	Specialty Chemicals International B.V.	Martin Kohlhase

Moody's Investors Service

Chemicals: analyst contact details

Analyst	Title	Phone	Email
Sven Reinke	Senior Vice President	4420-7772-1057	Sven.Reinke@moodys.com
Martin Kohlhase	VP-Sr Credit Officer	4969-7073-0719	Martin.Kohlhase@moodys.com
Maria Maslovsky	VP-Senior Analyst	4420-7772-5502	Maria.Maslovsky@moodys.com
Janko Lukac	VP-Senior Analyst	4969-7073-0925	Janko.Lukac@moodys.com
Moritz Melsbach	AVP-Analyst	4969-7073-0784	Moritz.Melsbach@moodys.com

Chemicals: related research

Chemicals – North America & EMEA: Outlook changed to stable from negative on tentative recovery after Q2 trough, 29 July 2020

Chemicals – Europe: Chemical distributors post strong Q2 earnings despite pandemic, a credit positive, 27 August 2020

Speculative-grade Chemicals – Europe: Chemical producers' formula for sustaining credit quality in next phase of pandemic, 9 July 2020

Gaming

European gaming industry on a bumpy road to recovery; online the clear winner

Florent Egonneau, Assistant Vice President - Analyst; Kristin Yeatman, Vice President - Senior Analyst

» **As the pandemic evolves, the recovery for retail gaming companies remains tenuous.** A ramp-up of restrictions across Europe and Latin America in the last few months of 2020 and at the beginning of 2021 is delaying the sector's recovery. Cirsa Enterprises S.L.U. (B3 stable) has announced that it does not expect a return to pre-pandemic revenue and EBITDA levels before the last quarter of 2021. However, the picture has become more complex than during the first lockdown in March-June 2020, with large disparities between countries and even regions. Restrictions range from lower capacity and shorter opening hours to the full closure of facilities. In this context, liquidity remains the immediate focus for land-based gaming operators. Odyssey Europe Holdco S.a.r.l. (Caa1 negative) received a €10 million equity contribution from its shareholder in December 2020, while Codere S.A. (Caa3 stable) is likely to need more cash to sustain its operations in the coming months despite its restructuring concluded in October 2020.

» **Online gambling operators benefited from an acceleration of revenue growth in the fourth quarter of 2020.** A key difference compared with the nationwide lockdowns in March-June 2020 is that major live sports events fully resumed in September across Europe. Sports betting is the most popular online gambling activity, with a 41% share in Europe, ahead of casino, bingo and lottery products. This enabled online gambling operators to benefit from the shift of retail players to the digital channel to a larger extent than during the second quarter of the year. Entain plc's (Ba2 negative) online net gaming revenue grew by 41% in the fourth quarter of 2020, primarily driven by a jump in its sports segment.

» **Government measures to support the economy remain critical to the sector.** Although gaming companies do not have access to state-guaranteed loans given the nature of their business, they have been able to use the furlough mechanism and limit cash burn related to the high fixed-cost nature of retail operations. Additionally, governments agreed to postpone gaming taxes in some countries, such as Italy and Spain. Gamenet Group S.p.A. (B1 negative) and Sisal Group S.p.A. (B1 stable) reported large working capital inflows in the first nine months of 2020, helped by €52 million and €35 million of tax deferrals, respectively. The Italian government and gaming authorities are also considering postponing gaming and sports betting tenders by up to three years. Gamenet and Sisal would benefit from this development because it would delay and likely reduce substantial cash outflow related to concession renewals. By contrast, less affected companies are considering repaying furlough funds. In the UK, William Hill plc (Ba3 ratings under review) handed back £24.5 million of furlough cash that it received in the first half of 2020. Flutter entertainment plc (Ba1 stable) did not tap into the government's furlough scheme.

» **Social risk will fuel the consolidation wave among gaming operators in Europe and North America.** Several large takeovers were completed or announced in 2020, including The Stars Group Inc. by Flutter, William Hill by Caesars Entertainment Inc. (B2 negative) and a selection of International Game Technology's (Ba3 negative) Italian assets by Gamenet. Adverse regulatory reform and tax increases are persistent challenges for the industry, and companies will continue to look for larger scale and ways to gain the upper hand in technology to strengthen their business profiles and enter new markets. In addition, the liberalisation of gaming in the US and Germany – two markets with significant growth potential – will spur opportunistic bids or partnerships. In January 2020, Entain rejected a £8 billion bid from MGM Resorts International (Ba3 negative) as the company's CEO stated that he remained "convinced (the company) will double or triple (its) size" in the next three years.

Gaming: rating positioning and rationale

Exhibit 14

Company	Rating	Rating Positioning	Rationale	Liquidity
Flutter	Ba1 Sta	Adequate	Leading position in the global online gaming market, focus on the online segment, diversified product offering in the gaming market and good positioning of products and business model relative to peers, counterbalanced by geographical concentration in the UK online market, regulatory risk, exposure to unregulated markets, and execution risk related to the merger with The Stars Group.	Good
Entain	Ba2 Neg	Weak	The rating reflects the temporary effects of the pandemic. We expect leverage to increase above the 4.5x downgrade trigger, but that it will normalise within the appropriate range for the Ba2 rating in the next 12-18 months. Despite uncertainty over the duration of closures, the level of expected cash burn is likely to be relatively low and Entain has an adequate liquidity buffer.	Adequate
Gamesys	Ba3 Sta	Adequate	Increased profile and scale of following merger with JPJ Group plc in 2019, sustained double-digit organic growth, expectations for continued revenue and earnings growth, and position as the largest online bingo operator in the UK, with strong growth in Asia, counterbalanced by product and geographic concentration in the UK and in online bingo, continued exposure to regulatory changes and tax increases in the UK, Sweden and Germany, and the highly competitive nature of the online gaming industry.	Good
William Hill	Ba3 RUR	Weak	Relatively strong positions in the UK retail betting industry, significant opportunity for online growth in Europe and North America, strong brand name and high barriers to entry in the retail segment, counterbalanced by elevated leverage, limited geographic diversity, volatility of sports results and the continued risk of adverse regulatory change and tax increases, particularly in the UK.	Good
Sisal	B1 Sta	Adequate	Solid market position in Italy, multichannel distribution, broad business offerings across several categories in the gaming market, growing presence in the high-margin and fast-developing online segment, long-term concession model and low leverage, counterbalanced by exposure to concession renewal risk, anticipated significant cash flow associated with the payment of the SperEnalotto licence renewal, pressure on profitability from tax increases, and presence in mature and competitive segments of the gaming market.	Adequate
Gamenet	B1 Neg	Weak	Leading position in the Italian gaming market, product diversification, significant exposure to the online segment, proven ability to make acquisitions and achieve synergies, and barriers to entry from existing long-term concessions, counterbalanced by exposure to licence renewal risks, geographic concentration in Italy, presence in mature and competitive market segments, and increased operating risk.	Good
Tipico	B2 Sta	Adequate	Dominant position in the German sports betting industry, good historical operating performance and high cash conversion, positive market fundamentals and low operating leverage, counterbalanced by risk of releveraging because of the aggressive financial policy of main shareholders, limited diversification, exposure to unpredictable sports results, and intense competition in the online betting and gaming industry.	Good
Cirsa	B3 Sta	Adequate	Leading market positions in Spain and Latin America, strong operating performance with consistent growth despite difficult market conditions, good diversification by product and geography and good operating cash flow, counterbalanced by our expectation that leverage will rise above 6.0x in the next 12-18 months, limited online offering and high reliance on land-based operations.	Adequate
Lowen Play	B3 Neg	Weak	Leading market position, continued diversification in online gaming in several European countries and resilient cash generation thanks to an asset-light business model, counterbalanced by limited geographic diversification, concentration in product offering and exposure to regulatory risk.	Adequate

Olympic	Caa1 Neg	Weak	Leading positions in core markets, the cash-generative nature of the business and barriers to entry, counterbalanced by small scale, geographical concentration in Latvia and aggressive financial policy.	Adequate
Codere	Caa3 Sta	Adequate	The rating reflects the two-year extension of the existing bonds maturity, the €250 million cash injection by bondholders and the company's ability to significantly reduce its fixed-cost base during periods of retail closure. It is constrained by the high risk of further pandemic-related disruption, limited prospects for full EBITDA recovery over the next two years, expectation of continued negative free cash flow and concerns over the sustainability of the capital structure.	Weak
Intralot	Ca Neg	Weak	The rating reflects the very high likelihood of default and weaker recovery as a result of the proposed debt restructuring and in particular the debt-to-equity swap; and uncertainty over the company's operating performance over the next 12-18 months and whether this will be sufficient to support a sustainable capital structure in the longer term, even with the proposed debt restructuring.	Weak

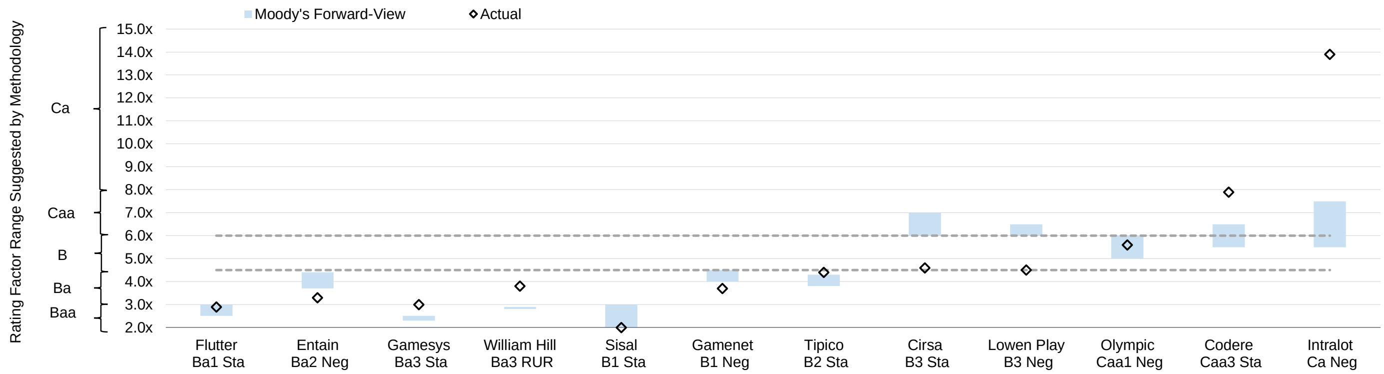
Notes: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

Gaming: leverage, interest cover and cash flows

Exhibit 15

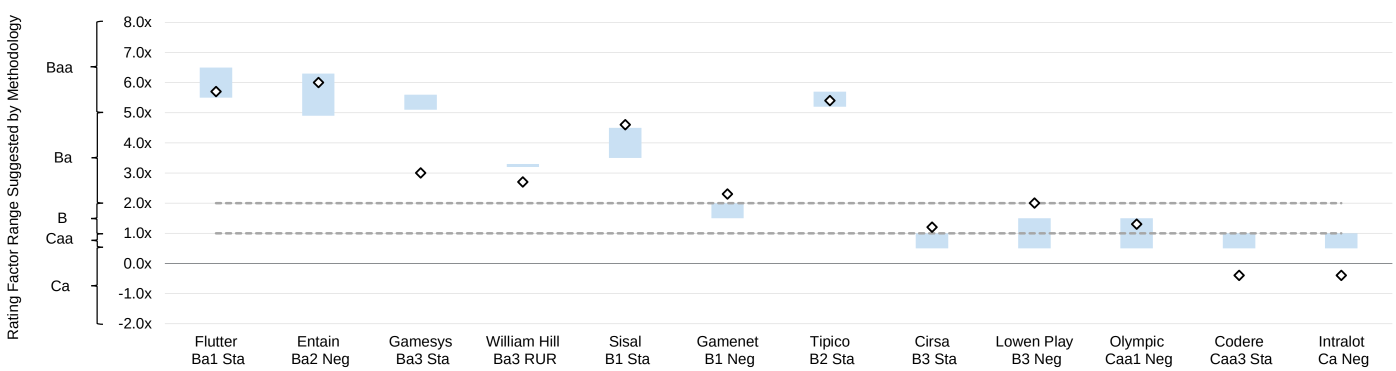
Moody's-adjusted debt/EBITDA



Note: Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Exhibit 16

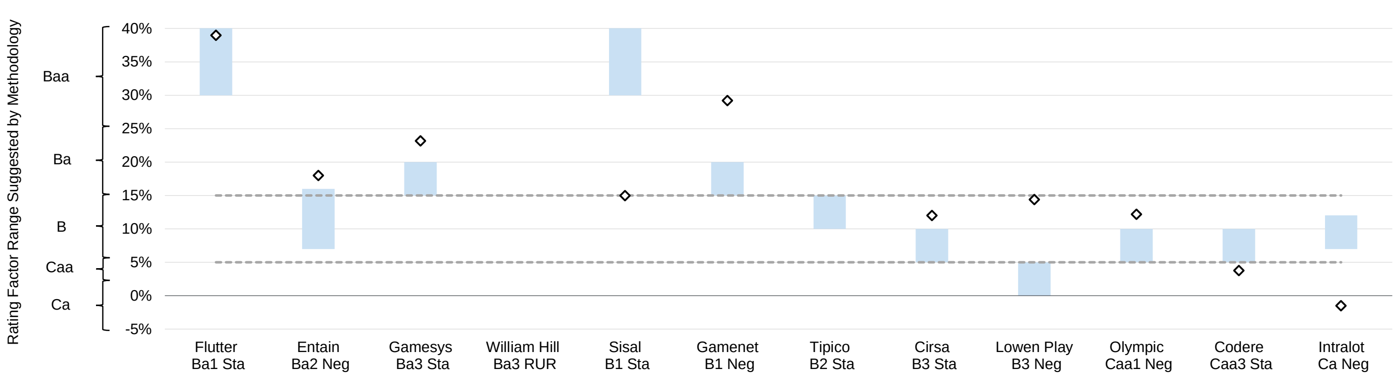
Moody's-adjusted EBIT/interest expense



Note: Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Exhibit 17

Moody's-adjusted RCF/net debt



Note: Based on metrics published in Moody's latest Credit Opinion report. William Hill actual RCF/net debt is 77.0% and expected to decrease to around 67.0%.
Source: Moody's Investors Service

Global gaming industry rating methodology

Exhibit 18

Global gaming methodology scorecard based on Moody's forward-view

		Scale	Business Profile			Profitability and Efficiency	Leverage and Coverage			Financial Policy	
Company Name	Actual Rating	Revenue ($bn)	Market Characteristics	Market Position	Diversification	EBIT Margin	Debt / EBITDA	EBIT / Interest	RCF / Net Debt	Financial Policy	Scorecard Indicated Rating
Flutter	Ba1	5.5 - 5.8	Ba	Baa	A	20.0% - 25.0%	2.5x - 3.0x	5.5x - 6.5x	30% - 40%	Baa	Baa2
Entain	Ba2	3.9 - 4.2	Ba	Ba	Ba	12.0% - 15.0%	3.7x - 4.4x	4.9x - 6.3x	7% - 16%	Ba	Ba2
Gamesys	Ba3	1.0	Ba	Ba	Ba	15.0% - 16.0%	2.3x - 2.5x	5.1x - 5.6x	15% - 20%	Ba	Ba2
William Hill	Ba3	1.8	Ba	Ba	B	10.0%	2.8x	3.2x	67%	Ba	Ba2
Sisal	B1	0.7	B	Ba	B	15.0% - 20.0%	2.0x - 3.0x	3.5x - 4.5x	30% - 40%	B	Ba3
Gamenet	B1	0.8 - 1.0	B	Ba	B	7.0% - 12.0%	4.0x - 4.5x	1.5x - 2.0x	15% - 20%	B	B1
Tipico	B2	1.1 - 1.2	B	A	Caa	15.0% - 20.0%	3.8x - 4.3x	5.2x - 5.7x	10% - 15%	B	B1
Cirsa	B3	1.3 - 1.6	B	Ba	B	5.0% - 10.0%	6.0x - 7.0x	0.5x - 1.0x	5% - 10%	B	B3
Lowen Play	B3	0.3	B	Ba	Caa	15.0% - 20.0%	6.0x - 6.5x	0.5x - 1.5x	0% - 5%	B	B3
Olympic	Caa1	0.2	B	Ba	Caa	15.0% - 20.0%	5.0x - 6.0x	0.5x - 1.5x	5% - 10%	Ca	Caa1
Codere	Caa3	1.5	B	Ba	B	0.0% - 5.0%	5.5x - 6.5x	0.5x - 1.0x	5% - 10%	B	B3
Intralot	Ca	0.5 - 0.6	B	B	Ba	5.0% - 10.0%	5.5x - 7.5x	0.5x - 1.0x	7% - 12%	B	B3

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Gaming: analytical coverage

Company	CFR entity	Analyst
Cirsa	Cirsa Enterprises, S.L.U.	Florent Egonneau
Codere	Codere S.A.	Florent Egonneau
Entain	Entain plc	Kristin Yeatman
Flutter	Flutter Entertainment plc	Florent Egonneau
Gamenet	Gamenet Group S.p.A.	Florent Egonneau
Gamesys	Gamesys Group plc	Kristin Yeatman
Intralot	Intralot S.A.	Florent Egonneau
Olympic	Odyssey Europe Holdco S.à.r.l.	Florent Egonneau
Lowen Play	Safari Beteiligungs GmbH	Florent Egonneau
Sisal	Sisal Group S.p.A.	Florent Egonneau
Tipico	Tackle Group S.a r.l.	Florent Egonneau
William Hill	William Hill plc	Kristin Yeatman

Moody's Investors Service

Gaming: analyst contact details

Analyst	Title	Phone	Email
Kristin Yeatman	VP-Senior Analyst	4420-7772-5213	Kristin.Yeatman@moodys.com
Florent Egonneau	AVP-Analyst	33-1-5330-1025	Florent.Egonneau@moodys.com

Gaming: related research

Flutter Entertainment plc: Kentucky legal proceedings is credit negative, December 2020

Gaming — Europe: 2021 Outlook Presentation, December 2020

Gaming — Europe: Outlook turns stable as recovery strengthens from coronavirus trough, November 2020

Gaming — Europe: Revenue starting to recover but new coronavirus restrictions pose a threat, October 2020

Tackle Group S.a.r.l.: New German online gaming regulations to increase Tipico's leverage, a credit negative, October 2020

Gaming — Germany: New online regulations are credit negative for incumbent operators, October 2020

Speculative-grade nonfinancial corporates — Europe: An overview of sector credit trends, September 2020

Gaming — Global: Problem gambling and crime prevention drive high social credit risk but impact varies, June 2020

Gaming — Europe: Credit quality weakens as coronavirus severely disrupts operations, April 2020, April 2020

Gaming — Italy: Coronavirus to hit betting and gaming revenues in northern Italy, a credit negative, March 2020

William Hill plc: Mr Green's social responsibility and anti-money-laundering failings are credit negative for parent William Hill, February 2020

Gambling — UK: UK regulator bans use of credit cards for gambling, a credit negative, January 2020

Healthcare

Healthcare services' operating performance to differ by sub-sector; M&A to remain a key credit risk

Perrine Bajolle, Assistant Vice President – Analyst

» **COVID-19 testing will continue to boost laboratories' operating performance.** Following record high revenue growth and margin expansion in 2020, we expect the sector's operating performance to remain strong in 2021 as COVID-19 testing activities continue to more than offset any potential reductions in non-COVID-19 volumes as long as the pandemic persists. We expect demand for polymerase chain reaction (PCR) tests[1] to gradually decline during 2021 from the current high levels as the need to detect the virus will likely diminish as vaccines become widely available. Conversely, the volume of antibody tests, also known as serology tests[2], has been relatively limited so far but might increase as vaccines are rolled out. This would represent an upside for laboratories despite reimbursement levels for serology tests being significantly lower than for PCR tests. Uncertainty remains high, however, particularly regarding the future volume and price of COVID-19 tests, which are highly dependent on national health authorities' policies.

» **Government aid will continue to support private hospital operators** because it helps to offset declining volumes and occupancy, as well as cost increases related to the pandemic**.** In December 2020, the French government announced that support for hospitals put in place in May 2020 following the COVID-19 outbreak will be extended to June 2021[3]. The support package provides revenue and cash flow predictability, a credit positive, because it guarantees a minimum revenue equal to 2019's level and compensates hospitals for non-recurring costs stemming from COVID-19 such as protective equipment. UK and German private hospitals have also received various forms of government support. A downside risk for the sector is the volume of elective surgeries and other non-urgent medical services that hospitals will provide when the government support ceases. Any shortfall versus pre-pandemic levels could hurt financial performance and, therefore, credit quality.

» **M&A will fully resume in 2021 and remain a key event risk for credit quality.** Debt-funded M&A has been a key growth pillar for hospitals, nursing homes and laboratories in past years. It has also allowed the large networks to realise economies of scale and efficiency gains, which are crucial for supporting margins in sectors continuously exposed to tariff cuts. We expect M&A to fully resume in 2021 after most companies put them on hold during the first months of the pandemic in the context of lockdown and operational disruptions. Debt-funded M&A activity may maintain the companies' leverage at a high level and limit their free cash flow generation, as in previous years, a key credit constraint. Business rationale, acquisition multiples and funding will be key credit drivers in 2021. Hospital operators have already resumed M&A, with Elsan SAS (B1 negative) agreeing to acquire Groupe C2S in a deal announced in late 2020.

» **Despite short-term uncertainty, longer-term dynamics remain favourable**. The demand for healthcare services is defensive in nature because it is driven by the critical nature of services and the fact they are mostly reimbursed by public authorities and/or mandatory health insurance. Demand for healthcare services will continue to increase, driven by underlying trends such as ageing populations and increasing incidences of chronic diseases. Diagnostic laboratories will further benefit from the continued outsourcing of clinical laboratory tests by public and private hospitals and an increasing focus on prevention. Nursing homes will benefit from changes in social behaviour, such as the decline in the working-age population's ability to look after elderly parents.

» **Tariff pressure eased in 2020 but is likely to resume in the medium term**. The healthcare sector is highly regulated and companies will continue to face potential tariff cuts as public authorities – which reimburse most of the healthcare services provided – seek to contain healthcare spending. Since the pandemic began European public authorities have put tariff cuts mostly on hold as the healthcare sector is seen as instrumental in the fight against the virus. However, pricing pressure will likely resume over the medium term as European governments grapple with the cost of supporting their economies during the pandemic. The extent and timing of the next tariff cuts will differ by geography and sub-sector because they will depend on local regulatory frameworks. In France for example, three-year agreements for private hospitals and laboratories provide some predictability over reimbursements through 2022.

Healthcare: rating positioning and rationale

Exhibit 19

Company	Rating	Rating Positioning	Rationale	Liquidity
Ramsay	Ba3 Sta	Weak	The rating is supported by the company's large scale and leading position in integrated care in Europe as one of the top companies in France and the Nordic countries; its industrial ownership by Ramsay Health Care; its overall good degree of visibility in terms of future operating performance; its favourable demographics, which should continue to drive growth; and the overall high barriers to entry. The rating is constrained by the company's high gross leverage; the risk of renewed tariff strain in the future or other policy changes; and exposure to a certain degree of event risk.	Good
DomusVi	B1 Neg	Weak	The rating is supported by the company's positioning in the French and Spanish nursing home markets, its good track record of organic growth, integration of acquisitions, good profitability compared with peers, and its good geographical and product diversification. The rating is constrained by the company's high leverage and high fixed-cost base, which is mainly composed of staff costs and rents.	Good
Elsan	B1 Neg	Weak	The rating is supported the company's competitive position as one of the largest private operators in France, favourable demographics trends supporting volumes and higher profitability versus peers. The rating is constrained by high gross leverage, the risk of renewed tariff strain in the future or other policy changes; and the risk of future debt-funded M&A.	Good
Amedes	B2 Sta	Adequate	The rating is supported by the company's market positioning in Germany and Belgium, its expertise in specialty and gynecology fields, defensive nature and positive underlying fundamental trends supporting demand, and barriers to entry. The rating is constrained by high leverage, limited free cash flow (FCF) generation, limited geographical diversification and continuous price pressure in the industry.	Good
Cerba	B2 Sta	Adequate	The rating is supported by the company's size, good market positioning especially in France, expertise in specialty testing, good margin level compared with peers, defensive nature and positive underlying fundamental trends supporting demand, and barriers to entry. The rating is constrained by high leverage, some concentration in France, which represents around 80% of revenue, and continuous price pressure in the industry.	Good
Colisée	B2 Sta	Weak	The rating is supported by the company's strong market position, high and growing demand for dependent care, barriers to entry, growth track record and positive FCF. The rating is constrained by high leverage, high fixed costs base, exposure to reputation risk and risk of future debt-funded M&A.	Good
Inovie	B2 Sta	Adequate	The rating is supported by the company's market positioning in the southern regions of France, defensive nature and positive underlying fundamental trends supporting demand, and a good margin level expected post-transaction. The rating is constrained by continuous tariff pressure in the sector, the absence of geographic diversification, full exposure to the French regulatory regime and high leverage.	Good
Synlab	B2 Sta	Adequate	The rating is supported by the company's size as the largest provider of clinical laboratory testing in Europe, good geographical diversification, defensive nature and positive underlying fundamental trends supporting demand, and barriers to entry. The rating is constrained by high leverage, modest FCF generation and continuous price pressure in the industry.	Good
Vivalto	B2 Sta	Adequate	The rating is supported by the high degree of visibility regarding its future operating performance, history of solid organic growth, high barriers to entry, positive FCF and financial flexibility. The rating is constrained by the company's small scale in total revenue terms, high leverage and high exposure to a regulated sector.	Adequate
Unilabs	B2 Sta	Weak	The rating is supported by the company's size, good business and geographic diversification, defensive nature and positive underlying fundamental trends supporting demand, and barriers to entry. The rating is constrained by very high leverage, modest FCF generation and continuous price pressure in the industry.	Good

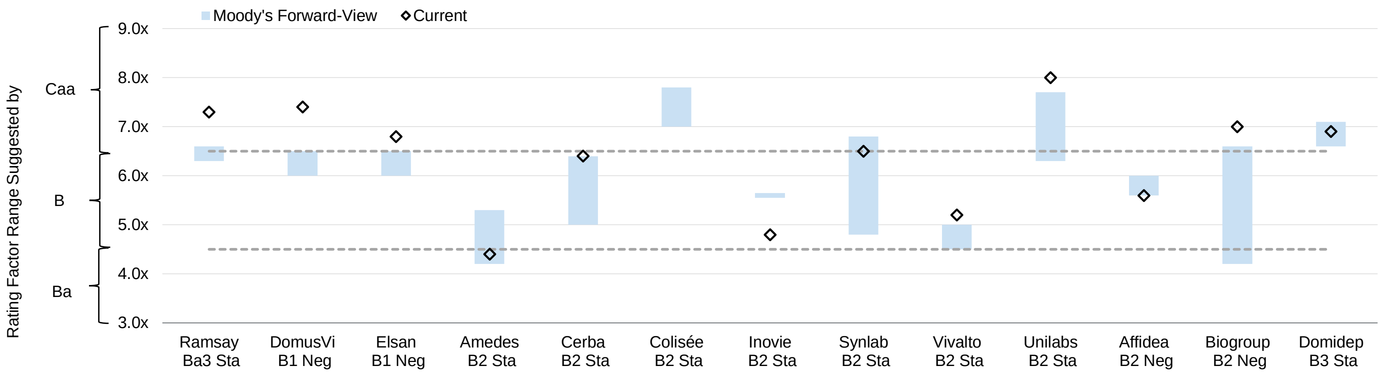
Affidea	B2 Neg	Weak	The rating is supported by the company's position as the largest provider of advanced diagnostic imaging services in Europe; a relatively high level of geographic diversification and favourable demand dynamics given demographic and outsourcing trends. The rating is constrained by the company's high gross leverage; limited size and scale, with a high fixed-cost base; significant exposure to public-sector clients, which potentially limits its pricing power; and execution risk related to organic EBITDA growth, given a mixed track record.	Adequate
Biogroup	B2 Neg	Weak	The rating is supported by the company's scale, leading market position and network density in France and Belgium; barriers to entry; the defensive nature and positive underlying fundamental trends supporting demand; and high profitability above peers', translating into good FCF generation. The rating is constrained by high leverage; an M&A strategy that has been more aggressive than the peer group; exposure to key-man risk; a geographical profile still concentrated in France; and continuous tariff pressure in the industry.	Good
Domidep	B3 Sta	Strong	The rating is supported by the company's market positioning as the fifth-largest private operator of nursing homes in France, sector tailwinds, including favourable sociodemographic dynamics and high barriers to entry, high level of profitability compared with peers and track record of positive FCF. The rating is constrained by the lack of geographical diversification, modest organic revenue growth prospects, high fixed costs, high leverage and risk of future debt-funded acquisitions.	Adequate

Note: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

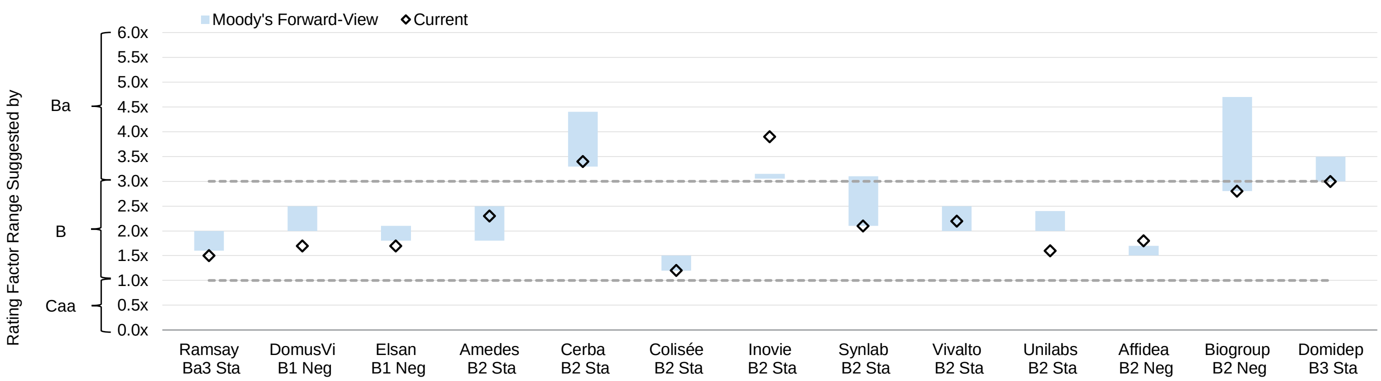
Healthcare: leverage, interest cover and cash flows

Exhibit 20
Moody's-adjusted debt/EBITDA



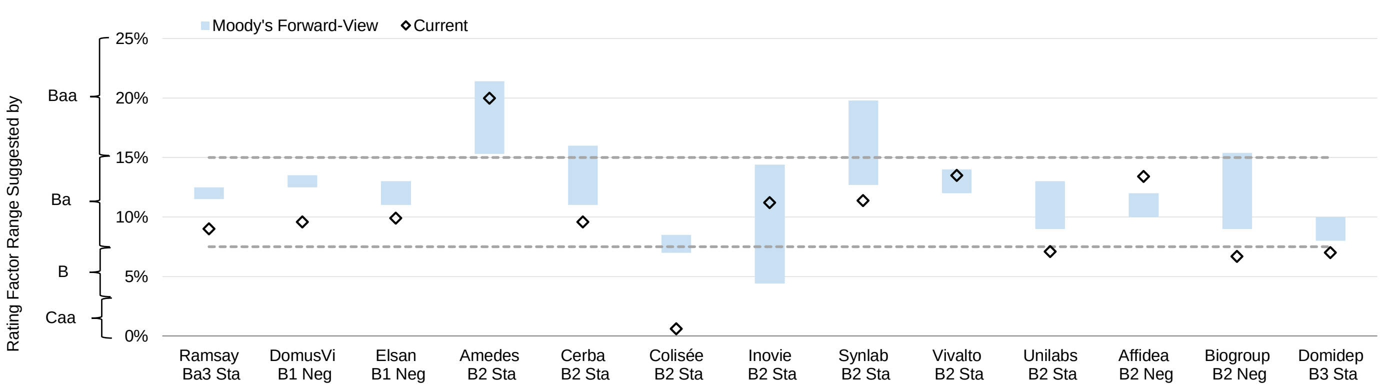
Note: Based on metrics published in Moody's latest Credit Opinion report or available on moodys.com.
Source: Moody's Investors Service

Exhibit 21
Moody's-adjusted EBITA/interest expense



Note: Based on metrics published in Moody's latest Credit Opinion report or available on moodys.com
Source: Moody's Investors Service

Exhibit 22
Moody's-adjusted RCF/net debt



Note: Based on metrics published in Moody's latest Credit Opinion report or available on moodys.com
Source: Moody's Investors Service

Global business and consumer services rating methodology

Exhibit 23
Global business and consumer services methodology scorecard based on Moody's forward-view

		Business Profile		Scale	Leverage and Coverage				Financial Policy	
Company Name	Actual Rating	Demand Characteristics	Competitive Profile	Revenue ($bn)	EBITA margin	EBITA / Interest	Debt / EBITDA	RCF / Net Debt	Financial Policy	Scorecard indicated rating
Ramsay	Ba3	Baa	A	4.2 - 4.4	6% - 7%	1.6x - 2.0x	6.3x - 6.6x	12% - 13%	Ba	Ba3
DomusVi	B1	Baa	Ba	1.9 - 2.0	12% - 13%	2.0x - 2.5x	6.0x - 6.5x	13% - 14%	B	Ba3
Elsan	B1	Baa	A	2.9 - 3.0	11% - 12%	1.8x - 2.1x	6.0x - 6.5x	11% - 13%	B	Ba3
Amedes	B2	Ba	B	0.5 - 0.5	13% - 18%	1.8x - 2.5x	4.2x - 5.3x	15% - 21%	B	B1
Cerba	B2	Ba	B	1.3 - 1.5	19% - 21%	3.3x - 4.4x	5.0x - 6.4x	11% - 16%	B	B1
Colisée	B2	Baa	Ba	1.2 - 1.2	15% - 15%	1.2x - 1.5x	7.0x - 7.8x	7% - 9%	B	B1
Inovie	B2	Ba	B	0.7 - 0.7	26% - 26%	3.1x - 3.1x	5.6x - 5.6x	9% - 9%	B	Ba3
Synlab	B2	Ba	Ba	2.3 - 2.9	13% - 15%	2.1x - 3.1x	4.8x - 6.8x	13% - 20%	B	B1
Vivalto	B2	Baa	Ba	0.9 - 0.9	7% - 9%	2.0x - 2.5x	4.5x - 5.0x	12% - 14%	B	B1
Unilabs	B2	Ba	Ba	1.5 - 1.7	14% - 16%	2.0x - 2.4x	6.3x - 7.7x	9% - 13%	B	B1
Affidea	B2	Ba	B	0.5 - 0.5	8% - 9%	1.5x - 1.7x	5.6x - 6.0x	10% - 12%	B	B2
Biogroup	B2	Ba	B	1.4 - 1.7	A - A	2.8x - 4.7x	4.2x - 6.6x	9% - 15%	B	Ba3
Domidep	B3	Baa	Ba	0.3 - 0.3	20% - 21%	3.0x - 3.5x	6.6x - 7.1x	8% - 10%	B	B1

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Healthcare: analytical coverage

Company	CFR entity	Analyst
Affidea	Affidea B.V.	Gilberto Ramos
Amedes	Antin Amedes Bidco GmbH	Perrine Bajolle
Biogroup	Laboratoire Eimer	Perrine Bajolle
Cerba	Constantin Investissement 3 S.A.S.	Perrine Bajolle
Colisée	Cobalt BidCo	Brad Gustafson
Domidep	Cube Healthcare Europe Bidco	Brad Gustafson
DomusVi	HomeVi S.a.S.	Brad Gustafson
Elsan	Elsan SAS	Brad Gustafson
Inovie	Inovie Group	Perrine Bajolle
Ramsay	Ramsay Sante	Brad Gustafson
Synlab	Synlab Unsecured Bondco PLC	Perrine Bajolle
Unilabs	Unilabs Subholding AB	Perrine Bajolle
Vivalto	Vivalto Sante Investissement	Brad Gustafson

Moody's Investors Service

Healthcare: analyst contact details

Analyst	Title	Phone	Email
Perrine Bajolle	AVP-Analyst	4969-7073-0902	Perrine.Bajolle@moodys.com
Brad Gustafson	VP-Senior Analyst	33153-301-068	Brad.Gustafson@moodys.com
Gilberto Ramos	Analyst	33153-303-370	Gilberto.Ramos@moodys.com

Healthcare: related research

Pharmaceuticals and Healthcare – Europe: Developments to watch in 2021: M&A, COVID-19 and other social risks, February 2021

Manufacturing

Coronavirus hit manufacturing industry at a weak point; stable outlook

Daniel Harlid, Vice President - Senior Analyst

» **Sector has made it through worst of the crisis and is well positioned for recovery.** The global manufacturing sector has been relatively resilient through the worst of the coronavirus crisis, as 2020 results and industry data show. While revenues for some issuers were considerably below prior-year levels, many companies have preserved profitability by quickly adjusting their cost base and preventing significant margin deterioration. Unprecedented central bank support and government stimulus helped to offset the negative impact of the coronavirus-related economic contraction. On a positive note, some companies are now cautiously providing guidance for 2021, if only in broad ranges of growth expectations, after being reluctant to do so during 2020. These forecasts indicate companies are getting a better grasp on factors affecting performance through the pandemic compared with the limited visibility in the first half of 2020.

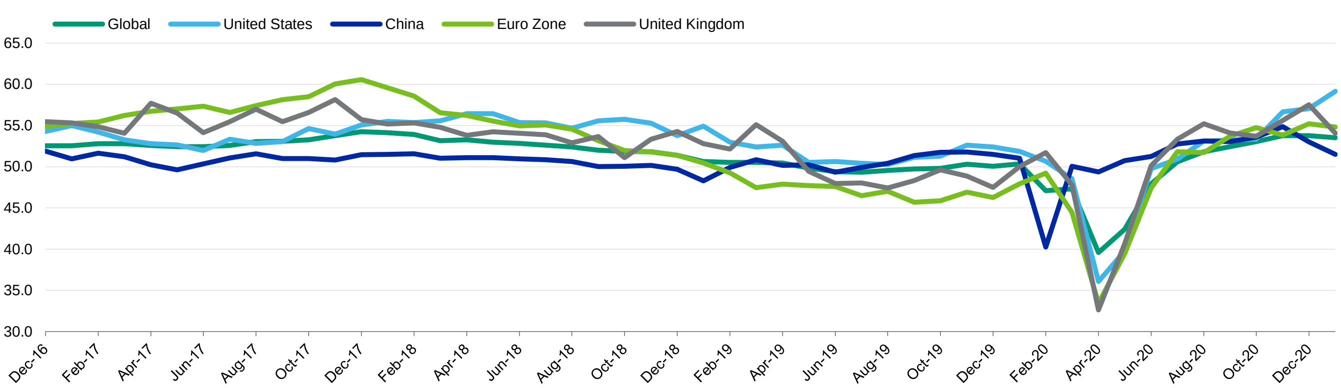
» **Purchasing managers' sentiment in expansionary territory.** We are seeing positive signals from certain forward-looking industrial indicators. For example, the Global Purchasing Managers' Index (PMI), which gauges current sentiment among manufacturing sector participants and serves as a leading indicator of changes in industry conditions, indicates a V-shaped recovery for all key countries. The PMI for China, which fell to 40.3 in February, the lowest level since its inception in April 2004, reached 54.1 in November 2020, though it has since fallen to 51.5 in January this year. Likewise, the indices for the euro area, UK and US, whose respective low points were in the low/mid-30s in April 2020, were all above the important PMI threshold of 50, reflecting expansion, in January this year, and are now even above their levels at year-end 2019.

» **Our industry outlook is stable.** We changed our outlook for the global manufacturing sector to stable from negative in September 2020, driven by our expectation of a strong, if only partial, recovery in 2021. We forecast single-digit EBITDA growth in 2021 after a double-digit decline in 2020. However, this is the midpoint of a very wide range of forecasts among multiple manufacturing segments and regions. While the resolution of the pandemic still faces many uncertainties and risks, we believe the sector has overcome the worst of the coronavirus-induced recession and is on the path to recovery. This assumes, however, the recent resurgence of coronavirus cases to be manageable and that vaccines will likely be widely available to the general public after the summer this year. Further, we expect fiscal and monetary policies to remain accommodative until the economic recovery can sustain itself on its own. We expect the recent inflationary trends of raw material prices and transportation costs to be passed on to end-customers in the form of gradual price increases.

Exhibit 24

Global PMIs have recovered since hitting their low points

Seasonally adjusted



Source: Markit Economics

Manufacturing: rating positioning and rationale

Exhibit 25

Company	Rating	Rating Positioning	Rationale	Liquidity
Dometic	Ba2 Neg	Weak	Favourable industry trends for some of its end-markets, leading market positions and recognisable brands in niche markets, good liquidity, and low-cost manufacturing and asset-light model. Constrained by somewhat elevated leverage, high exposure to cyclical original equipment manufacturing sectors and revenue concentration in the US in general and the US recreational vehicle sector in particular.	Good
Huvepharma	Ba3 Pos	Strong	Balanced diversification across products, geographies and customers, strong positions in key niche segments, proven track record of strong, profitable growth and solid industry fundamentals. Constrained by small size of operations on a global scale, lack of diversification in the companion animal segment and concentrated ownership structure.	Good
Flender	B1 Sta	Adequate	Market leader in the consolidated wind gearbox industry, mission-critical nature of products provided, long-standing relationships with key wind turbine manufacturers and potential for capturing service revenue from large installed base. Rating constrained by short financial track record, relatively low profitability given its market position, high dependency on the overall health of onshore wind industry and high customer concentration.	Adequate
Minimax	B1 Sta	Adequate	Rating supported by resilient business model with a high share of recurring revenue, solid profitability, strong market positions in an industry with high barriers to entry and sustainable free cash flow (FCF). Rating constrained by increased financial leverage after the dividend recap, limited geographical diversification, less stable demand and lower margins in the more fragmented and highly competitive Asian fire protection market, and some event risk associated with private-equity ownership.	Good
Thyssenkrupp	B1 Dev	Adequate	Large size and a solid business profile, improved liquidity, and a strategy focused on turning around profitability and improving cash flow in all segments. Rating constrained by still-weak macroeconomic environment and the recent demand slump across key end-markets, which have been severely hit by the coronavirus pandemic, increased raw material and restructuring costs, highly negative FCF and a weakened business profile after the disposal of its elevator division.	Good
Gerflor	B2 Sta	Adequate	Established market position in the attractive and growing vinyl contract market, good geographical and end-market diversification, long track record of profitable growth, strong FCF supported by solid profitability, modest maintenance capex and working capital requirement, and experienced management team. Rating constrained by elevated opening leverage, exposure to economic and construction cycles, a competitive market with high pricing pressure, and exposure to volatile input costs.	Good
RTC	B2 Sta	Adequate	Well diversified business by product, end-user market and geography, strong position in several niche markets, supported by in-house R&D, ability to generate meaningful positive FCF and adequate liquidity. Rating constrained by volatile profitability, performance highly reliant on public spending in military and infrastructure, high competitive pressure in more commoditised products, leveraged capital structure and high M&A event risk due to decentralised organisational structure and buy and build strategy.	Good
Sofime	B2 Sta	Adequate	Exposure to resilient end-markets with favourable long-term growth prospects, sizeable recurring after-sales services, technology leadership helps secure customer relationships, strong margin profile and expected positive FCF. Rating constrained by high leverage, event risk of debt-funded acquisitions, large amount of PIK notes issued above the restricted group, occasional volatility in order intake, and capital spending needs in line with customers' investment patterns.	Adequate
Tractel	B2 Sta	Adequate	Strong market position in small but protected niche markets, diversification in terms of products and geographies, with no customer concentration, resilient business model, strong FCF generation and good liquidity. Rating constrained by small scale of operations, exposure to cyclical end-markets and moderate sales visibility, adverse effect of the pandemic on the construction market, high leverage and shareholder-oriented financial policy.	Good

thyssenkrupp Elevator	B2 Sta	Adequate	Attractive demand drivers in the global elevator and escalator market, leading market positions and cutting-edge technological expertise, resilient business model, significant cost-savings potential, driving expected profitability improvements and positive FCF generation. Rating constrained by exposure to the cyclical construction sector in the new installation segment, very high financial leverage, execution risks associated with ambitious growth strategy and extensive restructuring, foreign-currency (translation) risk and aggressive financial policy.	Adequate
Delachaux	B2 Neg	Weak	Rating reflects leading position in its niche market, high barriers to entry, good revenue visibility and sustainable good profitability and cash flow generation. Constrained by modest scale and moderate product diversification, high leverage and exposure to raw material prices.	Adequate
ILPEA	B2 Neg	Weak	Leading position in niche market, high barriers to entry, good revenue visibility and sustainable, good profitability. Constrained by modest scale and moderate product diversification, high customer concentration and limited deleveraging prospects, given low FCF generation.	Adequate
Sisecam	B2 Neg	Weak	Balanced revenue and product mix, moderate leverage, leading market position in Turkey and significant geographic diversification outside country. Constrained by exposure to the country's political, legal, fiscal and regulatory environment, high maintenance capital investment requirements and negative FCF generation.	Adequate
Ammega	B3 Sta	Adequate	Strong positions in the global conveyor and power transmission belt markets, favourable market fundamentals supported by recurring replacement sales, broad end-market and geographical diversification, and entrenched relationships with a diverse and sticky customer base. Rating constrained by competitive landscape and lack of dominant market shares, exposure to cyclical end-markets, execution risk from recent M&A, weaker trading performance due to a more challenging economic environment, high leverage and an aggressive financial policy.	Adequate
Armacell	B3 Sta	Adequate	Niche company with a geographically diversified and resilient business profile, solid profitability through the cycle, track record of revenue growth and flexible manufacturing footprint and cost base. Rating constrained by high starting leverage under the new ownership structure, high exposure to cyclical end-markets and exposure to volatile input prices, resulting in margin volatility	Adequate
Cerdia	B3 Sta	Adequate	Well-established position in a niche industry characterised by high entry barriers, predictable end-user tobacco market and multi-year contracts with largest customers providing good revenue visibility, declining Moody's adjusted EBITDA margin, good liquidity due to positive underlying FCF generation and largely undrawn revolving facility. Rating constrained by narrow product portfolio dependent on the structural declining tobacco end-market, significant customer concentration, high price competition exacerbated by overcapacity despite the industry being oligopolistic, and elevated adjusted gross debt/EBITDA, with deleveraging prospects depending on the timely and successful closure of its cellulose acetate flake plant in France.	Good
Ceva	B3 Sta	Adequate	Established track record of profitable growth, very favourable industry dynamics, notably in emerging markets, solid competitive positioning in certain niche segments, good liquidity, limited degree of product and customer concentration. Rating constrained by deteriorating global economic outlook and severe and extensive credit shock because of the coronavirus pandemic, highly leveraged capital structure, modest size in a consolidating industry, acquisitive nature, and event risks still weighing on earnings and margins.	Good
Frigoglass	B3 Sta	Adequate	Improved operating profitability following restructuring efforts since 2016, leading position in the West African glass market, long-standing relationships with key customers, and strategic major shareholder, Truad Verwaltungs AG, that supported the company during the recapitalisation. Rating constrained by high customer concentration, exposure of the glass business to the country risk of Nigeria, high earnings volatility and track record of negative Moody's-adjusted FCF because of high capital spending and restructuring.	Adequate
Averys	B3 Neg	Weak	Largest company in Europe's racking market, made-to-order approach and distribution through its own channels, expected revenue growth tied to various drivers and ability to pass on raw material (foremost steel) price increases to customers and partly automated production, which support its high operating profitability margin. Rating constrained by geographic and product concentration, high exposure to the warehouse and logistics sector, high leverage, and acquisitive history and expected debt-funded acquisitions.	Good

EVOCA	B3 Neg	Weak	Rating primarily constrained by high leverage, small size, high customer concentration, sensitivity to economic cycles and pandemic-induced changes in trends. The rating is supported by company's clear market leadership, high profitability and asset-light business model.	Adequate
IDEMIA	B3 Neg	Weak	Rating supported by strong market share in key segments, high barriers to entry in various business lines, good geographic and customer diversification and adequate liquidity. Rating also reflects relatively limited recurring revenue and a lack of visibility in certain business lines, given the unevenness of new contracts and renewal cycles; technological risk; high Moody's-adjusted leverage and limited deleveraging since the acquisition of Morpho in 2017; and negative Moody's-adjusted FCF.	Adequate
INNIO	B3 Neg	Weak	Leading market postions, supported by selected barriers to entry, high-margin business, well-invested asset base and service business representing around 50% of total revenue, providing good visibility, an element of stability and typically higher margins. Rating constrained by high leverage, revenue exposure to upstream oil and gas cyclicality (less than 15%) and completing the transition of production in Waukesha to the new facility in Canada.	Weak
Laird	B3 Neg	Weak	Strong market positions with technical capabilities that are highly ranked by its customers, a well-diversified geographic footprint, a track record of organic growth and medium-to-high entry barriers protecting the business. Rating constrained by high leverage, potential volatility in EBITA margin, historically high R&D spending to maintain technology leadership and negative FCF generation.	Adequate
Nordex	B3 Neg	Weak	Improved scale, global footprint and competitive portfolio, solid cash position, service business representing around 12% of total revenue, positive prospects for the global wind industry and strong order backlog. Rating constrained by limited product diversification and some geographical concentration in the volatile wind industry, weak operating performance, some degree of uncertainty over the sufficiency of the cost-cutting measures to restore profitability and low pricing power.	Adequate
Norican	B3 Neg	Weak	Strong position in a niche market, sizeable aftermarket revenue, asset-light business and strong liquidity. However, rating constrained by exposure to cyclical industries, high leverage within the rating category, acquired business not performing according to plan and shift from ferrous to aluminium, which could reduce demand for DISA's machines.	Adequate
Schenck	B3 Neg	Weak	Diversified end-customer industries and geographical reach, asset-light business model and flexible cost structure, which help protect margins and FCF generation in a downturn, fairly solid entry barriers and high share of more profitable and typically more resilient aftermarket activities. Rating constrained by relatively small size, significant exposure to cyclical end-markets, highly levered capital structure and weak credit metrics in 2020 amid the coronavirus pandemic and uncertainty around a recovery in 2021.	Adequate
Wittur	B3 Neg	Weak	The rating reflects the limited product offering, a concentrated customer base, high exposure to the Chinese new installation market and high leverage. These credit challenges are balanced by leadership positions in key markets, long-standing relationships with the major elevator manufacturers, exposure to mature markets, which are relatively stable, and positive sector fundamentals.	Adequate
KME	Caa1 Sta	Adequate	Leading position in the niche copper market, good customer diversification, mostly positive FCF, positive exposure to supportive end-user industry trends, and recently completed reorganisation following the acquisition of MKM and the sale of the former brass business. Constrained by relatively small-scale operations and limited track record of structurally improved operating profitability following reorganisation, significantly volatile IFRS profitability and significant off-balance-sheet factoring, which is not disclosed.	Adequate
Arvos	Caa1 Neg	Weak	Expected improvement in the debt maturity profile and liquidity following the completion of the refinancing transaction, strong competitive position in certain niche markets, sizeable aftermarket business. Rating constrained by small scale and significant exposure to cyclical end-markets, history of volatility in operating results and cash flow, highly leveraged capital structure, weak profitability in fiscal 2021 because of the pandemic and the risk of a delay in earnings recovery.	Adequate

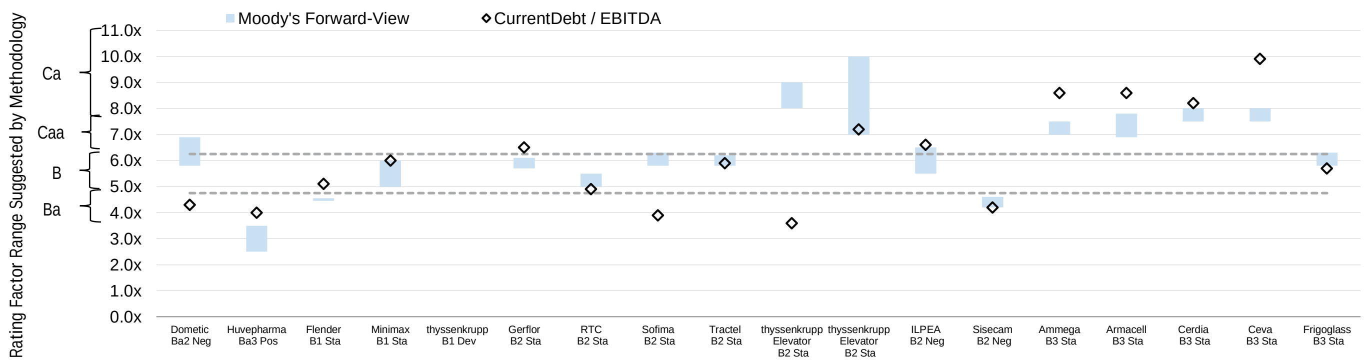
Ferroglobe	Caa1 Neg	Weak	Rating supported by solid position in a consolidated yet competitive industry and vertically integrated business model, which provides some protection from the rising prices of quartz and metallurgical coal. Rating constrained by very weak liquidity and financial metrics, operating performance highly sensitive to volatility in silicon metal prices, resulting in a sharp drop in operating profit in 2016 and again since mid-2018, and cyclical main end-markets, although they are projected to grow faster than global GDP in the long term.	Weak
Mangrove	Caa1 Neg	Weak	Established position in the global heat exchanger market, broad product portfolio, recent expansion into the market for data centre applications, long-standing customer relationships and management's proactive response to weakness in some core end-markets with additional restructuring efforts. Rating constrained by exposure to cyclical end-markets, high financial leverage and expectation of negative FCF until year-end 2021, execution risk around the restructuring and event risk because of the ongoing legal dispute following the restructuring of Galapagos.	Adequate
Novafives	Caa1 Neg	Weak	The order book provides some revenue visibility in the medium term, exposure to different end-markets mitigates demand cyclicality, but only to some extent, leading niche market positions and long-term investment shareholders support strategic development. Rating constrained by lower profitability than peers, ability to generate significant positive FCF dependent on working capital swings, likelihood of a prolonged depressed operating environment.	Adequate
Praesidiad	Caa1 Neg	Weak	Restructuring efforts to improve profitability well underway, solid position in a fragmented perimeter protection market with regional, product and end-market diversification, positioned to benefit from the long-term trend of securing people and assets, and adequate liquidity. Rating constrained by high leverage and persistently negative FCF, the difficulty in returning to revenue growth and improving profitability visibly and sustainably, limited visibility and lumpiness of orders in some of its segments and with some customers, exposure to volatile prices of inputs such as steel and zinc and a time lag in passing on cost increases to customers.	Adequate
VAC	Caa1 Neg	Weak	Good market position in special magnetic materials and components, expectation of long-term growth in end-markets, status as the supplier of core components for its customers' products and good margins as cost initiatives take hold. High leverage, ongoing pressure to lower costs, restructuring and add-backs, small size for the rating category, negative FCF generation and weakening liquidity.	Adequate
Doncasters	Caa2 Neg	Weak	Diversified revenues across a broad range of industries, platforms and customers, and between original equipment and the aftermarket, long-term agreements in aerospace and industrial gas turbines, the company's top three positions in critical long-term programmes and vertical integration through in-house superalloy production, and potential for substantial earnings improvement from operational turnaround and new business wins. Rating constrained by the severe effects of the coronavirus pandemic on the aerospace and automotive markets, high leverage, operational challenges as a result of new product introductions and manufacturing issues, and potential for liquidity pressure over the next 12-18 months.	Weak
Lumileds	Caa3 Neg	Weak	The rating takes into consideration extremely challenging conditions in BBBV's core end-markets, which are expected to be additionally burdened by the impact from the coronavirus pandemic, tight liquidity with high leverage and negative FCF. Credit challenges are balanced by long-standing and entrenched customer relationships, established track record of innovation and concentrated market structure.	Weak

Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

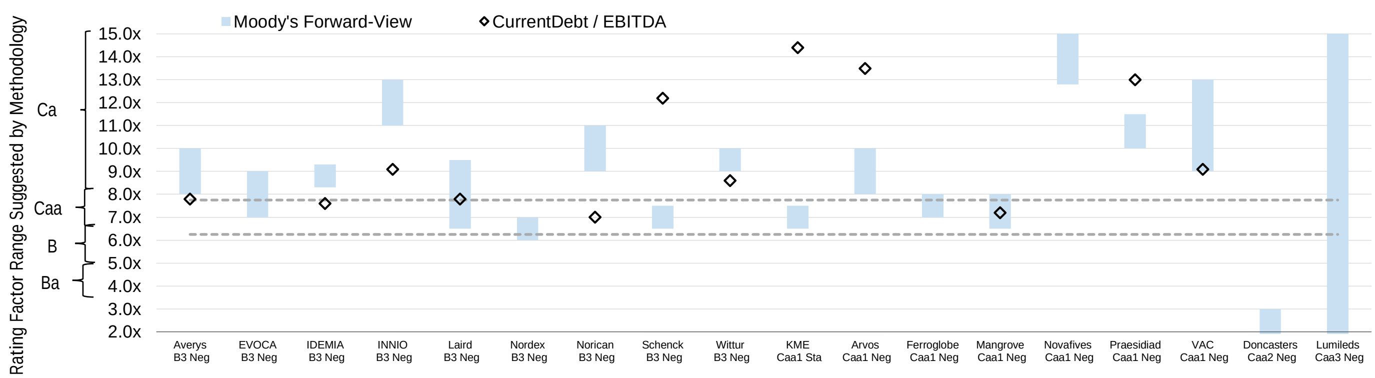
Manufacturing: leverage, interest cover and cash flows

Exhibit 26
Moody's-adjusted debt/EBITDA
For the issuers with Ba-B3 stable CFRs



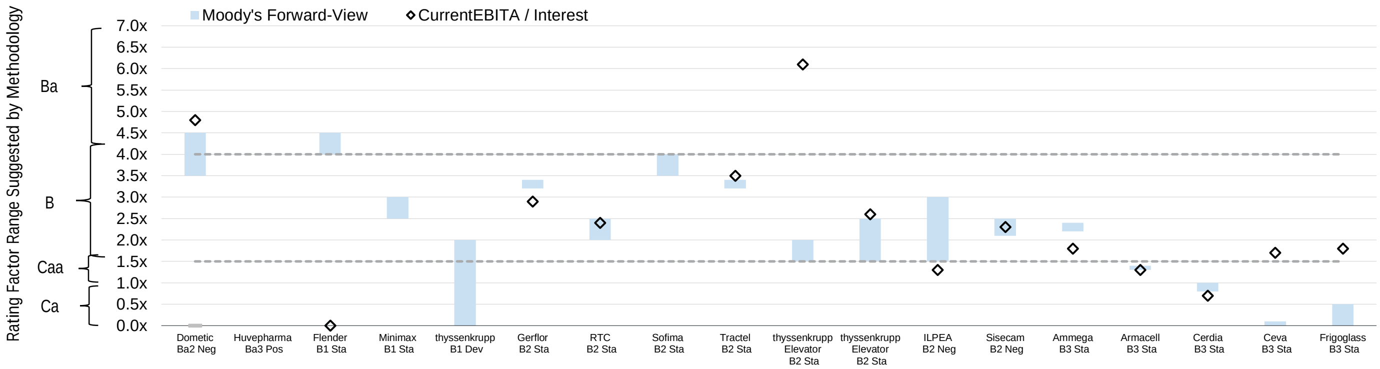
Note: Based on forward view metrics published in latest Credit Opinion report. thyssenkrupp actual leverage is -14.5x and is expected to be around 20.0x.
Source: Moody's Investors Service

Exhibit 27
Moody's-adjusted debt/EBITDA
For the issuers with B3 negative and lower CFRs



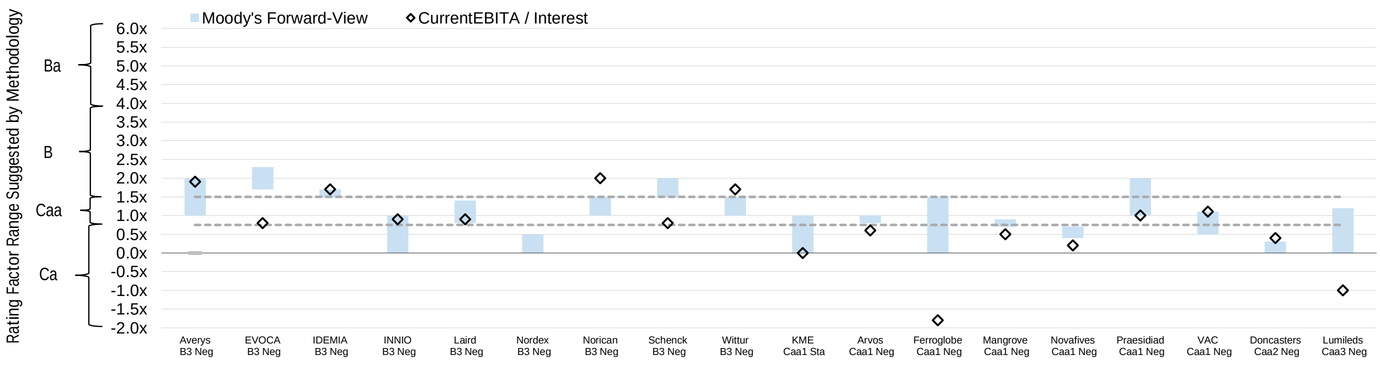
Note: Based on forward view metrics published in latest Credit Opinion report. EVOCA actual leverage is 16.3x; Nordex actual leverage is -5.5x; Ferroglobe actual leverage is -48.0x; Novafives actual leverage is 22.4x; Doncaster actual leverage is 18.0x; Lumileds actual leverage is 39.8x.
Source: Moody's Investors Service

Exhibit 28
Moody's-adjusted EBITA/interest expense
For the issuers with Ba-B3 stable CFRs



Note: Based on forward view metrics published in latest Credit Opinion report. Huvepharma actual EBITA/ interest expenses is 10.6x and expected to increase to 10.0x-20.0x; thyssenkrupp actual EBITA/ interest expense is -3.4x; Sofima actual EBITA/ interest expense is 10.7x.
Source: Moody's Investors Service

Exhibit 29
Moody's-adjusted EBITA/interest expense
For the issuers with B3 negative and lower CFRs

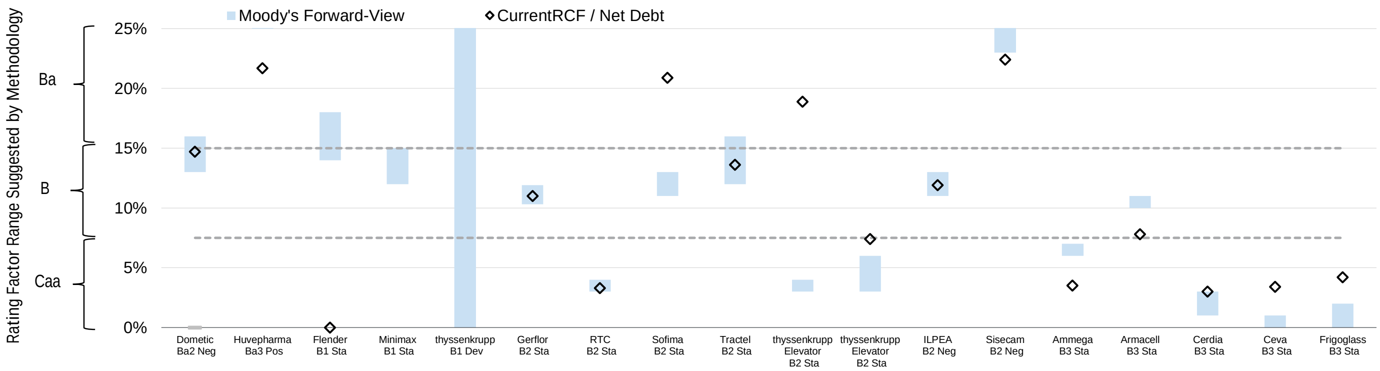


Note: Based on forward view metrics published in latest Credit Opinion report. Nordex actual EBITA/ interest expense is -3.1x.
Source: Moody's Investors Service

Exhibit 30

Moody's-adjusted RCF/net debt

For the issuers with Ba-B3 stable CFRs

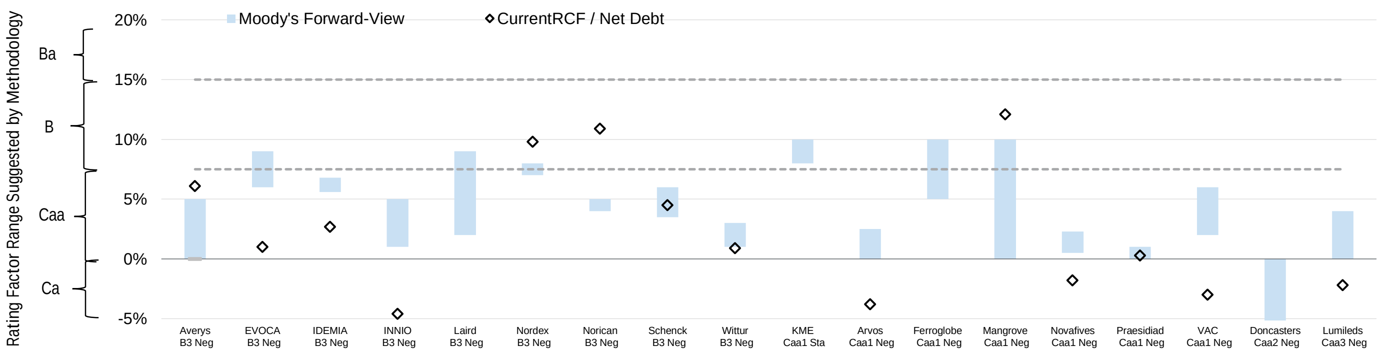


Note: Based on forward view metrics published in latest Credit Opinion report. Huvepharma RCF/net debt is expected to increase to 25.0%-35.0%; thyssenkrupp actual RCF/net debt is -27.0.%.
Source: Moody's Investors Service

Exhibit 31

Moody's-adjusted RCF/net debt

For the issuers with B3 negative and lower CFRs



Note: Based on forward view metrics published in latest Credit Opinion report. Laird actual RCF/net debt is -55.0%; KME actual RCF/net debt is -19.0%; Ferroglobe actual RCF/net is -18%; Doncaster actual RCF/net is -10.0%.
Source: Moody's Investors Service

Global manufacturing companies rating methodology

Exhibit 32

Global manufacturing companies rating methodology scorecard based on Moody's forward-view

For the issuers with Ba-B3 stable CFRs

		Scale	Business Profile	Profitability and Efficiency	Leverage and Coverage				Financial Policy	
Company Name	Actual Rating	Revenue ($bn)	Business Profile	EBITA margin	EBITA / Interest	Debt / EBITDA	RCF / Net Debt	FCF / Debt	Financial Policy	Scorecard Indicated Rating
Dometic	Ba2	1.5 - 1.6	Ba	10% - 11%	3.5x - 4.5x	5.8x - 6.9x	13% - 16%	4% - 7%	Ba	Ba3
Huvepharma	Ba3	0.7 - 0.8	Ba	20% - 25%	10.0x - 20.0x	2.5x - 3.5x	25% - 35%	10% - 15%	Ba	Ba1
Flender	B1	2.6	Ba	8% - 9%	4.0x - 4.5x	4.5x	14% - 18%	4% - 8%	B	Ba3
Minimax	B1	1.9	Ba	9% - 10%	2.5x - 3.0x	5.0x - 6.0x	12% - 15%	4% - 5%	B	B1
thyssenkrupp	B1	35.0 - 38.0	Ba	-2% - 2%	-1.0x - 1.0x	20.0x	-11% - 15%	-15% - -7%	Ba	B1
Gerflor	B2	1.2 - 1.3	B	12% - 12%	3.2x - 3.4x	5.7x - 6.1x	10% - 12%	4% - 5%	B	B1
RTC	B2	1.1 - 1.2	B	6% - 7%	2.0x - 2.5x	5.0x - 5.5x	3% - 4%	-2% - 0%	B	B2
Sofima	B2	1.7	Ba	13% - 15%	3.5x - 4.0x	5.8x - 6.3x	11% - 13%	5% - 7%	B	B1
Tractel	B2	Ca	B	>B	3.2x - 3.4x	5.8x - 6.2x	12% - 16%	5% - 7%	B	B2
thyssenkrupp Elevator	B2	8.8	Baa	11% - 12%	1.5x - 2.0x	8.0x - 9.0x	3% - 4%	1% - 2%	B	Ba3
Delachaux	B2	0.9 - 1.0	Ba	9% - 11%	1.5x - 2.5x	7.0x - 10.0x	3% - 6%	-1% - 1%	B	B2
ILPEA	B2	0.4	Ba	9% - 10%	1.5x - 3.0x	5.5x - 6.5x	11% - 13%	1% - 4%	B	B2
Sisecam	B2	2.5 - 2.8	Baa	15% - 16%	2.1x - 2.5x	4.2x - 4.6x	23% - 27%	-5% - -2%	Baa	Ba1
Ammega	B3	1.0	Ba	13% - 15%	2.2x - 2.4x	7.0x - 7.5x	6% - 7%	0% - 2%	B	B1
Armacell	B3	0.7	Ba	13% - 14%	1.3x - 1.4x	6.9x - 7.8x	10% - 11%	3% - 3%	B	B2
Cerdia	B3	0.4 - 0.5	B	8% - 9%	0.8x - 1.0x	7.5x - 8.0x	1% - 3%	-3% - 0%	B	n/a
Ceva	B3	1.4 - 1.5	Baa	17%	2.1x - 2.2x	7.5x - 8.0x	7% - 8%	-2% - 0%	B	B1
Frigoglass	B3	0.4 - 0.5	B	10% - 11%	1.5x - 2.0x	5.8x - 6.3x	5% - 7%	-3% - 0%	B	B3

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report

Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Exhibit 33

Global manufacturing companies rating methodology scorecard based on Moody's forward-view

For the issuers with B3 negative and lower CFRs

		Scale	Business Profile	Profitability and Efficiency	Leverage and Coverage				Financial Policy	
Company Name	Actual Rating	Revenue ($bn)	Business Profile	EBITA margin	EBITA / Interest	Debt / EBITDA	RCF / Net Debt	FCF / Debt	Financial Policy	Scorecard Indicated Rating
Averys	B3	0.6 - 0.7	B	5% - 8%	1.0x - 2.0x	8.0x - 10.0x	0% - 5%	-2% - 3%	B	B3
EVOCA	B3	0.4 - 0.5	Ba	12% - 15%	1.7x - 2.3x	7.0x - 9.0x	6% - 9%	-1% - 4%	B	B2
IDEMIA	B3	2.5 - 2.6	Ba	7% - 9%	1.5x - 1.7x	8.3x - 9.3x	6% - 7%	-2% - -1%	B	B2
INNIO	B3	1.3 - 1.5	B	3% - 5%	0.0x - 1.0x	11.0x - 13.0x	1% - 5%	-2% - 2%	B	B3
Laird	B3	0.5 - 0.6	Ba	8% - 11%	0.8x - 1.4x	6.5x - 9.5x	2% - 9%	-2% - 4%	B	B3
Nordex	B3	5.6 - 5.8	B	0% - 1%	0.0x - 0.5x	6.0x - 7.0x	7% - 8%	-15% - -10%	B	B2
Norican	B3	0.5 - 0.5	Ba	4% - 6%	1.0x - 1.5x	9.0x - 11.0x	4% - 5%	0% - 1%	B	B3
Schenck	B3	0.8 - 0.9	Ba	9% - 11%	1.5x - 2.0x	6.5x - 7.5x	4% - 6%	3% - 5%	B	B2
Wittur	B3	0.8 - 0.9	Ba	7% - 9%	1.0x - 1.5x	9.0x - 10.0x	1% - 3%	-5% - 0%	B	B2
KME	Caa1	2.3 - 2.5	B	1% - 2%	0.0x - 1.0x	6.5x - 7.5x	8% - 10%	0% - 1%	B	B3
Arvos	Caa1	0.3 - 0.4	B	10% - 13%	0.8x - 1.0x	8.0x - 10.0x	0% - 3%	-2% - -1%	B	Caa1
Ferroglobe	Caa1	1.5 - 1.6	B	-2% - 3%	-0.5x - 1.0x	7.0x - 8.0x	5% - 10%	-1% - 2%	B	B3
Mangrove	Caa1	1.1	B	3% - 4%	0.7x - 0.9x	6.5x - 8.0x	-4% - 6%	-10% - 15%	B	Caa1
Novafives	Caa1	1.6 - 1.7	B	1% - 2%	0.4x - 0.7x	12.8x - 16.7x	1% - 2%	-6% - 0%	B	B3
Praesidiad	Caa1	0.3	B	10% - 11%	1.0x - 2.0x	10.0x - 11.5x	0% - 1%	-4% - -1%	B	Caa1
VAC	Caa1	0.4	B	4% - 8%	0.5x - 1.1x	9.0x - 13.0x	2% - 6%	0% - 3%	B	Caa1
Doncasters	Caa2	0.4	B	3% - 4%	0.3x - 0.6x	9.0x - 12.0x	0% - -6%	-5% - -8%	Caa	Caa2
Lumileds	Caa3	1.0 - 1.1	Ba	-12% - -4%	-0.9x - 0.3x	24.0x - 100.0x	-7% - -3%	-10% - 6%	Caa	Caa1

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report

Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Manufacturing: analytical coverage

Company	CFR entity	Analyst
Laird	AI Ladder (Luxembourg) Subco S.a r.l	Oliver Giani
Doncasters	Alloy Parent Limited	Martin Hallmark
Ammega	Ammega Group B.V.	Nathalie Tuszewski
Arvos	Arvos Midco S.a r.l.	Svitlana Ukrayinets
Cerdia	BCP VII Jade Holdco (Cayman) Ltd	Janko Lukac
Lumileds	Bright Bidco B.V.	Stephan Wulf
Delachaux	Delachaux Group SA	Nathalie Tuszewski
Dometic	Dometic Group AB	Daniel Harlid
EVOCA	EVOCA S.p.A.	Martin Fujerik
Ferroglobe	Ferroglobe PLC	Sven Reinke
Ceva	Financiere Mendel SAS	Lorenzo Re
Frigoglass	Frigoglass SAIC	Stephan Wulf
Gerflor	Hestiafloor 2	Nathalie Tuszewski
Huvepharma	Huvepharma International BV	Lorenzo Re
IDEMIA	IDEMIA Group	Gianni Fabrizio Marchesi
ILPEA	ILPEA Parent, Inc.	Svitlana Ukrayinets
INNIO	INNIO Group Holding GmbH	Oliver Giani
KME	KME SE	Goetz Grossmann
Mangrove	Mangrove LuxCo III S.a r.l.	Svitlana Ukrayinets
Minimax	Minimax Viking GmbH	Svitlana Ukrayinets
Armacell	Neptune Holdco S.a.r.l.	Moritz Melsbach
VAC	New VAC Intermediate Holdings BV	Oliver Giani
Nordex	Nordex SE	Oliver Giani
Norican	Norican Global A/S	Goetz Grossmann
Novafives	Novafives S.A.S.	Oliver Giani
Averys	Optimus BidCo SAS	Oliver Giani
Schenck	Platin 1425. GmbH	Goetz Grossmann
Praesidiad	Praesidiad Group Limited	Tobias Wagner
RTC	Royal Ten Cate	Janko Lukac
Sofima	Sofima Holding S.p.A.	Goetz Grossmann
Thyssenkrupp	thyssenkrupp AG	Goetz Grossmann
Tractel	TI Luxembourg S.A. (Tractel)	Nathalie Tuszewski
Sisecam	Turkiye Sise ve Cam Fabrikalari A.S.	Thomas Le Guay
thyssenkrupp Elevator	Vertical TopCo III GmbH	Goetz Grossmann
Wittur	Wittur International Holding GmbH	Svitlana Ukrayinets
Flender	Zephyr German Holdco GmbH	Daniel Harlid

Moody's Investors Service

Manufacturing: analyst contact details

Analyst	Title	Phone	Email
Daniel Harlid	VP-Senior Analyst	4685-0256-546	Daniel.Harlid@moodys.com
Fabrizio Marchesi	VP-Senior Analyst	4420-7772-113	Fabrizio.Marchesi@moodys.com
Goetz Grossmann	VP-Senior Analyst	4969 7073-0728	Goetz.Grossmann@moodys.com
Janko Lukac	VP-Senior Analyst	4420-7772-110	Janko.Lukac@moodys.com
Lorenzo Re	VP-Senior Analyst	4420-7772-112	Lorenzo.Re@moodys.com
Martin Fujerik	VP-Senior Analyst	4969-7073-0909	Martin.Fujerik@moodys.com
Martin Hallmark	Senior Vice President	4420-7772-1953	Martin.Hallmark@moodys.com
Moritz Melsbach	AVP-Analyst	4420-7772-114	Moritz.Melsbach@moodys.com
Nathalie Tuszewski	AVP-Analyst	4685-1791-262	Nathalie.Tuszewski@moodys.com
Oliver Giani	VP-Senior Analyst	4969-7073-0722	Oliver.Giani@moodys.com
Stephan Wulf	VP-Senior Analyst	4969-7073-0856	Stephan.Wulf@moodys.com
Sven Reinke	Senior Vice President	4420-7772-111	Sven.Reinke@moodys.com
Svitlana Ukrayinets	Analyst	4969-7073-0920	Svitlana.Ukrayinets@moodys.com
Thomas Le Guay	AVP-Analyst	971-423-795-45	Thomas.Leguay@moodys.com
Tobias Wagner	VP-Sr Credit Officer	4420-7772-115	Tobias.Wagner@moodys.com

Manufacturing: related research

Manufacturing - Global: Outlook moves to stable on 2021 economic recovery expectations, 16 September 2020

Leveraged finance: Corporates - US and EMEA:
Show me the money: Liquidity access will dictate survival or default from pandemic, 22 July 2020

Manufacturing - EMEA, Second quarter 2020 newsletter, 30 June 2020

Manufacturing - Global: To understand pandemic's effect, credit analysis goes beyond financial results, 24 June 2020

Manufacturing Methodology, Rating Methodology, 3 March 2020

Packaged goods

Outlook is improving, but some segments remain vulnerable to weak demand

Lorenzo Re, Vice President - Senior Analyst

» **Our industry outlook remains stable.**We expect a recovery in operating profit for packaged goods companies on the back of gradual demand normalisation. However, uncertainty about the global economic recovery and the risk of a prolonged pandemic remain high. Positive news on vaccines will help sustain consumer confidence, which is currently at historical lows. This will support a recovery in demand for the more discretionary or nonessential products, such as beauty products, that have been more disrupted by lockdown measures.

» **Recovery will remain uneven across segments and distribution channels.** The resumption of closures and restrictions on movement in Europe will continue to negatively affect demand for some channels such as food service, out-of-home and travel retail. Companies exposed to disrupted sectors, such as ice-cream maker Froneri International Limited (B1 stable), continue to suffer and will take longer to recover, but the magnitude of their rebound may be greater following plunging sales in 2020 and early 2021. By contrast, companies that generate most of their sales from daily essentials, such as Premier Foods plc (B1 stable) and yoghurt manufacturer FAGE International S.A. (B2 stable) continue to fare well.

» **Growth in e-commerce will accelerate**. Private label manufacturers such as Artemis Midco (UK) Limited (Partner in Pet Food, B2 negative), Cerelia Participation Holding SAS (B3 positive) and PHM SF Dutch Bidco B.V. (Signature Food, B2 stable) will benefit from market share gains, because consumers tend to shift to these cheaper products in periods of economic recession. However, manufacturers such as Cookie Intermediate Holding II SAS (Biscuit International, B3 stable), with high exposure to hard discounters with less developed online delivery capabilities, will suffer from consumers' continued switch to online sales. Conversely, companies with strong direct-to-consumer distribution capabilities, such as beauty product manufacturer Oriflame Holding Ltd (B1 negative), will likely outperform the market.

» **Cost-cutting initiatives will drive profit growth in the sector.** Price pressures will remain strong given the subdued macroeconomic environment and because of the less favourable sales mix for some products due to the shift in demand volumes from out-of-home to at-home consumption. Moreover, companies may need to again increase their marketing and advertising costs after the reduction in 2020 because of less product innovation. Therefore, companies will need to continue to cut costs and increase efficiency to preserve profitability. However, the cost of some key raw materials, such as milk or cereals, is recovering from the low levels of 2020, which will create pockets of cost inflation for some companies such as Partner in Pet Food.

Packaged goods: rating positioning and rationale

Exhibit 34

Company	Rating	Rating Positioning	Rationale	Liquidity
JDE	Ba1 Pos	Strong	The rating reflects the company's strong market position, global scale, relatively good operating margin and solid track record of free cash flow (FCF) generation. It also reflects our expectation that its credit quality will eventually converge with that of its parent JDE Peet's.	Good
JDE Peet's	Ba1 Pos	Strong	The rating reflects good liquidity with strong FCF, clear number two position in coffee distribution, a strong portfolio of brands and good geographical diversification. It also reflects that the pandemic may temporarily disrupt performance and the company's complex capital structure.	Good
Froneri	B1 Sta	Adequate	The rating reflects a sharp increase in leverage following the refinancing and acquisition of Nestlé's US ice cream business, which is only partially offset by improved scale and diversification. The rating also reflects the company's focus on a highly seasonal product, a degree of exposure to food service and a highly competitive though fragmented market.	Adequate
Nomad	B1 Sta	Adequate	The rating is supported by leading market positions in a number of countries and good geographical diversification across Europe. The rating is constrained by exposure to a mature market that demands ongoing innovation to maintain top-line and profitability growth, the presence of much larger retailers and the likelihood expansion through acquisitions might delay any significant reduction in financial leverage.	Good
Ontex	B1 Sta	Adequate	The rating reflects our expectation of modest improvement in operating performance, which continues to be impaired by strong competition and a negative impact from foreign-currency exchange. The rating is supported by good product and geographical diversification.	Adequate
Premier	B1 Sta	Adequate	The rating reflects solid market positions in the UK food market with a well established brands portfolio, which can generate relatively high margins. The rating is constrained by high geographical and customer concentration and exposure to raw materials price volatility.	Adequate
Oriflame	B1 Neg	Weak	The rating reflects good positioning in the global beauty and personal care market, but with some concentration in a few emerging markets. The rating also reflects expected improvement in credit metrics backed by solid operating cash flow.	Good
Cooper-Vemedia	B2 Sta	Adequate	High financial leverage and small size relative to global peers constrain the company's rating. The rating is supported by solid cash flow generation, strong market positions in the fragmented French self-care market and some diversification in European markets.	Good
Fage	B2 Sta	Adequate	The rating reflects major challenges in operating performance because of difficult market conditions, especially in the US. The rating continues to be supported by the strength of the brand and premium positioning, as well as market leadership in core products.	Adequate
Signature Foods	B2 Sta	Adequate	The rating reflects leading market positions in niche product categories across the Benelux region and Poland, a strong portfolio, supportive market fundamentals, a track record of growth across key product categories as well as a track record of positive FCF, and resilience of the business model to the pandemic. The rating is constrained by modest scale and narrow business focus on increasingly mature product categories, limited geographical and product diversification, high leverage and willingness to pursue further acquisitions.	Good
Upffield	B2 Sta	Weak	The rating reflects the company's operating performance and cash flow generation slightly behind our expectations, with financial leverage remaining high and a slower deleveraging profile than anticipated following the Arivia acquisition. The rating is supported by significant scale and strong portfolio of brands, leading global market position and extensive geographic diversification.	Adequate
Flamingo	B2 Neg	Weak	The rating reflects limited product diversification, exposure to weather and crop disease risk, as well as the political risk arising from operating in Kenya and Ethiopia. However, it also reflects a strong market position and degree of vertical integration with the combination of its own production with third-party sourcing, helping to meet demand volatility.	Adequate

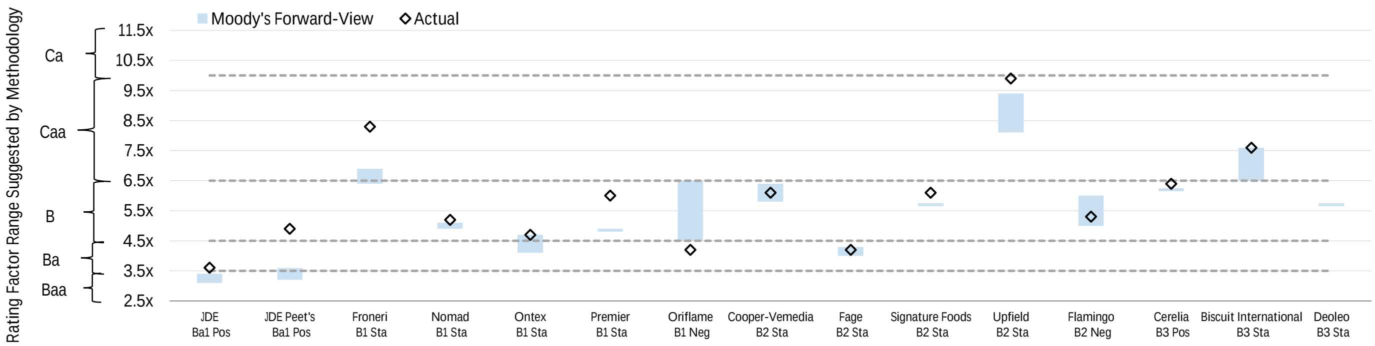
PPF	B2 Neg	Weak	The rating reflects the company's narrow business focus, although with solid positions in some selected markets in Eastern Europe. Moreover, uncertainties around its ablity to improve FCF generation limit its capacity to reduce currently high leverage.	Adequate
Cerelia	B3 Pos	Strong	The rating reflects leading market shares in niche product categories, geographically diversified sales, track record of maintaining long-term relationships with key private-label customers and low production costs. Rating is constrained by the company's high leverage, expected negative FCF on the back of expansionary capital spending and a track record of weak performance in its North American business.	Good
Biscuit International	B3 Sta	Adequate	The rating reflects weak profit in 2020 due to lockdown measures and a number of restructuring costs. The rating is supported by a strong market position in private-label products, a degree of diversification across Europe and expected positive FCF. It also assumes a reduction in financial leverage in 2021.	Adequate
Deoleo	B3 Sta	Adequate	The rating reflects improved cash flow generation capacity following the restructuring of its debt. The rating is limited by exposure to volatility in prices for key raw materials.	Adequate

Note: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

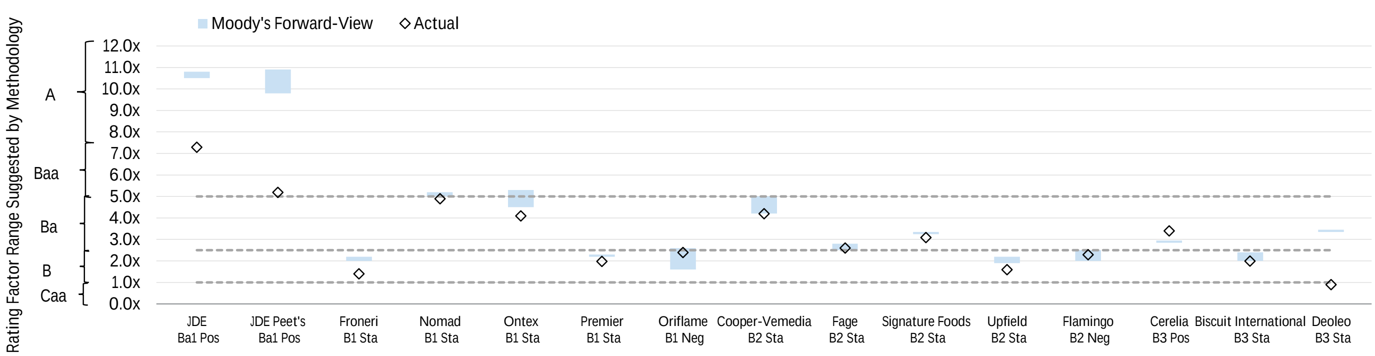
Packaged goods: leverage, interest cover and cash flows

Exhibit 35
Moody's-adjusted debt/EBITDA



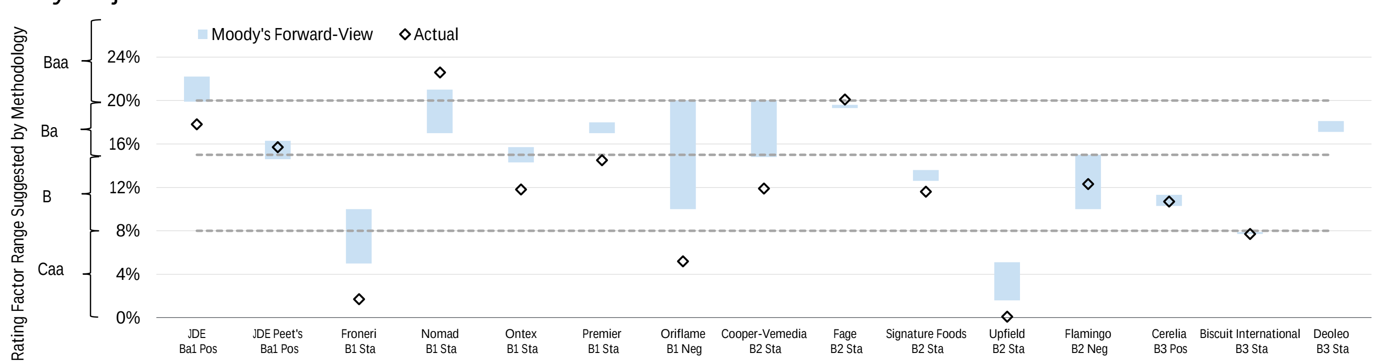
Note: Based on metrics published in Moody's latest Credit Opinion report. Deoleo actual debt/EBITDA is 16.1x.
Source: Moody's Investors Service

Exhibit 36
Moody's-adjusted EBIT/interest expense



Note: Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Exhibit 37
Moody's-adjusted RCF/net debt



Note: Based on metrics published in Moody's latest Credit Opinion report. Deoleo actual RCF/net debt is -3.0%.
Source: Moody's Investors Service

Global packaged goods rating methodology

Exhibit 38

Global packaged goods rating methodology scorecard based on Moody's forward-view

		Scale	Business Profile				Profitability	Financial Policy	Leverage and Coverage			
Company Name	**Actual Rating**	**Revenue ($bn)**	**Geographic Diversification**	**Segmental Diversification**	**Market Position**	**Category Assessment**	**EBITA Margin**	**Financial Policy**	**Debt / EBITDA**	**RCF / Net Debt**	**EBITA / Interest**	**Scorecard indicated rating**
JDE	Ba1	7.0 - 7.2	Ba	B	A	Baa	20%	Ba	3.1x - 3.4x	20% - 22%	10.5x - 10.8x	Baa3
JDE Peet's	Ba1	7.9 - 8.1	Baa	B	A	Baa	19% - 19%	Baa	3.2x - 3.6x	15% - 16%	9.8x - 10.9x	Baa2
Froneri	B1	4.8 - 5.0	Baa	B	Ba	Ba	10% - 12%	Ba	6.4x - 6.9x	5% - 10%	2.0x - 2.2x	Ba2
Nomad	B1	2.7 - 2.8	Ba	B	Ba	Ba	14% - 16%	B	4.9x - 5.1x	17% - 21%	5.0x - 5.2x	Ba3
Ontex	B1	2.4 - 2.5	B	Ba	Ba	Baa	8% - 9%	Ba	4.1x - 4.7x	14% - 16%	4.5x - 5.3x	Ba2
Premier	B1	1.2	Caa	Ba	Ba	Ba	15% - 16%	Ba	4.8x - 4.9x	17% - 18%	2.2x - 2.3x	Ba3
Oriflame	B1	1.3 - 1.5	Ba	Ba	B	Ba	8% - 12%	Ba	4.5x - 6.5x	10% - 20%	1.6x - 2.6x	B1
Cooper-Vemedia	B2	0.5	B	B	Ba	Ba	28% - 28%	B	5.8x - 6.4x	15% - 20%	4.2x - 5.0x	Ba3
Fage	B2	0.5	B	B	B	Ba	13% - 14%	Ba	4.0x - 4.3x	19% - 20%	2.5x - 2.8x	B1
Signature Foods	B2	0.4	Caa	Caa	B	Ba	15%	B	5.7x - 5.7x	13% - 13%	3.3x - 3.3x	B2
Upfield	B2	3.1 - 3.2	Baa	Caa	Ba	B	18% - 21%	B	8.1x - 9.4x	2% - 5%	1.9x - 2.2x	B1
Flamingo	B2	0.7 - 0.8	B	B	B	Ba	7% - 8%	B	5.0x - 6.0x	10% - 15%	2.0x - 2.5x	B2
PPF	B2	Caa	B	Caa	B	Baa	B	B	B - B	B - B	B - B	B3
Cerelia	B3	0.6	Ba	B	B	Ba	11%	B	6.2x - 6.2x	11% - 11%	2.9x - 2.9x	B2
Biscuit International	B3	0.6	Ba	B	B	B	Baa	B	6.5x - 7.6x	8% - 8%	2.0x - 2.4x	B1
Deoleo	B3	0.7	Ba	Caa	Ba	B	6%	B	5.7x - 5.7x	18% - 18%	3.4x - 3.4x	B2

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Packaged goods: analytical coverage

Company	CFR entity	Analyst
Cooper-Vemedia	Alpha BidCo SAS	Lorenzo Re
PPF	Artemis Midco (UK) Limited	Igor Kartavov
Cerelia	Cerelia Participation Holding SAS	Igor Kartavov
Biscuit International	Cookie Intermediate Holding II SAS	Paolo Leschiutta
Deoleo	Deoleo S.A.	Igor Kartavov
Fage	FAGE International S.A.	Lorenzo Re
Flamingo	Flamingo Group International Limited	Egor Nikishin
Froneri	Froneri International Limited	Egor Nikishin
JDE	JACOBS DOUWE EGBERTS Holdings B.V.	Paolo Leschiutta
JDE Peet's	JDE Peet's N.V.	Paolo Leschiutta
Nomad	Nomad Foods Limited	Egor Nikishin
Ontex	Ontex Group NV	Lorenzo Re
Oriflame	Oriflame Holding Ltd	Lorenzo Re
Signature Foods	PHM SF Dutch Bidco B.V.	Igor Kartavov
Premier	Premier Foods plc	Egor Nikishin
Upfield	Sigma Holdco BV	Paolo Leschiutta

Moody's Investors Service

Packaged goods: analyst contact details

Analyst	Title	Phone	Email
Igor Kartavov	Analyst	34-91-768-8304	Igor.Kartavov@moodys.com
Lorenzo Re	VP-Senior Analyst	3902-9148-1123	Lorenzo.Re@moodys.com
Paolo Leschiutta	Senior Vice President	3902-9148-1140	Paolo.Leschiutta@moodys.com
Egor Nikishin	Analyst	4420-7772-8737	Egor.Nikishin@moodys.com

Packaged goods: related research

Consumer Products – EMEA: Fourth quarter 2020 newsletter, 7 January 2021

The State of the European Consumer: December 2020, 9 December 2020

Consumer packaged goods and beverages – Global, Consumer durables and food – US: 2021 outlooks stable on expectations of operating profit rebound in packaged goods, beverages and durables but pandemic remains a risk (Slides), 4 December 2020

Consumer packaged goods — Global: Outlook remains stable reflecting healthy demand for essential products, 20 October 2020

Packaging

Prolonged crisis and cost inflation will be the main challenges within the sector in the first part of the year

Donatella Maso, Vice President - Senior Analyst

- **Packaging volumes will be driven by end-market exposures at least in the first part of the year.** As partial lockdowns, social distancing measures and travel restrictions are likely to remain in place throughout the first quarter of 2021 and potentially beyond, the evolution of demand for packaging will be uneven within the sector and it remains correlated with end-market exposures. Most of the 15 European non-paper packaging companies we rate generate their earnings from food, beverage, personal care and pharmaceutical end-markets. These companies have demonstrated strong resilience to the pandemic and, in certain cases, experienced significant volume growth because of increased at-home consumption, e-commerce activity and health and hygiene focus. However, for companies that produce more discretionary products, such as cosmetics, or serve heavily affected industries such as hospitality and travel, demand will likely remain subdued in the first part of the year.
- **Cost inflation and the phasing out of government support measures may pressure profitability margins.** Rising input and freight costs could result in margin headwinds. While pass-through clauses are the norm in North America, they are less common in Europe and, even when there are contractual pass-through agreements, there is a lag of several months before price changes are passed on to customers. Additionally, some costs, such as energy and freight, are often excluded from these arrangements. Furthermore, government support measures such as wage subsidies will be phased out at some point, resulting in incremental costs.
- **Growing awareness of sustainable packaging across Europe remains credit negative for plastic packagers.** Sustainable packaging is gaining in importance among consumers and customers. At the same time, regulators continue to focus on reducing the use of non-recyclable plastic and improving the circular economy. These trends may result in lower volumes and higher costs through the increased use of recycled materials, higher clean-up charges, new taxes and incremental investments for plastic packaging companies. While sector players have progressively become more engaged on sustainability issues, investment across the supply chain has generally lagged. Conversely, these trends could provide opportunities to sell more value-added products.
- **Consolidation remains a feature of the industry, mainly in the highly fragmented plastic segment.** Acquisitions remain an important source of synergies and cost-cutting opportunities in a sector that is generally mature and highly competitive. Equally, private equity firms and trade buyers are attracted by the stable end-markets supplied by packaging companies, which result in predictable revenue and cash flow. However, aggressively debt-funded acquisitions or dividend recapitalisations can weigh on credit quality. M&A activity over the last 12 months has included the acquisition of GCL Pharma and ISO Arzneiverpackungen Gmbh by Bormioli Pharma S.p.A. (B3 stable), the sale of Alinea by Albea Beauty Holdings Sa.r.l (B2 negative) to Silgan Holdings Inc (Ba2 stable), the acquisition of the Sirap food-packaging business in Italy, Poland and Spain by Faerch Midco ApS (Faerch, B3 stable), and the announced acquisition of Faerch by AP Moeller Holdings.
- **Liquidity remains adequate for the sector.** Liquidity in the sector is adequate considering the levels of cash and cash equivalents, committed and unused bank facilities and access to factoring programmes for near-term needs. Overall, there is limited refinancing risk for the cohort. The debt maturities are managed beyond 2022.

Exhibit 39
Packaging: rating positioning and rationale

Company	Rating	Rating Positioning	Rationale	Liquidity
Canpack	Ba2 Sta	Adequate	Leading market positions across its four divisions, above-industry-average historical growth and moderate leverage, counterbalanced by some product concentration, exposure to fluctuations in input prices and currencies, and negative free cash flow (FCF) until 2022.	Good
SIG	Ba2 Sta	Adequate	Stable business supported by a consolidated market, entrenched positions with large customers and large installed base of filling machines supplied under long-term contracts, global footprint in terms of revenue and expectation of good FCF after interest, capex and dividends. Constrained by concentration of revenue in one activity, potential volatility in raw material prices and a challenging growth environment in core markets.	Good
Verallia	Ba3 Pos	Strong	Solid profitability, focus on value-added solutions, reducing substitution risk, and diversified portfolio of food and beverage customers, offset by exposure to low-growth end-markets, the risk of temporary margin compression, exposure to currency headwinds and political risk, and uncertainty over the impact of the second wave of the coronavirus pandemic.	Good
Taghleef	Ba3 Sta	Adequate	Good market positions, geographical reach and track record of steady performance, counterbalanced by strong focus on a specific sub-segment of the packaging market and exposure to raw material price volatility while operating in a competitive market with a degree of commoditisation.	Good
Weener Plastics	B1 Sta	Weak	Solid profitability in a competitive trading environment, diversified geographic profile despite the size of the business and positive FCF expectations, counterbalanced by exposure to rising raw material prices as well as currencies, risk of debt-funded acquisitions, and limited scale in a highly fragmented and competitive industry, with some customer concentration.	Good
Guala	B1 Neg	Weak	Market-leading position in the niche segment of safety closures and good geographic diversity, but constrained by small size, high financial leverage and ongoing exposure to raw material price and currency movements	Adequate
Albea	B2 Neg	Weak	Leading position in the global beauty personal care packaging industry with long-standing customer relationships and improved liquidity following the disposal of Alinea, counterbalanced by high leverage, weak cash flow and high customer concentration in a competitive trading environment.	Good
Paccor	B2 Neg	Weak	Leading pan-European rigid plastic converter with a well-invested asset base and a moderately diversified customer base, constrained by high financial leverage and exposure to volatile raw material and input prices.	Adequate
Ardagh	B3 Sta	Adequate	Strong market positions in the core US and European markets and Brazil, and focus on less cyclical but low-growth end markets. Some customer concentration, weak FCF, high leverage and an aggressive financial profile.	Good
Bormioli Pharma	B3 Sta	Adequate	Established packaging manufacturer for the pharmaceutical industry in Italy and Western Europe with a moderately diversified and sticky customer base, offset by small scale, high leverage and historic negative FCF due to significant investments.	Adequate
Faerch	B3 Sta	Adequate	Solid profitability because of high automation of facilities and customisation with customers, as well as a track record of passing through cost inflation, offset by limited product offering, high leverage, a track record of aggressive financial policy, raw material cost inflation and currency effects.	Adequate
Klöckner (KP)	B3 Sta	Adequate	Large and diversified business, focused on less cyclical markets, and improving performance. Still high leverage following refinancing, ongoing challenge to maintain pricing discipline.	Good
Trivium	B3 Sta	Weak	Leading market position in the non-beverage can metal packaging industry, good size and broad and well-invested geographical footprint, counterbalanced by high leverage, pricing pressure on commodity-like products, customer concentration, presence in low-growth and competitive end-markets and degree of underperformance since the rating was assigned.	Adequate
Axilone	B3 Neg	Weak	Track record of growth and positive FCF on the back of contract wins and rebuy orders, good margins and cost-competitive offering, constrained by limited scale, focused product portfolio and manufacturing footprint with a concentrated customer base.	Adequate
Schoeller	B3 Neg	Weak	Leading market position in the plastic RTP sector in Europe and degree of geographical and end-market diversity partially mitigate industry cyclicality, high leverage, historical negative FCF and some client concentration.	Adequate

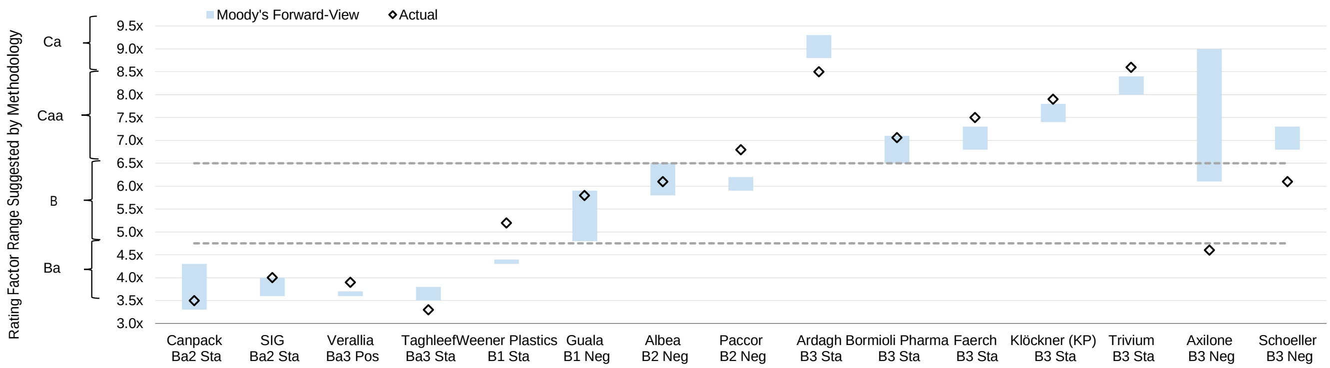
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

Packaging: leverage, interest cover and cash flows

Exhibit 40

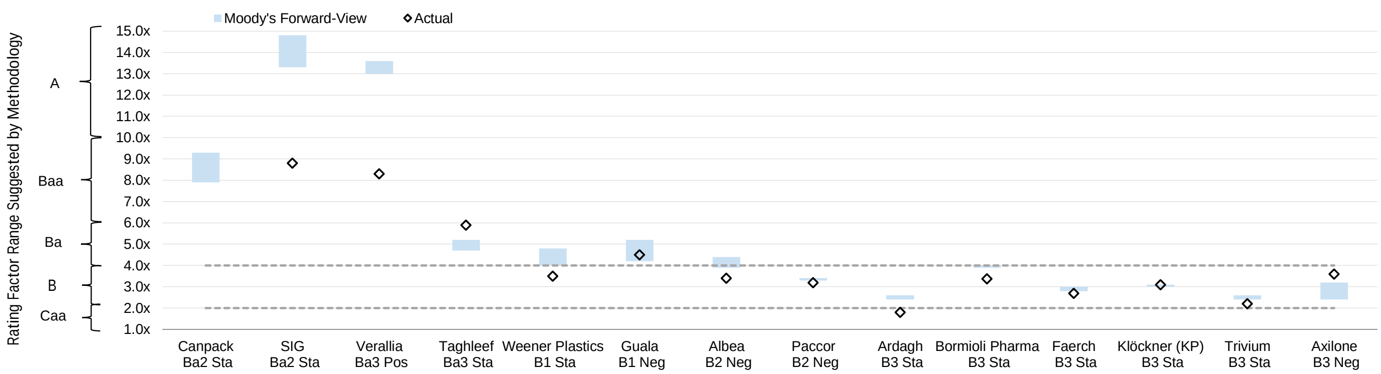
Moody's-adjusted debt/EBITDA



Note: Based on metrics published in latest Credit Opinion report and latest Moody's estimates.
Source: Moody's Investors Service

Exhibit 41

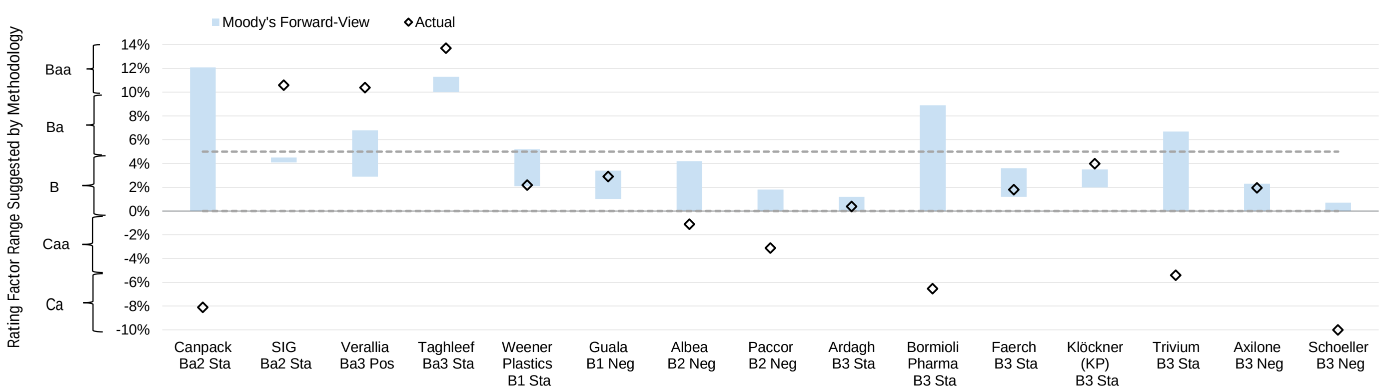
Moody's-adjusted EBITDA/interest expense



Note: Based on metrics published in latest Credit Opinion report and latest Moody's estimates. Canpack's actual EBITDA/Interest expense is equal to 17.9x.
Source: Moody's Investors Service

Exhibit 42

Moody's-adjusted FCF/debt



Note: Based on Moody's Financial Metrics, pro forma metrics and Moody's estimates.
Source: Moody's Investors Service

Packaging manufacturers rating methodology

Exhibit 43

Packaging manufacturers rating methodology scorecard based on Moody's forward-view

		Scale	Business Profile		Financial Policy	Profitability and Efficiency	Leverage and Coverage			
Company Name	Actual Rating	Revenue ($bn)	Competitive position / Switching Cost	Product Strength and Differentiation	Financial Policy	EBITDA Margin	FCF / Debt	Debt / EBITDA	EBITDA / Interest	Scorecard indicated rating
Canpack	Ba2	2.3	Ba	B	Ba	15% - 17%	-13% - -1%	3.3x - 4.3x	7.9x - 9.3x	Ba2
SIG	Ba2	2.1 - 2.3	Baa	Ba	Ba	24% - 27%	4% - 5%	3.6x - 4.0x	13.3x - 14.8x	Ba1
Verallia	Ba3	2.9 - 3.0	B	Ba	Ba	23% - 24%	3% - 7%	3.6x - 3.7x	13.0x - 13.6x	Ba2
Taghleef	Ba3	0.9 - 1.0	B	B	Ba	12% - 13%	10% - 11%	3.5x - 3.8x	4.7x - 5.2x	B1
Weener Plastics	B1	0.5	B	Ba	B	21% - 21%	2% - 5%	4.3x - 4.4x	4.0x - 4.8x	B1
Guala	B1	0.7	Ba	Ba	B	17% - 19%	1% - 3%	4.8x - 5.9x	4.2x - 5.2x	B1
Albea	B2	1.4 - 1.5	B	Ba	B	14% - 14%	-3% - 1%	5.8x - 6.5x	3.9x - 4.4x	B2
Paccor	B2	0.6 - 0.7	B	B	B	14% - 15%	-1% - 1%	5.9x - 6.2x	3.3x - 3.4x	B3
Ardagh	B3	6.2 - 6.6	Ba	B	B	17% - 17%	0% - 1%	8.8x - 9.3x	2.4x - 2.6x	B2
Bormioli Pharma	B3	0.3	Ba	B	B	21% - 22%	-8% - 1%	6.5x - 7.1x	3.9x - 4.0x	B3
Faerch	B3	0.5	Ba	B	B	25% - 25%	1% - 4%	6.8x - 7.3x	2.8x - 3.0x	B2
Klöckner (KP)	B3	2.0 - 2.1	Ba	B	Caa	16% - 16%	2% - 4%	7.4x - 7.8x	3.0x - 3.1x	B2
Trivium	B3	2.6 - 2.7	Ba	B	B	15% - 16%	-5% - 1%	8.0x - 8.4x	2.4x - 2.6x	B2
Axilone	B3	0.2 - 0.2	B	Ba	B	28% - 30%	0% - 2%	6.1x - 9.0x	2.4x - 3.2x	B1
Schoeller	B3	0.6	B	B	B	12% - 12%	-4% - -3%	6.8x - 7.3x	2.4x - 2.7x	B3

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Scorecard based on latest methodology update as of September 2020.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Packaging: analytical coverage

Company	CFR entity	Analyst
Albea	Albea Beauty Holdings S.a r.l.	Donatella Maso
Ardagh	ARD Finance S.A.	Donatella Maso
Axilone	CCP Lux Holding S.a.r.l.	Donatella Maso
Bormioli Pharma	Bormioli Pharma S.p.A.	Donatella Maso
Canpack	CANPACK S.A.	Donatella Maso
Faerch	Faerch Midco ApS	Donatella Maso
Guala	Guala Closures S.p.A.	Donatella Maso
Klöckner (KP)	Kleopatra Holdings 2 S.C.A	Tobias Wagner
Paccor	PACCOR Holdings GmbH	Donatella Maso
Schoeller	Schoeller Packaging B.V.	Donatella Maso
SIG	SIG Combibloc Group AG	Maria Maslovsky
Taghleef	Taghleef Industries Topco Limited	Maria Maslovsky
Trivium	Trivium Packaging B.V.	Donatella Maso
Verallia	Verallia S.A.	Donatella Maso
Weener Plastics	Weener Plastics Holding BV	Donatella Maso

Moody's Investors Service

Packaging: analyst contact details

Analyst	Title	Phone	Email
Donatella Maso	VP-Senior Analyst	3902-9148-1121	Donatella.Maso@moodys.com
Tobias Wagner	VP-Sr Credit Officer	4420-7772-5308	Tobias.Wagner@moodys.com
Maria Maslovsky	VP-Senior Analyst	4420-7772-5502	Maria.Maslovsky@moodys.com

Packaging: related research

Faerch Midco ApS: Acquisition by A.P. Møller Holding could be credit positive but future capital structure is unknown, 17 December 2020

Update Industry Methodology: Packaging Manufacturers: Metal, Glass and Plastic Containers Methodology, 2 September 2020

Packaging – Europe: Sector is less susceptible, but not immune, to coronavirus disruptions, 5 June 2020

Packaging and consumer goods – Europe Impact of sustainability targets, regulation greater for packaging manufacturers, 28 April 2020

Albéa Beauty Holdings S.ar.l: Sale of dispensing business weakens business profile but final credit impact depends on use of proceeds, 5 February 2020

Pharmaceuticals

Downside risk to 2021 forecasts, but credit quality largely intact in the face of the pandemic

Frederic Duranson, Assistant Vice President - Analyst

» **The essential nature and general availability of pharmaceutical products have supported volumes throughout the pandemic.** As such, operating performance in the sector has remained relatively resilient to volume declines. However, the renewal or continuation of lockdowns and social distancing measures tends to lower patient visits and elective procedures. The adverse impact on operating performance continues to vary by segment and geography. The most diversified companies or those with exposure to countries where healthcare capacity has been greater, such as Germany, will fare better. Conversely, companies with greatest exposure to the UK bear the most downside risk. Product segments where treatments can be deferred or require primary care physician visits (i.e. to a general practitioner) and possibly diagnostic tests, such as dermatology and women's health, remain most at risk. This is also the case for drug sales linked to elective procedures or acute care. Chief examples include IWH UK Finco Limited (Theramex, B3 stable) and Antigua Bidco Limited (Atnahs, B2 stable) in women's health, Sunshine Luxembourg VII SARL (Galderma, B3 stable) and Almirall, S.A. (Ba3 stable) in dermatology, and Curium Bidco S.a r.l. (Curium, B3 stable), which produces radiopharmaceuticals for nuclear imaging. Theramex was the only negative rating action related to the pandemic in our European speculative-grade pharmaceuticals portfolio in 2020.

» **We estimate that around half of companies will still have grown revenue and EBITDA organically in 2020.** They include generic drugs providers Hikma Pharmaceuticals PLC (Ba1 stable), AI Sirona (Luxembourg) Acquisition S.a.r.l. (Zentiva, B3 stable) and Diocle S.p.A. (Doc Generici, B2 stable), benefitting from a combination of portfolio diversity, product accessibility and increased generics penetration, though this leads to continued price erosion. Nidda BondCo GmbH (Stada, B3 stable) also benefits from geographic diversification, its presence in over-the-counter markets and continued cost savings as a result of acquisitions. However, the pandemic's likely continued adverse impact on operating performance in 2021 increases the downside risk to our expectation for stronger growth this year compared with historical levels. Companies that do not grow organically in any year are those focused on mature drugs whose volumes are in decline, such as ADVANZ PHARMA Corp. Limited (B3 stable), Atnahs and Cheplapharm Arzneimittel GmbH (B2 negative).

» **Speculative-grade companies have been able to defend their margins rather successfully in the pandemic** because many have a high proportion of variable costs or operate asset-light models. Cash flow generation remains solid for most companies and liquidity at least adequate. Working capital consumption is generally not having a material adverse effect on cash flows because receivables collection has remained on track, compensating for somewhat higher inventory levels to maintain safety stocks in the event of coronavirus- or Brexit-related supply chain disruption.

» **Acquisitions will continue to supplement organic growth, likely aided by debt funding despite healthy cash flows.** We expect most companies in our European high-yield pharma portfolio will be acquisitive, particularly Stada and Zentiva, which have acquisitive track records, as well as Cheplapharm, Atnahs and ADVANZ, whose business model relies on the acquisition of commercial rights to mature drugs, often debt-funded, to offset organic regression in EBITDA. Ongoing divestments of mature and non-core assets by large pharma companies will continue to provide acquisition targets as M&A remains a key feature of companies' growth strategy. We also expect continued consolidation in the European generics landscape.

Pharmaceuticals: rating positioning and rationale

Exhibit 45

Company	Rating	Rating Positioning	Rationale	Liquidity
Hikma	Ba1 Sta	Strong	The rating is supported by the company's good performance in 2018-20 in the face of pandemic and price pressures (particularly in the US noninjectable market), good product pipeline and strong credit metrics as a result of its conservative balance sheet structure. These factors are balanced against its relatively small scale, with revenue of $2.2 billion and somewhat lower margins compared with generics peers, reflecting a degree of commoditisation in the portfolio; high business risks in the generics industry; and compliance risks stemming from manufacturing complexity, particularly in Injectables.	Good
Almirall	Ba3 Sta	Adequate	The rating reflects the company's robust credit ratios, its solid pipeline, good sales prospects for Lebrikizumab and good cash flow generation. It also reflects its small size, limiting economies of scale and increasing earnings volatility; high geographical concentration in Europe; substantial exposure to dermatology, a therapeutic area significantly affected by the coronavirus pandemic; and some event risk related to potential acquisitions.	Adequate
Doc Generici	B2 Sta	Strong	The rating reflects the company's strong positioning in the Italian retail market, overall high barriers to entry, a broad product portfolio across several therapeutic categories and products, strong earnings and free cash flow (FCF) generation, and limited exposure to execution risk related to acquisitions in the Italian generics domestic market. The rating is constrained by the company's limited geographic diversification and scale, its asset-light model and high leverage, with deleveraging dependent on earnings growth.	Good
Atnahs	B2 Sta	Weak	The rating reflects the company's good diversification by geography and therapeutic area, as well as its asset-light business model, resulting in high EBITDA margins and solid FCF generation. The rating is constrained by its levered capital structure, relatively small overall size and product portfolio, limited track record of operating its current portfolio of drugs, and a continued organic decline in sales and EBITDA, triggering the need for acquisitions.	Adequate
Rossini/ Recordati	B2 Sta	Weak	The rating is supported by the company's strong positioning in the Italian retail market, high barriers to entry, a broad product portfolio and strong cash flow generation. It is constrained by its limited scale and lack of geographic diversification, its asset-light structure, some uncertainty and risks related to the ongoing liberalisation of the Italian pharmacy market, high leverage and a covenant-lite structure.	Adequate
Cheplapharm	B2 Neg	Weak	The rating is supported by Cheplapharm's good operating performance; growing product, therapeutic and geographical diversity following several product acquisitions in recent years; and track record of timely transfers of marketing authorisations from pharmaceutical companies for products acquired so far. The rating is constrained by the company's aggressive financial policy, a structural earnings decline in its existing off-patent product portfolio, and its relatively short track record of working with well-recognised pharmaceutical companies.	Adequate
Advanz	B3 Sta	Adequate	The rating is constrained by Advanz's declining revenue and EBITDA organically, high leverage, and a degree of geographic concentration in the UK, where pricing pressure is intense and the group is subject to legal proceedings relating to the potential infringement of competition laws, an ESG risk. The rating benefits from Advanz's good product and therapeutic diversity, broad geographic presence and an asset-light business model, leading to solid cash generation (before acquisitions).	Good
Curium	B3 Sta	Adequate	The rating mainly reflects very high leverage, social risks, some environmental risks and governance considerations such as the risk of slower deleveraging because of potential debt-funded acquisitions. It is supported by the growing market for diagnostic radiopharmaceuticals in which the group holds a solid share, the group's scale and vertical integration, high barriers to entry, the degree of revenue predictability stemming from long-term contracts, and a track record of positive FCF generation.	Adequate

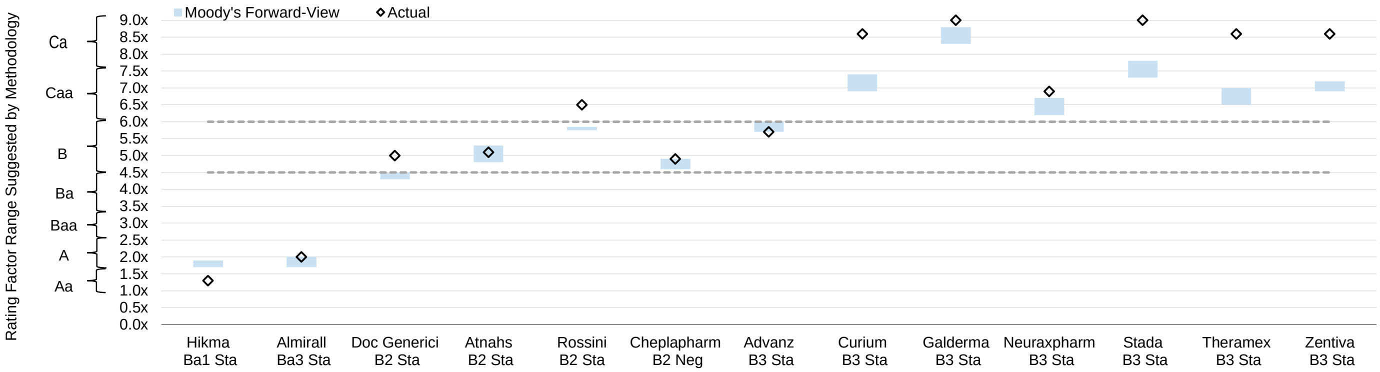
Galderma	B3 Sta	Adequate	The rating is constrained by very high leverage, exacerbated by the impact of the pandemic; the group's limited consolidated financial history and limited cash flow generation; sales concentration in its top four products of over 60%; looming loss of exclusivity and generics entry, and US pricing pressure in prescription drugs. Execution risks on the pipeline also remain high, leading to rising R&D expenses. The rating is supported by good growth potential, supported by the group's global footprint, solid position in the aesthetics market and potential for further expansion in consumer brands.	Adequate
Stada	B3 Sta	Adequate	The rating incorporates the industry's steady growth, driven by high volumes; the group's diversified small-molecule generics portfolio and good geographical split across key European generics markets; its strong over-the-counter brand portfolio, with leading market positions across various therapeutic areas and geographies; and improving profitability and positive FCF. The rating also reflects the group's highly leveraged capital structure, the relatively commoditised nature of its generics portfolio, continued price erosion in the industry, the group's exposure to foreign-currency fluctuations, its relatively small size among the European and global pharmaceutical companies we rate, and the potential for ongoing M&A activity.	Very Good
Theramex	B3 Sta	Adequate	The rating mainly reflects a lack of organic growth, including as a result of the pandemic, and an absence of FCF generation, resulting in very high leverage. It is also constrained by Theramex's limited scale, some business concentration, as illustrated by its exposure to just one segment, and the risk of supply chain shortages because of its asset-light model. The rating is supported by the relatively defensive nature of the company's product portfolio thanks to modest patent, pipeline and pricing risk. Theramex also has relatively high profitability.	Adequate
Neuraxpharm	B3 Sta	Adequate	The rating is supported by Neuraxpharm's strong performance over the past 18 months; attractive product pipeline; well-balanced geographical diversification across Europe with the potential to enter new markets; good profitability margins and solid liquidity, which provides an ample liquidity buffer. The rating is constrained by high leverage following Neuraxpharm's debt refinancing; the company's high business concentration in the central nervous system segment; its overall moderate size; and some degree of acquisition-related event risk because of the company's external growth strategy.	Good
Zentiva	B3 Sta	Adequate	The rating reflects Zentiva's highly leveraged capital structure and aggressive M&A policy, the commoditised nature of its generics portfolio, execution and integration risks related to recent and potential future acquisitions, and the company's relatively limited geographical diversification and overall modest scale compared with Moody's-rated European and global pharmaceutical peers. The rating also reflects its improving operating performance, good expected FCF generation, strong market position in most of the markets in which it operates and diverse molecule portfolio, and good coverage and product launch for small molecules.	Adequate

Note: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

Pharmaceuticals: leverage and cash flow coverage of debt

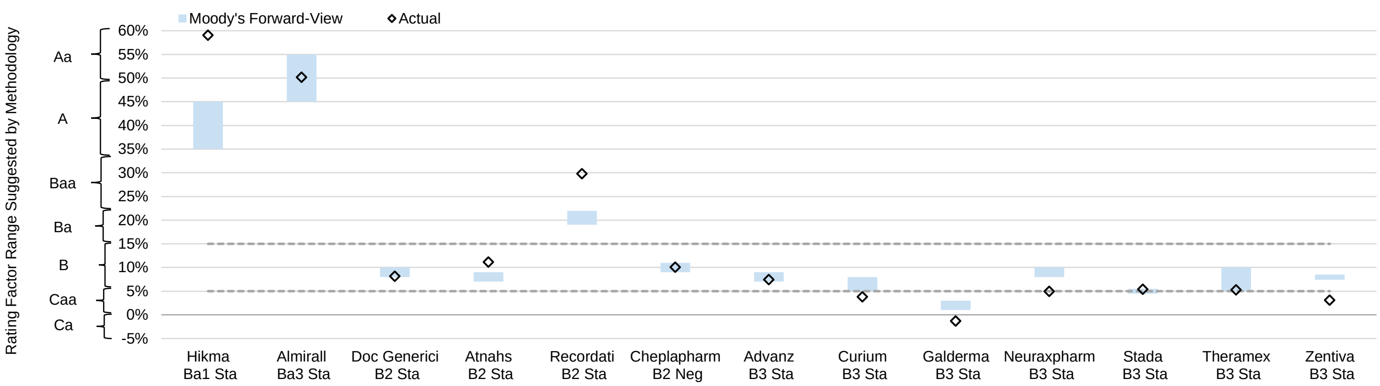
Exhibit 46
Moody's-adjusted debt/EBITDA



Note: Based on metrics published in the latest Credit Opinion on moodys.com; Rossini represents a proportionally consolidated leverage.
Source: Moody's Investors Service

Our pharmaceuticals methodology does not contain interest cover metrics, so we present cash flow coverage of debt below based on adjusted cash flow from operations, which is stated after interest paid but before capex and dividends. We view speculative-grade pharma issuers' ability to cover their interest charges as generally adequate, even for the most levered companies in the B3 category, whose cash generation is limited by high interest payments.

Exhibit 47
Moody's-adjusted cash flow from operations/debt



Note: Based on metrics published in latest Credit Opinion on moodys.com; Cash flow coverage of debt not available for Rossini hence it is shown at the level of Recordati.
Source: Moody's Investors Service

Pharmaceutical industry rating methodology

Exhibit 48

Pharmaceutical industry rating methodology scorecard based on Moody's forward-view

		Business Profile				Scale	Leverage and Coverage			Financial Policy	
Company Name	**Actual Rating**	**Product and Therapeutic Diversity**	**Geographic Diversity**	**Patent Exposures**	**Pipeline quality**	**Revenue ($bn)**	**Debt / EBITDA**	**CFO / Debt**	**Pharmaceutical Cash Coverage of Debt**	**Financial Policy**	**Scorecard indicated rating**
Hikma	Ba1	Ba	Baa	Baa	Ba	2.3 - 2.4	1.7x - 1.9x	35% - 45%	45% - 60%	Baa	Baa3
Almirall	Ba3	Ba	B	A	Ba	1.0 - 1.1	1.7x - 2.0x	45% - 55%	25% - 30%	Baa	Ba1
Doc Generici	B2	Ba	Ca	Baa	Ba	0.3 - 0.3	4.3x - 4.5x	8% - 10%	15% - 18%	B	B2
Atnahs	B2	B	Baa	Baa	Caa	0.3 - 0.3	4.8x - 5.3x	7% - 9%	3% - 6%	B	B2-B3
Recordati	B2	Baa	Ba	Baa	B	1.7 - 1.7	5.8x - 5.8x	19% - 22%	10% - 12%	B	Ba3
Cheplapharm	B2	Ba	Baa	Baa	Caa	1.1 - 1.1	4.6x - 4.9x	9% - 11%	12% - 16%	B	B1
Advanz	B3	Baa	B	B	Caa	0.5 - 0.5	5.7x - 6.0x	7% - 9%	12% - 14%	B	B2
Curium	B3	Ba	Baa	Ba	Ba	0.7 - 0.9	6.9x - 7.4x	5% - 8%	1% - 2%	B	B2
Galderma	B3	Ba	Ba	B	B	2.8 - 2.8	8.3x - 8.8x	1% - 3%	3% - 5%	Caa	B2
Neuraxpharm	B3	Ba	B	Ba	B	0.4 - 0.4	6.2x - 6.7x	8% - 10%	8% - 15%	B	B3
Stada	B3	Ba	B	Ba	Ba	3.4 - 3.5	7.3x - 7.8x	5% - 6%	17% - 19%	B	B1
Theramex	B3	Ba	Ba	B	Caa	0.3 - 0.3	6.5x - 7.0x	5% - 10%	5% - 10%	B	B3
Zentiva	B3	Ba	B	Ba	Ba	1.3 - 1.4	6.9x - 7.2x	7% - 9%	9% - 12%	B	B2

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report.

Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Pharmaceuticals: analytical coverage

Company	CFR entity	Analyst
Advanz	ADVANZ PHARMA Corp. Limited	Frederic Duranson
Almirall	Almirall, S.A.	Marie Fischer-Sabatie
Atnahs	Antigua Bidco Limited	Frederic Duranson
Neuraxpharm	Cerebro HoldCo GmbH	Gilberto Ramos Sotelo
Cheplapharm	Cheplapharm Arzneimittel GmbH	Marie Fischer-Sabatie
Curium	Curium Bidco S.a.r.l	Frederic Duranson
Doc Generici	Diocle S.p.A.	Gilberto Ramos Sotelo
Galderma	Sunshine Luxembourg VII SARL	Frederic Duranson
Hikma	Hikma Pharmaceuticals PLC	Frederic Duranson
Recordati	Rossini S.a r.l	Marie Fischer-Sabatie
Stada	Nidda BondCo GmbH	Gilberto Ramos Sotelo
Theramex	IWH UK Finco Limited	Frederic Duranson
Zentiva	AI Sirona (Luxembourg) Acquisition S.a.r.l.	Gilberto Ramos Sotelo

Moody's Investors Service

Pharmaceuticals: analyst contact details

Analyst	Title	Phone	Email
Frederic Duranson	AVP-Analyst	4420-7772-1950	Frederic.Duranson@moodys.com
Marie Fischer-Sabatie	Senior Vice President	33-1-5330-3391	Marie.Fischer-Sabatie@moodys.com
Gilberto Ramos	Analyst	33-1-5330-3370	Gilberto.Ramos@moodys.com

Pharmaceutical: related research

Pharmaceuticals & Healthcare – EMEA: Fourth quarter 2020 newsletter, 11 January 2021

Pharmaceuticals - Global: Outlook: Going positive as COVID-19 vaccines and treatments propel growth above 4%, 7 December 2020

Branded Pharmaceuticals - Europe: Q1 results boost from coronavirus will reverse in the rest of 2020, 11 May 2020

Pharmaceutical Industry Rating Methodology, 21 June 2017

Retail and Apparel

Mixed impact of pandemic on retailers' credit quality; prospects vary by segment but margins likely to remain under pressure due to high competition as long-term shift online will persist

David Beadle, Vice President - Senior Credit Officer

» **Prospects for nonfood retailers, particularly in apparel, remain challenging even as vaccine rollout provides hope for a return to normality.** Last year was characterised by high-profile failures and debt restructurings. Despite adjustments to their capital structures, companies like Missouri Topco Limited (Matalan, Caa1 negative), Takko Fashion S.a r.l. (Caa2 stable) and Helix Holdco S.A. (Hema, Caa2 Stable) remain vulnerable to further lockdown restrictions and, moreover, the possibility of soft demand due to weak economic conditions. However, some segments of specialty retail have proven resilient during the pandemic, with consumers' increased focus on their home environments and loved ones benefiting the credit quality of issuers such as Maxeda DIY Holdings B.V. (B2 stable), Mobilux 2 SAS (BUT, B2 stable) and Goldstory SAS (THOM, B2 stable), despite periodic lockdown restrictions.

» **Grocers face the challenge of sustaining credit quality as demand normalises**. Sales of grocers like Iceland VLNCo Limited (B2 stable) and Picard Bondco S.A. (B3 stable) have benefited from coronavirus-related restrictions on normal working and socialising habits, boosting demand for consumption at home, a credit positive. The frozen-food focus of these issuers has been particularly beneficial. However, when consumption gradually returns to more normal patterns, competition will be intense in the sector as grocers seek to maximise retention of higher spending by customers, and this could weigh on margins.

» **Online shopping surge and change in consumer habits force retailers to adapt.** For the past several years, online growth has been outpacing retail store sales growth. Stay-at-home orders, which forced most nonessential retailers to close for months, have proved a fillip for online specialists like German fashion retailer PrestigeBidCo GmbH (Schustermann & Borenstein, B2 stable) and the UK's THG Operations Holdings Limited (The Hut Group, B1 positive) and The Very Group Limited (B3 stable). Traditional store-focused retailers will be forced to find efficiencies and cost reductions to offset the incremental infrastructure to support expanding online demand and lower online margins.

» **Increasing customer scrutiny over environmental, social and governance considerations will drive transformation.** The pandemic has accelerated some structural trends, notably mounting sustainability awareness, which pose some reputational risks for retailers and force long-term adaptation. The rise in online shopping and digital marketing creates opportunities for retailers, but also some challenges when it comes to customer data privacy issues. Changing consumer preferences toward healthier and more environmentally sustainable products also create challenges for grocers, translating into heightened efforts on labelling and traceability. Apparel retailers face rising responsible sourcing scrutiny as the younger generation is increasingly environmentally and socially aware of the impact of its purchases.

Retail and Apparel: rating positioning and rationale

Exhibit 49
Apparel and retail: rating positioning and rationale

Company	Rating	Rating Positioning	Rationale	Liquidity
Action	B1 Neg	Weak	Large scale in Benelux markets, history of deleveraging via EBITDA growth, positive market share momentum for discounters. At the same time, constraints include high leverage and history of dividend recapitalisation, execution risks related to store rollout strategy, exposure to intense competition and downside risks in the context of the coronavirus pandemic.	Adequate
BUT	B2 Sta	Strong	The rating is supported by BUT's strong brand awareness, good execution strategy that has allowed it to consistently gain market share, which increased following the coronavirus outbreak, good liquidity and positive free cash flow (FCF) generation. The rating is constrained by the cyclicality of the industry, large seasonal and working capital swings, leveraged capital structure and moderate size, with concentration in the French market.	Good
S&B	B2 Sta	Strong	Solid historical sales growth supported by high online penetration rates, high margins compared with peers, solid earnings growth. Rating constraints include reliance on suppliers to continuously source popular brands at attractive prices, and the seasonality of the fashion retail industry, which drives sales, inventory and cash flow management.	Adequate
Iceland	B2 Sta	Adequate	Niche position with a strong share in frozen foods, provision of home delivery and online services, which provides differentiation against discounters, outperformance compared with larger peers during the pandemic and adequate liquidity. The rating also reflects the UK's highly competitive grocery market, while Iceland's small scale compared with peers limits scope for sustained improvement in margins.	Adequate
Maxeda	B2 Sta	Adequate	Strong market position and established DIY brand name in Belgium and the Netherlands, low fashion and trend risks in the company's business model, and solid recent operating performance resulting from consumers increasing their home improvement spend, improving the company's liquidity. Constrained by the highly cyclical nature of the DIY industry, low profitability because of intense competition and cost inflation, high leverage, though slightly improved as a result of the recent debt reduction, and seasonality of operations and cash flow, which constrains liquidity in some quarters.	Adequate
THOM	B2 Sta	Adequate	The rating reflects THOM's leading position in the French affordable jewellery market with a 9% share, large product range and moderate exposure to fashion risks, higher margins than other rated specialty retailers, and adequate liquidity supported by good FCF. The rating also reflects small scale in a fragmented and moderately competitive industry, appetite for external growth which entails execution risks, seasonal and cyclical business, and high leverage.	Adequate
MFG	B2 Sta	Weak	Largest UK fuel forecourt operator, significant bargaining power with suppliers, stable fuel-demand patterns and supportive long-term trend toward convenience offerings, well-invested, predominantly freehold estate in attractive locations. Challenged by exposure to the inherently low profit margin associated with fuel retail operations, leveraged credit profile, mitigated by strong interest cover and underlying cash flow generation, exposure to a degree of event and execution risk, despite proven integration abilities and strong management. The pandemic's ultimate impact on the company's sales and operating costs is not yet clear.	Good
Afflelou	B2 Neg	Weak	The rating is supported by Afflelou's solid credit metrics compared with peers, leading market position with high brand recognition and adequate liquidity owing to positive FCF generation in recent years. The rating is challenged by a modest revenue base and geographical concentration in France, exposure to fragmented and competitive markets, limited organic growth despite significant advertising spend, and exposure to downside risks in relation to the pandemic.	Adequate

CBR Fashion	B2 Neg	Weak	Solid trading performance, positive FCF and deleveraging achieved in recent years, limited direct inventory risk and asset-light business model, and relatively strong online business. Constrained by the pandemic, which will reduce earnings and cash flow and strain liquidity, leveraged financial structure and shareholder-oriented financial policy, moderate scale and exposure to the highly competitive apparel market in Europe and especially Germany, and high fashion risk component, with some concentration in brand.	Adequate
Tendam	B2 Neg	Weak	Strong brand awareness and established market position, high profitability and solid FCF generation in recent years, solid credit metrics before the coronavirus outbreak. Constrained by the temporary closure of stores because of the pandemic, which will reduce earnings and strain liquidity, exposure to fashion risk, discretionary and cyclical nature of the industry, high dependency on the Spanish market, and some weakness in Springfield women's segment and franchises.	Adequate
EG	B3 Sta	Adequate	Wide geographic diversity, increased scale, strong bargaining power with suppliers, opportunities to employ best practices group-wide, resilient C-stores sales, acceleration of ongoing growth trends, historically stable fuel demand and integration of recent acquisitions. Constrained by significant operating leverage due to the prevalence of the company-owned, company-operated business model compared with other operating models, highly leveraged capital structure, more uncertain long-term industry outlook, significant M&A risk, limited progress on governance and internal controls.	Adequate
Picard	B3 Sta	Adequate	Track record of stable operating performance, strong brand image and leading position in the French frozen food market, ability to renew its product offering constantly and positive FCF generation. The rating also reflects failure to reduce high leverage, small size, a difficult trading environment and limited growth prospects.	Good
The Very Group	B3 Sta	Adequate	The rating reflects the company's high leverage and low net cash flow generation, focus on a specific subset of consumers in a single country and reliance on continued access to securitisation facilities. The rating also reflects long history of offering credit to customers to drive purchasing decisions and loyalty, successful transition to pure-play e-tail and diverse product range.	Adequate
Isabel Marant	B3 Neg	Weak	Balanced distribution channels and geographically diversified footprint, asset-light business model, solid profitability before the coronavirus outbreak and strong online presence relative to peers. The rating is constrained by the pandemic, which renders the company vulnerable because of its exposure to discretionary spending and store-based retailing, exposure to high fashion risk in the fast-moving and competitive luxury fashion segment, limited scale, relatively narrow brand focus, high reliance on the company's founder and main designer Isabel Marant, execution risks associated with IM's fast-paced expansion strategy, and high leverage.	Adequate
H&B	Caa1 Sta	Adequate	The rating reflects recent significant underperformance due to rising competition and challenging trading conditions, with some downside risks related to the pandemic, high leverage and limited scale. The rating also reflects focus on growing market niche for health and wellness, leading franchise and market position in vitamins and favourable industry dynamics.	Adequate
Douglas	Caa1 Neg	Weak	High leverage and limited deleveraging prospects over the next 12-18 months, strong competition in the sector, discretionary nature of beauty spend, modest absolute scale and downside risks in relation to the pandemic. Also, good market position and brand recognition, extensive store network coverage and e-commerce capabilities, low fashion and trend risks in its business model.	Adequate
Matalan	Caa1 Neg	Weak	Weak credit metrics expected because of the pandemic, exposure to cyclical clothing demand, fashion risk and intense competition. The rating also reflects the company's position as one of the leading value clothing retailers in the UK and improvements in execution over the last two years.	Adequate
Hema	Caa2 Sta	Adequate	Established market position and brand awareness in the Netherlands, growth prospects from store development and online, differentiated and diversified product offering with in-house design and over 20,000 stock-keeping units. Constrained by challenging trading conditions with coronavirus disruption and low consumer confidence, highly competitive market environment in both the Netherlands and the company's expansion markets, execution risks associated with the company's expansion plan and negative FCF in the next 12-18 months.	Adequate

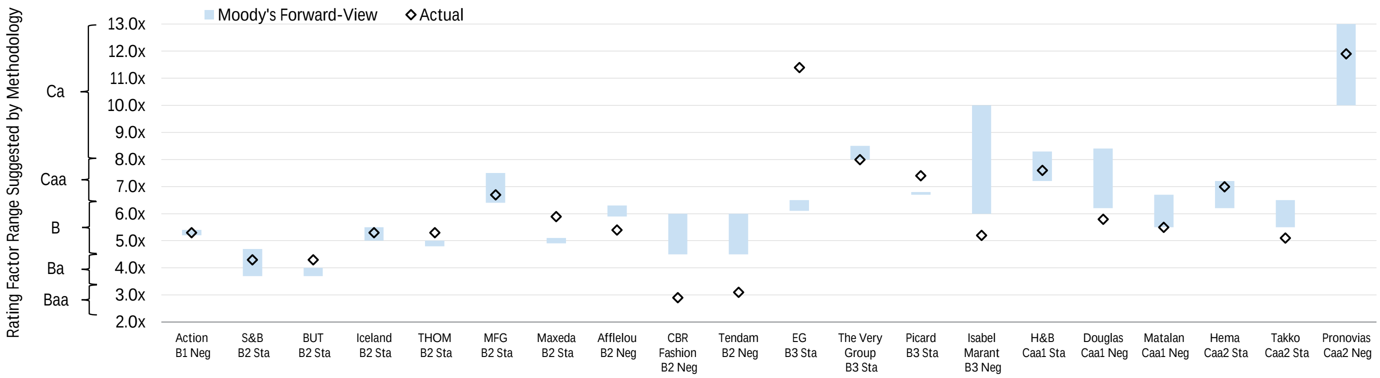
Takko	Caa2 Sta	Adequate	The rating is supported by an established presence in the discount apparel segment and growing geographical diversification away from Germany, with a presence in 16 other European countries. It is challenged by the pandemic, which reduced earnings and strained FCF in 2020, the very competitive and fragmented apparel retail market, limited scale compared with competitors, high seasonality of the business and vulnerability to weather conditions, high leverage and limited deleveraging prospects in the next 12-18 months.	Adequate
Pronovias	Caa2 Neg	Weak	Strong brand awareness, established market shares in the bridal business in Italy and Spain and asset-light business model with limited fixed costs, which has translated into high margins historically. Constrained by further pressure on liquidity because of the pandemic, very high leverage and unsustainable capital structure, execution risks associated with recent acquisitions and the new strategic plan to expand in retail, modest scale of operations compared with other rated apparel companies, product concentration in a niche market and the longer-term trend of falling wedding rates.	Weak

Note: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

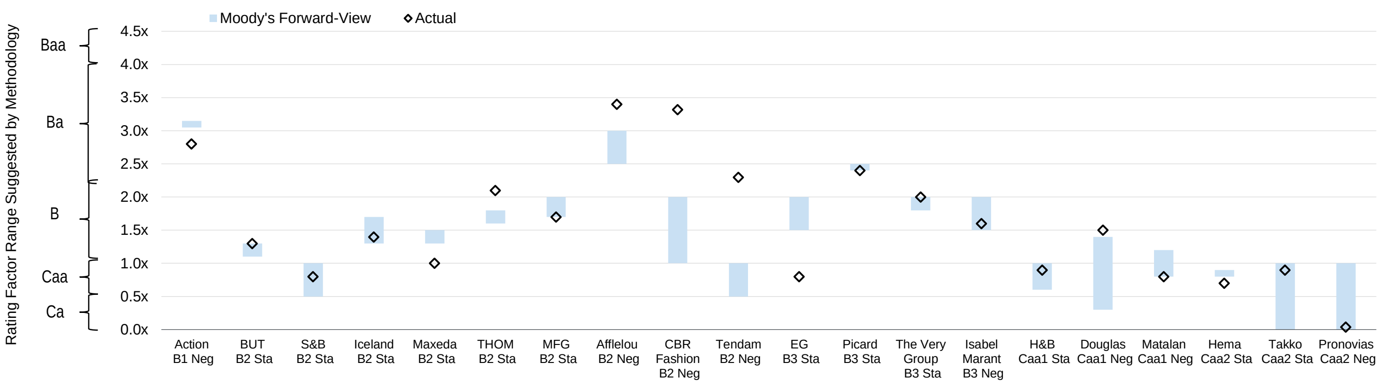
Apparel and retail: leverage, interest cover and cash flows

Exhibit 50
Moody's-adjusted debt/EBITDA



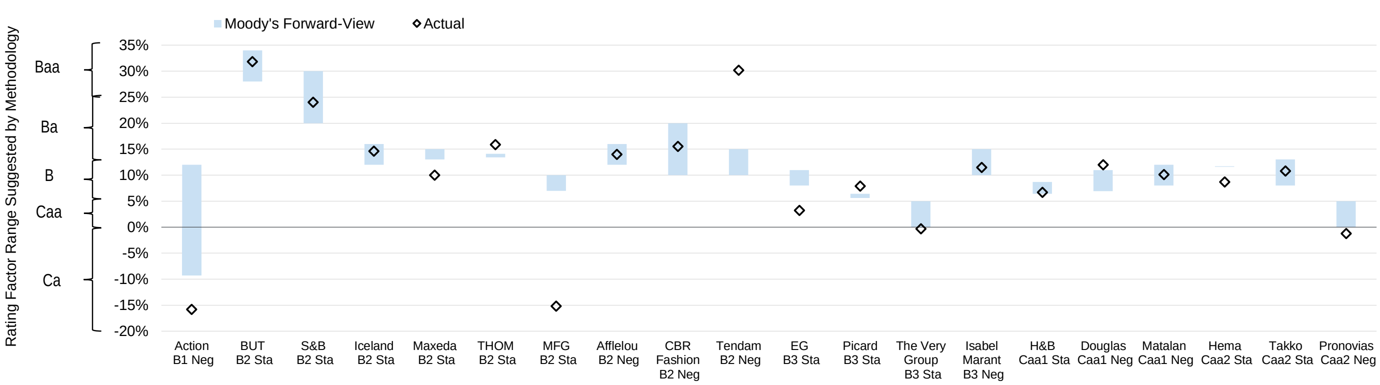
Note: Based on metrics published in latest Credit Opinion report.
Source: Moody's Investors Service

Exhibit 51
Moody's-adjusted EBIT/interest expense



Note: Based on metrics published in latest Credit Opinion report.
Source: Moody's Investors Service

Exhibit 52
Moody's-adjusted RCF/net debt



Note: Based on metrics published in latest Credit Opinion report.
Source: Moody's Investors Service

Retail rating methodology

Exhibit 53
Retail rating methodology scorecard based on Moody's forward-view

		Scale	Business Profile		Leverage and Coverage			Financial Policy	
Company Name	Actual Rating	Revenue ($bn)	Stability of product	Execution and Competitive Position	EBIT / Interest	RCF / Net Debt	Debt / EBITDA	Financial Policy	Scorecard indicated rating
Action	B1	5.8 - 6.4	Ba	Ba	3.1x	-9% - 12%	5.2x - 5.4x	B	B1
BUT	B2	1.9 - 2.0	Ba	B	1.1x - 1.3x	28% - 34%	3.7x - 4.0x	B	Ba3
S&B	B2	0.7	B	B	0.5x - 1.0x	20% - 30%	3.7x - 4.7x	B	B1
Iceland	B2	4.8 - 5.0	Baa	B	1.3x - 1.7x	12% - 16%	5.0x - 5.5x	B	B1
Maxeda	B2	1.5	B	Ba	1.3x - 1.5x	13% - 15%	4.9x - 5.1x	B	B1
THOM	B2	0.8	B	B	1.6x - 1.8x	13% - 14%	4.8x - 5.0x	B	B2
MFG	B2	5.0 - 5.6	A	B	1.7x - 2.0x	7% - 10%	6.4x - 7.5x	B	B1
Afflelou	B2	0.4	Ba	B	2.5x - 3.0x	12% - 16%	5.9x - 6.3x	B	B2
CBR Fashion	B2	0.6	-	-	1.0x - 2.0x	10% - 20%	4.5x - 6.0x	B	B2
Tendam	B2	1.2	B	B	0.5x - 1.0x	10% - 15%	4.5x - 6.0x	B	B2
EG	B3	23.0 - 26.0	A	B	1.5x - 2.0x	8% - 11%	6.1x - 6.5x	B	B1
Picard	B3	1.5	Baa	Ba	2.4x - 2.5x	6% - 6%	6.7x - 6.8x	B	B1
The Very Group	B3	2.5 - 2.6	Ba	Ba	1.8x - 2.0x	0% - 5%	8.0x - 8.5x	B	B2
Isabel Marant	B3	0.2	-	-	1.5x - 2.0x	10% - 15%	6.0x - 10.0x	B	B2
H&B	Caa1	0.9	Ba	B	0.6x - 1.0x	6% - 9%	7.2x - 8.3x	B	B3
Douglas	Caa1	3.3 - 3.5	Ba	B	0.3x - 1.4x	7% - 11%	6.2x - 8.4x	B	B3
Matalan	Caa1	1.3 - 1.5	B	B	0.8x - 1.2x	8% - 12%	5.5x - 6.7x	B	B2
Hema	Caa2	1.2 - 1.3	Ba	B	0.8x - 0.9x	12% - 12%	6.2x - 7.2x	B	B3
Takko	Caa2	1.0 - 1.2	B	B	0.0x - 1.0x	8% - 13%	5.5x - 6.5x	Caa	B3
Pronovias	Caa2	0.2	-	-	-0.5x - 0.5x	0% - 5%	10.0x - 13.0x	B	Caa2

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Retail and Apparel: analytical coverage

Company	CFR entity	Analyst
Action	Peer Holding III B.V.	Francesco Bozzano
Afflelou	3AB Optique Developpement	Gilberto Ramos Sotelo
BUT	Mobilux 2 SAS	Gilberto Ramos Sotelo
CBR	CBR Service GmbH	Guillaume Leglise
Douglas	Kirk Beauty One GmbH	Lorenzo Re
EG	EG Group Limited	Roberto Pozzi
H&B	L1R HB Finance Limited	David Beadle
Hema	Helix Holdco S.A.	Francesco Bozzano
Iceland	Iceland VLNCo Limited	David Beadle
Isabel Marant	IM Group SAS	Guillaume Leglise
Matalan	Missouri TopCo Limited	David Beadle
Maxeda	Maxeda DIY Holding B.V.	Guillaume Leglise
MFG	CD&R Firefly 4 Limited	Roberto Pozzi
Picard	Picard Bondco S.A.	Francesco Bozzano
Pronovias	CatLuxe Acquisition S.a.r.l.	Guillaume Leglise
S&B	PrestigeBidCo GmbH	Guillaume Leglise
Takko	Takko Fashion S.a r.l.	Guillaume Leglise
Tendam	Tendam Brands S.A.U.	Guillaume Leglise
The Very Group	The Very Group Limited	David Beadle
THOM	Goldstory SAS	Vincent Gusdorf

Moody's Investors Service

Retail and Apparel: analyst contact details

Analyst	Title	Phone	Email
David Beadle	VP-Sr Credit Officer	44-207-772-5390	David.Beadle@moodys.com
Francesco Bozzano	VP-Sr Analyst	33-1-5330-1037	Francesco.Bozzano@moodys.com
Gilberto Ramos	Analyst	33-1-5330-3370	Gilberto.ramos@moodys.com
Guillaume Leglise	AVP-Analyst	33-1-5330-5979	Guillaume.Leglise@moodys.com
Lorenzo Re	VP-Sr Analyst	39-029-148-1123	Lorenzo.Re@moodys.com
Vincent Gusdorf	VP-Sr Credit Officer	33-1-5330-1056	Vincent.Gusdorf@moodys.com

Retail and Apparel: related research

» Sector Comment - Apparel Retail - Online specialists' acquisitions will weaken sector margins as move online continues, 8 February 2021

» Sector Profile — Retail - EMEA: Fourth quarter 2020 newsletter, 7 January 2021

» Industry Outlook (Slides) — Retail - Europe: 2021 outlook stable as demand recovery offset by online surge, 2 December 2020

» Food Retail – France: Credit quality to deteriorate in 2021 as competition, weak sentiment dent earnings, 23 November 2020

» Industry Outlook — Retail - Europe: Outlook stable as demand recovery is balanced by margin dilutive online surge, 20 October 2020

Software

Recurring revenue base underpins sector resilience, but increasing churn is a key risk

Dirk Goedde, AVP - Analyst; Luigi Bucci, Analyst; Fabrizio Marchesi, VP - Senior Analyst

» **For 2021, we project revenue growth for publicly rated European high-yield software companies in the low-to-mid-single digits in percentage terms.** However, revenue growth will likely be below historic levels for specialised enterprise resource planning (ERP) vendors such as Brunello Bidco S.p.A. (Teamsystem, B3 stable), Precise Midco B.V. (Exact, B3 stable) and IRIS Debtco Limited (B2 stable), because of their exposure to the small and medium business (SMB) segment. We expect growth rates similar to ERP for vendors in the financial services sector, such as ION Trading Technologies Limited (B3 stable), Itiviti Group Holding AB (B3 stable) and Finastra Limited (B3 stable), which will benefit from the industry's digitalisation, with some carry-over of investment decisions from 2020.

» **The shift to SaaS/Cloud is likely to remain the key driver of revenue growth together with upsell and cross-sell, supporting recurring revenue expansion.** Growth will also be supported by the expected recovery, though moderate, in licences and professional services revenue from depressed levels following the impact of the coronavirus pandemic last year. Companies with a higher reliance on new licence sales are subject to a higher recovery risk in the event that the pandemic is prolonged, such as Northpole NewCo S.a r.l. (B2 negative).

» **A high degree of recurring revenue has underpinned a broadly resilient performance since the start of the pandemic; however, while we expect growth in 2021, substantial risks around the extent of the recovery remain.** These risks include a potential increase in gross attrition and an increased risk of insolvency across SMBs, particularly micro businesses, once governments begin to reduce their support programmes, together with the possibility of customers down-selling their modules as they look to reduce costs. These uncertainties are magnified for UK-based software companies such as IRIS and Aston Midco Limited (Advanced, B3 stable) because Brexit may hinder the fragile recovery prospects post-pandemic.

» **We expect EBITDA margins to improve slightly in 2021** as tight cost controls, particularly on discretionary spending such as travel and entertainment, continue and daily processes and operations become more virtual. While large-scale cost-saving programmes have mostly been completed, given the maturities of most rated leveraged buyouts (LBOs), issuers have used the pandemic as a trigger for further cost savings, as in the case of Finastra. Software vendors recording the strongest organic revenue growth will continue to benefit most from operating leverage, thanks to the largely fixed nature of their cost base.

» **M&A activity has slowed significantly during the pandemic but will start to supplement organic growth again with bolt-on acquisitions**, likely debt-funded, as the case of Advanced demonstrates. We expect software companies to focus primarily on adding new product capabilities, for example by entering new verticals; enhancing geographic diversification; reducing competition; and achieving cost synergies. We expect European software borrowers to continue to use their headroom – though reduced versus pre-pandemic levels – under debt incurrence covenants to fund acquisitions, which will slow underlying deleveraging.

» **We expect LBOs to continue to represent the majority of new debt volume,** with headline leverage multiples often higher than the average LBO in other industries. We expect continued issuance activity in the market, driven by the high stability of these businesses, high margins and solid growth rates. Aside from LBOs, we see acquisitions by larger enterprises as an option as in the case of WP/AV CH II Holdings B.V. (Avaloq, ratings withdrawn) which was acquired by NEC Corporation in December 2020. Rated LBOs completed since October 2020 include Teamsystem and Concorde Midco Limited (CDKI, B3 stable). Companies have generally repaid revolving credit facility drawings, which has created additional flexibility for future M&A. Nevertheless, as in the case of Micro Focus International plc (B1 stable), companies have also started to repay drawings through available cash resources.

» **The European software cohort now totals 19 companies**, with nine providing ERP solutions, three operating in the financial services software industry and the remainder in a range of different sectors such as cybersecurity. So far this year, we have assigned two new ratings (CDKI and Teamsystem). The sector's dominant rating category is B3, with around 80% of issuers having a stable outlook. Two of the cohort's 19 issuers have negative outlooks (IGT Holding III AB (IFS), B2 negative and Athena Bidco GmbH (P&I), B2 negative), while two (Avast Holding B.V. (Ba2 positive) and Dedalus S.p.A. (B3 positive)) have a positive outlook.

Software: rating positioning and rationale

Exhibit 55

Company	Rating	Rating Positioning	Rationale	Liquidity
Avast	Ba2 Pos	Adequate	The Ba2 CFR reflects Avast's strong operating performance over the last year and its voluntary debt repayment in 2020. Conversely, the rating is constrained by a small percentage of paid users (4% in desktop) and some focus in the US; Avast's overall limited scale, with low diversification in terms of end-products and customer segments; intense industry competition and inherent technology risks in the cybersecurity software market; and relatively low customer switching costs.	Very Good
Micro Focus	B1 Sta	Adequate	Micro Focus' B1 CFR mainly reflects its strong position in the enterprise software market, together with its continued commitment to achieving a reported net leverage of 2.7x and strong liquidity. Counterbalancing these strengths are continued delays in revenue stabilisation because of the integration with the HPE software unit and the coronavirus pandemic, and the company's product portfolio of mainly mature software applications.	Good
IRIS	B2 Sta	Weak	IRIS' B2 CFR mainly reflects its mission-critical product offering and high degree of recurring revenue, with around 90% of its base coming from subscriptions. The rating is constrained by high leverage following the debt-funded acquisition of FMP Global and the drawdown of the company's acquisition capex facility; high exposure to the UK market; and the continued slowdown in pro forma EBITDA expansion because of the pandemic.	Good
IFS	B2 Neg	Adequate	The B2 rating is mainly driven by IFS' high leverage following the debt raised for shareholder distribution and the Astea acquisition, and the company's relatively small size as an enterprise application software provider. However, it also positively reflects IFS' solid track record, with both relatively steady organic licence sales growth over the last three years and growth from acquisitions.	Adequate
P&I	B2 Neg	Adequate	The B2 CFR mainly reflects P&I's high Moody's-adjusted leverage of 6.2x for the LTM ended September 2020. It also reflects high renewal rates and switching costs for customers, a high level of recurring revenue and the company's ability to provide tailored solutions and services to its customers.	Adequate
NSO	B2 Neg	Weak	NSO's B2 CFR reflects the group's solid performance since 2018, characterised by strong EBITDA growth and consistently high margins, as well as the large addressable market in which it operates. The rating is constrained by NSO's high Moody's-adjusted leverage, very limited product diversification, customer concentration, susceptibility to cyberattacks and lower recurring revenue than peers as a result of a relatively higher share of perpetual licences, though this is improving.	Adequate
Dedalus	B3 Pos	Strong	Dedalus' B3 CFR reflects its leading position in selected markets in a highly stable industry, its well-diversified and highly loyal, high-quality customer base, and its strong and stable operating margins, driven by increasing scale and upselling. The rating is constrained by a financial policy characterised by high leverage, potential integration and carveout-related risks, Dedalus' exposure to a mature market with highly specialised competition, and limited product diversification, which restricts organic growth.	Adequate
CDKI	B3 Sta	Adequate	The B3 CFR mainly reflects CDKI's leading position as a provider of technology and services to automotive dealers and the low tendency of dealers to change DMS software. It is constrained by very high leverage and CDKI's significant reliance on identified cost-saving initiatives to reduce leverage.	Adequate
Exact	B3 Sta	Adequate	Exact's B3 CFR reflects high leverage of 8.4x pro forma for the planned all-debt-funded acquisition of Unit4 Bedrijfssoftware, its limited size and geographic concentration in the Benelux group of countries. These factors are mitigated by Exact's good market position in the Benelux countries and high proportion of recurring revenue, as well as a track record of EBITDA growth and positive free cash flow (FCF) generation.	Adequate
ION Trading	B3 Sta	Adequate	ION Trading's B3 CFR reflects the group's resilient operating performance with growing EBITDA margins following the acquisition of Fidessa in 2018 as well as positive market dynamics, supported by an increasing outsourcing trend. The rating is constrained by the company's still elevated Moody's adjusted leverage of around 7.9x and customer concentration, with more than 25% of revenue from the company's top 10 clients.	Good
Itiviti	B3 Sta	Adequate	Itiviti's credit profile reflects high leverage in the context of its small scale and exposure to the nature of financial trading flows. More positively, the group's products are truly mission-critical and Itiviti benefits from very high recurring revenue of over 90% through subscriptions.	Adequate

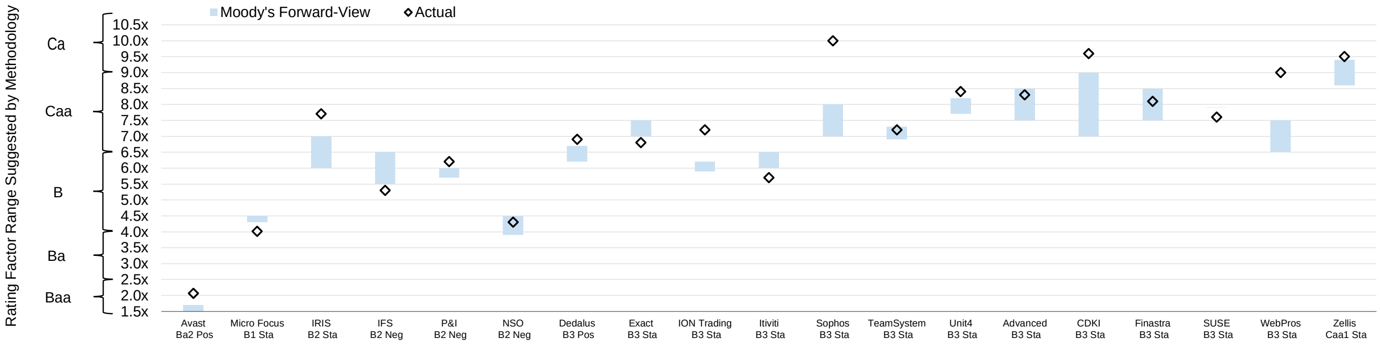
Sophos	B3 Sta	Adequate	Sophos' B3 CFR primarily reflects the company's strong position in the cybersecurity sector and its wide range of converged product offerings in the end-point and networks security market. The rating is constrained by very high adjusted leverage of around 8x after the closing of the LBO by Thoma Bravo, and the significant dependence of the company's deleveraging on cost synergies, which entail execution risk.	Good
TeamSystem	B3 Sta	Adequate	TeamSystem's B3 CFR mainly reflects its market leading position in the fragmented Italian ERP market, high retention rates and the company's strong track record of organic revenue and EBITDA growth. The rating is is constrained by TeamSystem's high leverage, geographic concentration and high exposure to SMEs.	Adequate
Unit4	B3 Sta	Adequate	Unit 4's rating reflects its underperformance in 2019, as well as our expectation that leverage will remain high and that FCF will remain limited over the next 12-18 months, despite the sale of the company's U4B division in the fourth quarter of 2020.	Adequate
Advanced	B3 Sta	Weak	Advanced's B3 CFR reflects high leverage and the company's historically limited, though improving, FCF; its limited geographical exposure, mostly to the UK; a continued risk of debt-funded acquisitions, given the company's acquisitive nature; and a slowdown in pro forma EBITDA expansion in the company's fiscal 2021. The rating is supported by our expectation of continued deleveraging, along with Advanced's solid positioning in a number of niche segments of the UK software market.	Adequate
Finastra	B3 Sta	Weak	Finastra's B3 CFR mainly reflects its very high leverage following Misys' debt-funded acquisition of D+H in 2017, together with continued negative FCF generation, to a large extent affected by the transition to a subscription model and the ongoing impact of exceptional items. More positively, the rating benefits from Finastra's positioning in the financial services software market, which is supported by favourable long-term sector dynamics.	Adequate
SUSE	B3 Sta	Weak	The B3 CFR reflects SUSE's high leverage of close to 8x following the acquisition of Rancher, as well as the diluted margin profile of the combined entity. The rating also reflects good revenue visibility resulting from a subscription-based, upfront-cash business model, and the high stickiness of the product.	Adequate
WebPros	B3 Sta	Weak	WebPros's B3 CFR mainly reflects its strong position in the niche market for web hosting control panels, strong renewal rates and limited churn. The rating is constrained by the company's small addressable market, its limited offering, which is largely concentrated in two similar products, and its reliance on large web hosting partners.	Adequate
Zellis	Caa1 Sta	Adequate	Zellis' Caa1 CFR mainly reflects continued negative FCF generation, though improving as carve-out exceptional costs phase out, and very high leverage, which is likely to remain elevated at around 8.5x-9.5x over the next 12 months. More positively, the rating is supported by the company's leading positioning in the UK's payroll and HR software market, and high levels of recurring revenue.	Adequate

Notes: [1] Ratings strongly (weakly) positioned are highlighted in blue (orange); [2] See end of the section for analyst contact details and links to companies' home page on Moodys.com.
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

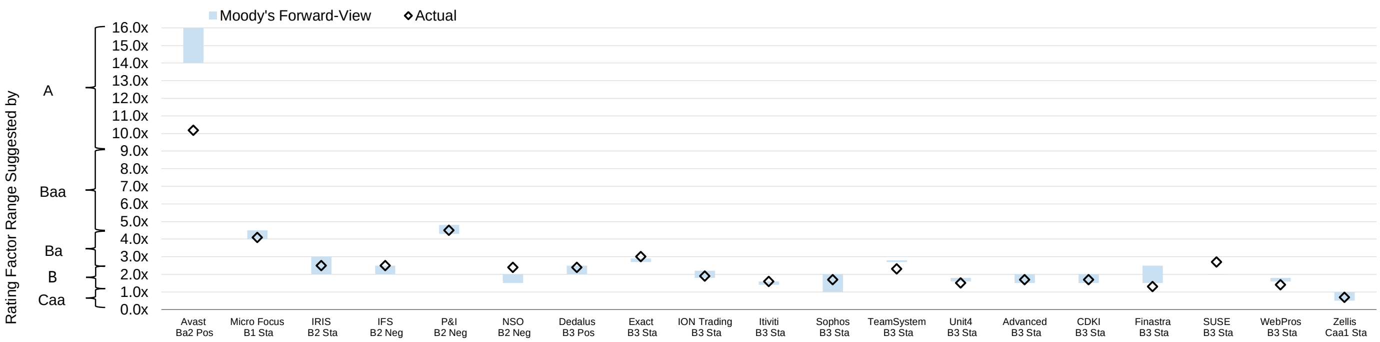
Software: leverage, interest cover and cash flows

Exhibit 56
Moody's-adjusted debt/EBITDA



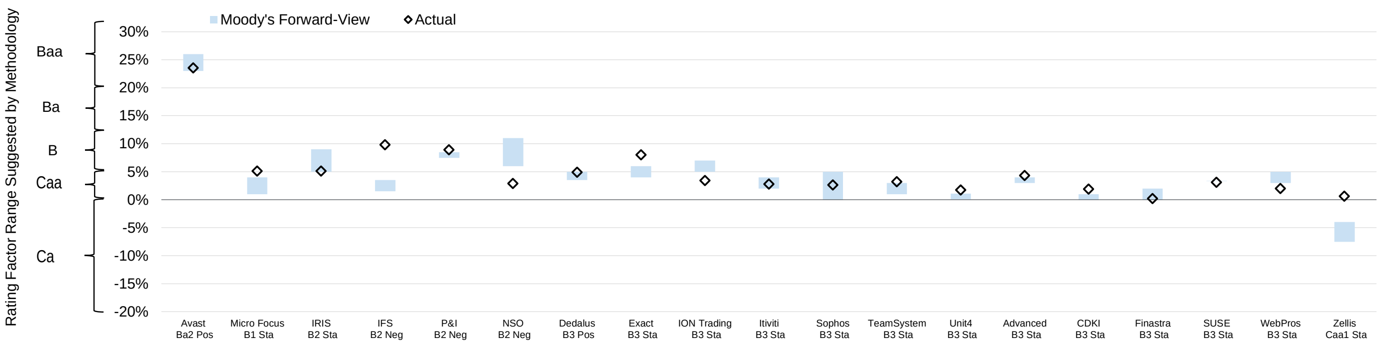
Note: Based on metrics published in Moody's latest Credit Opinion reports.
Source: Moody's Investors Service

Exhibit 57
Moody's-adjusted (EBITDA-capex)/interest expense



Note: Based on credit metrics published in Moody's latest Credit Opinion reports.
Source: Moody's Investors Service

Exhibit 58
Moody's-adjusted FCF/debt



Note: Based on credit metrics published in Moody's latest Credit Opinion reports.
Source: Moody's Investors Service

Software: industry rating methodology

Exhibit 59

Software industry rating methodology scorecard based on Moody's forward-view

		Scale		Business Profile				Financial Policy	Profitability	Leverage and Coverage				
Company Name	**Actual Rating**	**Revenue ($bn)**	**Free Cash Flow ($bn)**	**Product Line Diversity**	**Geographic Diversity**	**End - Market Diversity**	**Market share**	**Financial Policy**	**Operating Income ROA**	**Debt / EBITDA**	**(EBITDA - CAPEX) / Interest**	**FCF / Debt**	**(Cash + Marketable Securities) / Debt**	**Scorecard indicated rating**
Avast	Ba2	0.9	0.2	B	Baa	B	Ba	Ba	14% - 15%	1.5x - 1.7x	14.0x - 16.0x	23% - 26%	20% - 30%	Ba1
Micro Focus	B1	2.9 - 3.1	0.1 - 0.2	Ba	Ba	Baa	Ba	B	2% - 2%	4.3x - 4.5x	4.0x - 4.5x	1% - 4%	7% - 8%	B1
IRIS	B2	0.3	0.0 - 0.1	B	Caa	Ba	B	B	0% - 5%	6.0x - 7.0x	2.0x - 3.0x	5% - 9%	10% - 20%	B3
IFS	B2	0.8 - 0.9	0.0	B	Ba	Ba	B	B	4% - 5%	5.5x - 6.5x	2.0x - 2.5x	2% - 4%	10% - 14%	B2
P&I	B2	0.2	0.0	B	B	Ba	B	B	4% - 4%	5.7x - 6.0x	4.3x - 4.8x	8% - 9%	13% - 18%	B2
NSO	B2	0.3	0.0	Caa	Ba	Caa	B	B	12% - 13%	3.9x - 4.5x	1.5x - 2.0x	6% - 11%	10% - 15%	B2
Dedalus	B3	0.7 - 0.8	0.1	B	B	Ba	Ba	B	6% - 7%	6.2x - 6.7x	2.0x - 2.5x	4% - 5%	4% - 6%	B2
Exact	B3	0.3	0.1	B	Caa	Ba	B	B	0% - 5%	7.0x - 7.5x	2.7x - 2.9x	4% - 6%	7% - 12%	B2
ION Trading	B3	1.0	0.1 - 0.2	Ba	Ba	B	B	B	5% - 8%	5.9x - 6.2x	1.8x - 2.2x	5% - 7%	5% - 8%	B2
Itiviti	B3	0.2	0.0	B	Baa	Caa	B	B	5% - 6%	6.0x - 6.5x	1.4x - 1.6x	2% - 4%	3% - 5%	B3
Sophos	B3	0.7 - 0.8	0.0 - 0.1	Ba	Ba	Baa	Ba	B	3% - 5%	7.0x - 8.0x	1.0x - 2.0x	0% - 5%	10% - 15%	B2
TeamSystem	B3	0.5	0.0	B	Caa	Ba	Ba	B	5% - 10%	6.9x - 7.3x	2.7x - 2.8x	1% - 3%	0% - 1%	B3
Unit4	B3	0.5	0.0	B	B	Ba	B	B	4% - 5%	7.7x - 8.2x	1.6x - 1.8x	0% - 1%	18% - 19%	B3
Advanced	B3	0.3	0.0	B	Caa	Ba	B	B	0% - 1%	7.5x - 8.5x	1.5x - 2.0x	3% - 4%	6% - 8%	B3
CDKI	B3	0.3 - 0.4	0.0	B	Ba	Caa	Ba	B	7% - 9%	7.0x - 9.0x	1.5x - 2.0x	0% - 1%	4% - 4%	B3
Finastra	B3	1.7 - 1.8	0.0	Ba	Ba	B	Ba	B	2% - 3%	7.5x - 8.5x	1.5x - 2.5x	-1% - 1%	2% - 2%	B2
SUSE	B3	0.6	0.0	B	Baa	Ba	B	B	8%	7.9x - 7.9x	2.0x - 2.0x	3%	5%	B2
WebPros	B3	0.2	0.0	Caa	Ba	B	B	B	7% - 8%	6.5x - 7.5x	1.6x - 1.8x	3% - 5%	4% - 7%	B3
Zellis	Caa1	0.2	0.0	B	Caa	B	Ba	B	-1% - 0%	8.6x - 9.4x	0.5x - 1.0x	-4% - 1%	2% - 5%	Caa1

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Software: analytical coverage

Company	CFR entity	Analyst
Advanced	Aston Midco Limited	Luigi Bucci
Avast	Avast Holding B.V.	Dirk Goedde
CDKI	Concorde Midco Limited	Luigi Bucci
Dedalus	Dedalus S.p.A.	Dirk Goedde
Exact	Precise Midco B.V.	Gianni Fabrizio Marchesi
Finastra	Finastra Limited	Luigi Bucci
IFS	IGT Holding III AB	Dirk Goedde
ION Trading	ION Trading Technologies Limited	Dirk Goedde
IRIS	IRIS Debtco Limited	Luigi Bucci
Itiviti	Itiviti Group Holding AB	Dirk Goedde
Micro Focus	Micro Focus International plc	Luigi Bucci
NSO	NorthPole Newco S.a r.l.	Dirk Goedde
P&I	Athena Bidco GmbH	Dirk Goedde
Sophos	Sophos Intermediate II Limited	Luigi Bucci
SUSE	Marcel LUX IV S.a.r.l.	Dirk Goedde
TeamSystem	Brunello Bidco S.p.A	Gianni Fabrizio Marchesi
Unit4	AI Avocado Holding B.V.	Gianni Fabrizio Marchesi
WebPros	Particle Investments S.a.r.l.	Luigi Bucci
Zellis	Zellis Holdings Limited	Luigi Bucci

Moody's Investors Service

Software: analyst contact details

Analyst	Title	Phone	Email
Luigi Bucci	Analyst	4420 7772-1961	Luigi.Bucci@moodys.com
Dirk Goedde	AVP-Analyst	4969-7073-0702	Dirk.Goedde@moodys.com
Gianni Fabrizio Marchesi	VP-Senior Analyst	3315-3301-024	Fabrizio.Marchesi@moodys.com

Software: related research

Technology Software – Europe: ERP software vendors ride out pandemic but exposure to smaller customers is a risk, 26 November 2020

Finastra Limited: FAQ on coronavirus, deleveraging and free cash flow, 17 November 2020

Diversified Information Technology - Global: Cloud and software spending keeps outlook stable despite significant cuts in IT budgets, 14 April 2020

Software - Europe: Credit quality stable for now but set to weaken as coronavirus hurts customers, 07 April 2020

Diversified Information Technology - Global: Cloud spending strong but slowdown in broader IT drives outlook change to stable, 6 December 2019

Software Industry Rating Methodology, 3 August 2018

Telecommunications

Sluggish revenue growth in 2021 as intense competitive pressure persists

Sebastien Cieniewski, Vice President - Senior Credit Officer, Carlos Winzer - Senior Vice President, Ernesto Bisagno - Vice President - Senior Credit Officer, Agustin Alberti, Vice President - Senior Analyst

» **We project only limited revenue growth of around 1% in 2021 for the set of publicly rated European high-yield telecommunications companies, reflecting the challenging market environment.** The telecoms sector demonstrated stronger resilience in 2020 relative to many other sectors. We forecast that it will experience flat revenue on average for the cohort compared with the previous year, while we project that GDP will drop by 7.7% on average across the euro area and by 10.7% in the UK. At the same time, we expect sluggish revenue growth for telecoms operators in 2021, reflecting continued disruption from the third wave of the coronavirus pandemic, including the negative impact on roaming revenue, as well as intense competition driven mainly by the industry's high level of fragmentation. We believe that positive outliers will include market challengers, notably Lorca Holdco Limited (Masmovil, B1 stable), for which we project double-digit revenue growth, driven by growth in the subscriber base and growing convergence, as well as operators in under-penetrated markets including PLT VII Finance S.a.r.l. (Bite, B2 stable) in the Baltics and Adria Midco B.V. (B2 stable) in South-Eastern Europe. On the other hand, most incumbents, including Telecom Italia S.p.A. (Ba2 negative) and DKT Holdings ApS (TDC, B2 stable), are likely to continue to experience a decline in revenue in 2021 as they face strong competition.

» **We project a modest EBITDA margin improvement in 2021, reflecting telecoms operators' cost discipline in the context of sluggish revenue growth.** We project the average EBITDA margin (as adjusted by Moody's) will improve to 43% in 2021 from 42% in 2020, driven by modest top-line growth and continued cost discipline. Masmovil will experience the strongest margin improvement in 2021, supported by strong revenue growth. UPC Holding B.V. (B1 stable) and VMED O2 UK Limited (Ba3 stable) are likely to experience sustained margin improvement starting from 2021 as they gradually realise cost synergies from the merger of UPC and Sunrise Communications AG's fixed and mobile operations in Switzerland, and Virgin Media Inc. (Ba3 stable) and O2 UK's operations (owned by Telefonica S.A. (Baa3 stable)) in the UK. The latter transaction is still subject to regulatory approval. Targeted cost savings account for 10% and 13% of EBITDA pro forma for the mergers before synergies of Virgin Media/O2 and UPC/Sunrise, respectively.

» **Free cash flow to improve slightly in 2021 compared with the previous year, supported by modest EBITDA growth and lower average capital spending.** We project capital spending as a percentage of revenue will decrease to 23% in 2021 from 24% in 2020. Telecoms operators will continue to invest in upgrading their mobile and fixed networks through 5G and fibre-to-the-home (FTTH), including Telecom Italia, which expects to reach 56% coverage with FTTH by 2025 in Italy. However, in the short term, higher FTTH and 5G capital spending will be more than offset by lower capital spending for integrated cable operators, which are now approaching the completion of the upgrade of their networks to DOCSIS 3.1 offering download speeds of up to 1 Gigabit per second (Gbps). This is the case for cable operators VodafoneZiggo Group B.V. (B1 stable) in the Netherlands, UPC in Switzerland and Telenet Group Holding NV (Ba3 stable) in Belgium.

» **We expect regulation to become more supportive and tolerant of M&A and consolidation.** The telecoms industry's highly fragmented nature creates excessive competition that holds down prices despite increasing demand for data. The May 2020 European Court of Justice ruling overturning a 2016 order blocking a deal between O2 and Three UK is a key positive development because we believe it may change the way the European competition authority assesses future possible telecoms deals, particularly between mobile operators operating in the same country. In particular, we believe consolidation could take place in the coming years in Denmark, Sweden, the UK, Spain, Poland and Italy because of market dynamics in these countries. In addition to M&A, we consider that telecoms operators will contemplate disposals of mobile towers, which are considered non-strategic passive infrastructure. Most recently, in February 2021, Altice France S.A., which is owned by Altice France Holding S.A. (B2 negative), announced that it had entered into an exclusivity agreement to sell to Cellnex Telecom its 50.01% stake in Hivory, a joint venture between Altice France and KKR & Co. that owns around 10,500 towers in France.

Telecommunications: rating positioning and rationale

Exhibit 60

Company	Rating	Rating Positioning	Rationale	Liquidity
Polsat	Ba1 Sta	Adequate	The rating reflects market-leading positions in pay-TV, online video, and fixed and mobile telephony and broadband services, as well as strong and stable free cash flow (FCF) generation. It also reflects high leverage following the acquisition of Asseco Poland and Interia Group and exposure to the advertising market.	Adequate
PPF	Ba1 Sta	Adequate	The rating reflects PPF's leading position as the integrated incumbent in the Czech Republic, its geographical diversification in Central and Eastern Europe, and its financial policy and commitment to manage leverage within management's public guidance. The rating also reflects the group's moderate scale, potentially higher competition in the Czech Republic and PPF Telecom's structurally subordinated position relative to debt raised at operating companies.	Adequate
TI	Ba2 Neg	Weak	The rating mainly reflects the company's scale and position as the incumbent service provider in Italy, as well as its international diversification in Brazil. It also reflects high leverage, with only a marginal improvement in 2021.	Good
Telenet	Ba3 Sta	Adequate	The rating reflects relatively moderate adjusted leverage, strong position in the Belgian telecoms market through its converged fixed mobile offering, and an improving cash flow profile. It remains constrained by challenged revenue growth prospects and regulation imposed on cable operators in Belgium.	Good
VMED O2	Ba3 Sta	Adequate	The rating reflects the large scale of the joint venture, the good quality of its fixed and mobile networks, and expectations of significant cost and capital expenditure savings and revenue synergies. It is constrained by high leverage, the highly competitive nature of the UK telecoms market and increased pressure in the medium term from the rollout of fibre by incumbent and alternative network providers.	Adequate
eircom	B1 Sta	Weak	The rating reflects eircom's integrated business model and improving network quality, position as incumbent in the fixed-line market in Ireland and the third largest operator in the mobile segment, and improving FCF. It also reflects the company's exposure to weakened economic conditions caused by the pandemic, moderate level of leverage and exposure to the highly competitive Irish market.	Adequate
Masmovil	B1 Sta	Weak	The rating reflects Masmovil's track record of revenue growth, the quality of its management and its objective to grow its fixed telecom business. It is constrained by relatively high expected Moody's-adjusted gross leverage, our expectation of negative FCF and the increasingly competitive operating environment in Spain.	Adequate
Silknet	B1 Sta	Adequate	The rating mainly reflects Silknet's strong position as a leading convergent operator in the Georgian telecoms market, which remains relatively underpenetrated, and high EBITDA margin of above 50%. It is mainly constrained by small size, strong competition and significant foreign-currency exposure.	Adequate
UPC	B1 Sta	Weak	The rating reflects UPC's improved business profile pro forma for the acquisition of Sunrise, significant synergies to be realised from the integration of Sunrise, and the good quality of the UPC and Sunrise networks. It is constrained by UPC's high adjusted leverage and continued pressure on revenue and earnings from increasing competition in the Swiss telecoms market.	Adequate
VodaZiggo	B1 Sta	Adequate	The rating reflects VodaZiggo's improved operating performance, successful fixed-mobile convergence and the improved competitive environment in mobile following market consolidation. It remains constrained by high adjusted gross leverage and continued shareholder-friendly policies.	Adequate
Adria	B2 Sta	Weak	The rating reflects Adria's strong operating performance, well-established market positions, improved scale, geographical and business diversification, fully owned and well-invested networks and positive track record of integrations. The rating is constrained by high leverage, lack of significant FCF generation, geographical concentration and continued acquisitions.	Adequate
TDC	B2 Sta	Adequate	The rating mainly reflects TDC's robust operations in Denmark, with strong market shares in mobile, TV, broadband and fixed voice; highly advanced fixed and mobile network infrastructure; and ownership of most of the critical telecoms infrastructure in Denmark. It also reflects high leverage, negative FCF over the next two years and uncertainty over the company's future structure.	Adequate

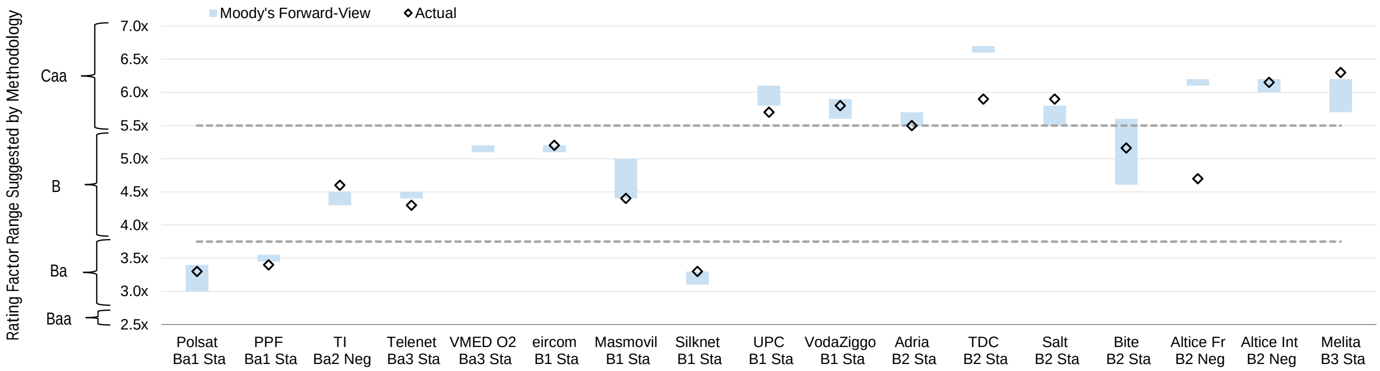
Salt	B2 Sta	Weak	The rating is supported by Salt's growing market share in the Swiss mobile market, its high EBITDA margin, and strong cash flow generation. It is constrained by increasing competition in a convergent telecoms market, high leverage and the risk of further large dividend distributions to the parent.	Adequate
Bite	B2 Sta	Adequate	The rating reflects Bite's strong position in the mobile and TV segments, high-quality mobile network, and leading free-to-air TV channels and content in the Baltic region. It also reflects its relatively modest scale and scope of operations, geographical concentration in the Baltic region and initial high leverage.	Good
Altice Fr	B2 Neg	Weak	The rating reflects the company's position as of one of the leading convergent companies in the French market and improved liquidity. It is constrained by its highly leveraged capital structure, weak FCF, the complexity of the group structure and stretched management resources given the scale of the group.	Adequate
Altice Int	B2 Neg	Weak	The rating mainly reflects the group's geographical diversification and strong market position, well-invested fibre-rich infrastructure, and commitment to reduce net debt/EBITDA. It is constrained by the highly leveraged capital structure, weak FCF generation, the complexity of the group structure, and competitive market conditions in Israel and the Dominican Republic.	Adequate
Melita	B3 Sta	Adequate	The rating mainly reflects the company's challenger position in the Maltese market, with strong market shares in the broadband and pay-TV segments; its fully convergent offering, high-quality broadband network, based on DOCSIS 3.1 technology, and exclusive pay-TV content; and our expectation for continued growth in revenue and EBITDA. The rating also reflects the company´s high leverage and limited scale.	Adequate

Note: Ratings strongly (weakly) positioned are highlighted in blue (orange).
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

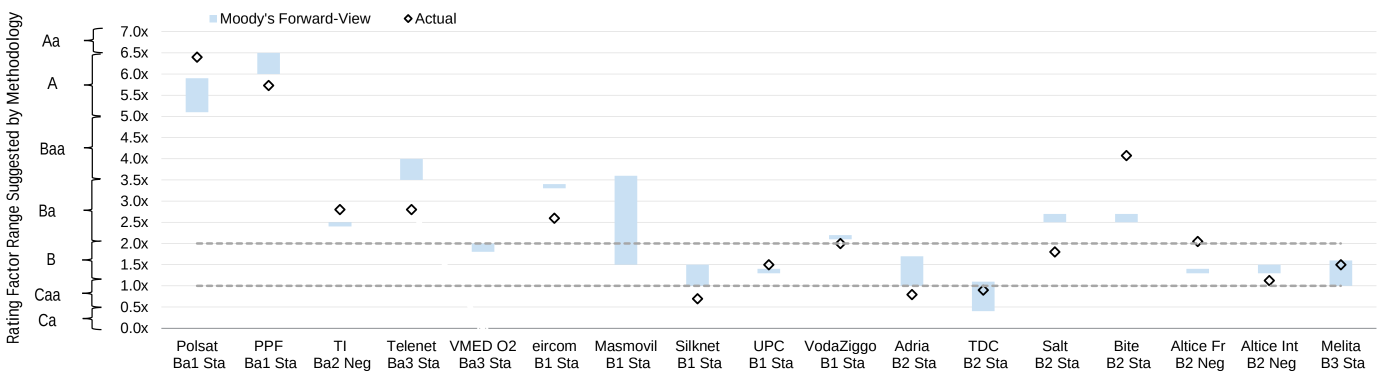
Telecommunications: leverage, interest cover and cash flows

Exhibit 61
Moody's-adjusted gross debt/EBITDA



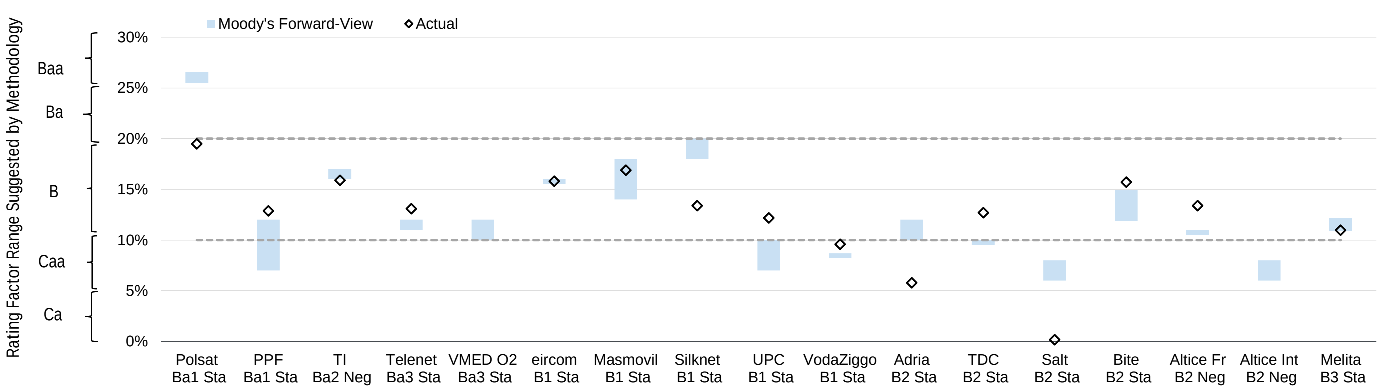
Note: Positioning based on credit metrics published in latest Credit Opinion reports; no actual for VMED O2 as JV has yet to close. UPC and Adria's ratios are pro forma for M&A.
Source: Moody's Investors Service

Exhibit 62
Moody's-adjusted (EBITDA-capex)/gross interest expense



Note: Positioning based on credit metrics published in latest Credit Opinion. No actual for VMED O2 as JV has yet to close. UPC and Adria's ratios are pro forma for M&A. Negative actual for Masmovil.
Source: Moody's Investors Service

Exhibit 63
Moody's-adjusted RCF/debt



Note: Positioning based on credit metrics published in latest Credit Opinion. No actual for VMED O2 as JV has yet to close. UPC and Adria's ratios are pro forma for M&A.
Source: Moody's Investors Service

Telecommunications Service Providers rating methodology

Exhibit 64
Telecommunications Service Providers rating methodology scorecard based on Moody's forward-view

		Scale	Business Profile			Profitability and Efficiency	Financial Policy	Leverage and Coverage			
Company Name	**Actual Rating**	**Revenue ($bn)**	**Business Model, Competitive Environment and Technical Positioning**	**Regulatory and Political**	**Market share**	**Revenue Trend and Margin Sustainability**	**Financial Policy**	**Debt / EBITDA**	**RCF / Debt**	**(EBITDA - CAPEX) / Interest**	**Scorecard Indicated Rating**
Polsat	Ba1	3.0	Ba	Ba	Ba	Baa	Baa	3.0x - 3.4x	26% - 27%	5.1x - 5.9x	Ba1
PPF	Ba1	3.7	A	Ba	Baa	Baa	Ba	3.5x - 3.5x	7% - 12%	6.0x - 6.5x	Ba1
TI	Ba2	17.5 - 17.8	Baa	Ba	A	Ba	Ba	4.3x - 4.5x	16% - 17%	2.4x - 2.5x	Ba2
Telenet	Ba3	2.9 - 3.0	Baa	Ba	Baa	Baa	Ba	4.4x - 4.5x	11% - 12%	3.5x - 4.0x	Ba2
VMED O2	Ba3	14.0	Baa	Ba	Baa	Baa	Ba	5.1x - 5.2x	10% - 12%	1.8x - 2.0x	Ba2
eircom	B1	1.4	Baa	Ba	Baa	Baa	B	5.1x - 5.2x	16% - 16%	3.3x - 3.4x	Ba3
Masmovil	B1	2.1 - 2.4	Ba	Ba	B	A	B	4.4x - 5.0x	14% - 18%	1.5x - 3.6x	Ba3
Silknet	B1	0.1 - 0.2	Ba	Ba	Baa	Baa	B	3.1x - 3.3x	18% - 20%	1.0x - 1.5x	B1
UPC	B1	3.8	Baa	Baa	Baa	Ba	Ba	5.8x - 6.1x	7% - 10%	1.3x - 1.4x	Ba3
VodaZiggo	B1	4.7 - 4.9	Baa	Baa	Baa	Baa	B	5.6x - 5.9x	8% - 9%	2.1x - 2.2x	Ba3
Adria	B2	2.1 - 2.2	Baa	Ba	Ba	Baa	B	5.5x - 5.7x	10% - 12%	1.0x - 1.7x	B1
TDC	B2	2.4 - 2.5	Baa	Ba	Baa	Baa	B	6.6x - 6.7x	10% - 10%	0.4x - 1.1x	B1
Salt	B2	1.1 - 1.2	Ba	Baa	Ba	Ba	B	5.5x - 5.8x	6% - 8%	2.5x - 2.7x	B1
Bite	B2	0.5 - 0.5	Ba	Ba	Ba	Baa	B	4.6x - 5.6x	12% - 15%	2.5x - 2.7x	B1
Altice Fr	B2	13.0 - 13.4	Ba	Ba	Ba	Ba	B	6.1x - 6.2x	11% - 11%	1.3x - 1.4x	B1
Altice Int	B2	4.8 - 5.0	Ba	Ba	Baa	Ba	B	6.0x - 6.2x	6% - 8%	1.3x - 1.5x	B1
Melita	B3	0.1	B	Ba	Ba	Baa	B	5.7x - 6.2x	11% - 12%	1.0x - 1.6x	B2

Please note: Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). Positioning based on credit metrics published in latest Credit Opinion reports.
Source: Moody's Financial Metrics & Moody's Investors Service estimates

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Telecommunications: analytical coverage

Company	CFR entity	Analyst
Adria	Adria Midco B.V.	Agustin Alberti Ausejo
Altice Fr	Altice France Holding S.A.	Ernesto Bisagno
Altice Int	Altice International S.a.r.l.	Ernesto Bisagno
Polsat	Cyfrowy Polsat S.A.	Ernesto Bisagno
TDC	DKT Holdings ApS	Carlos Winzer
eircom	eircom Holdings (Ireland) Limited	Ernesto Bisagno
Masmovil	Lorca Holdco Limited	Carlos Winzer
Salt	Matterhorn Telecom Holding SA	Sebastien Cieniewski
Melita	Melita BidCo Limited	Carlos Winzer
Bite	PLT VII Finance S.a.r.l.	Agustin Alberti Ausejo
PPF	PPF Telecom Group B.V.	Carlos Winzer
Silknet	Silknet JSC	Sebastien Cieniewski
TI	Telecom Italia S.p.A.	Ernesto Bisagno
Telenet	Telenet Group Holding NV	Sebastien Cieniewski
UPC	UPC Holding B.V.	Sebastien Cieniewski
VMED O2	VMED O2 UK Limited	Sebastien Cieniewski
VodaZiggo	VodafoneZiggo Group B.V.	Sebastien Cieniewski

Moody's Investors Service

Telecommunications: analyst contact details

Analyst	Title	Phone	Email
Sebastien Cieniewski	VP-Sr Credit Officer	4420-7772-1964	Sebastien.Cieniewski@moodys.com
Carlos Winzer	Senior Vice President	3491-7688-238	Carlos.Winzer@moodys.com
Ernesto Bisagno	VP-Sr Credit Officer	3902-9148-1120	Ernesto.Bisagno@moodys.com
Agustin Alberti Ausejo	VP-Senior Analyst	3491-7688-309	Agustin.Alberti@moodys.com

Telecommunications: related research

Telecommunications – EMEA Outlook negative as revenue growth still sluggish and competitive pressure persists, 28 October 2020

Telecommunications – Spain: Macro weakness, fierce competition could accelerate consolidation in Spain, 14 October 2020

Telecommunications – France: French spectrum auction is credit neutral: reduced uncertainty offsets high price, 2 October 2020

Fibre upgrade for UK telecoms will increase network competition, 16 July 2020

Court ruling overturning block of O2-Three UK deal is credit positive for telecom sector, 1 June 2020

Telecommunications Service Providers Methodology, 31 January 2017

Travel-related services

Recovery in the travel sector will be uneven and take at least several years

Egor Nikishin, Analyst

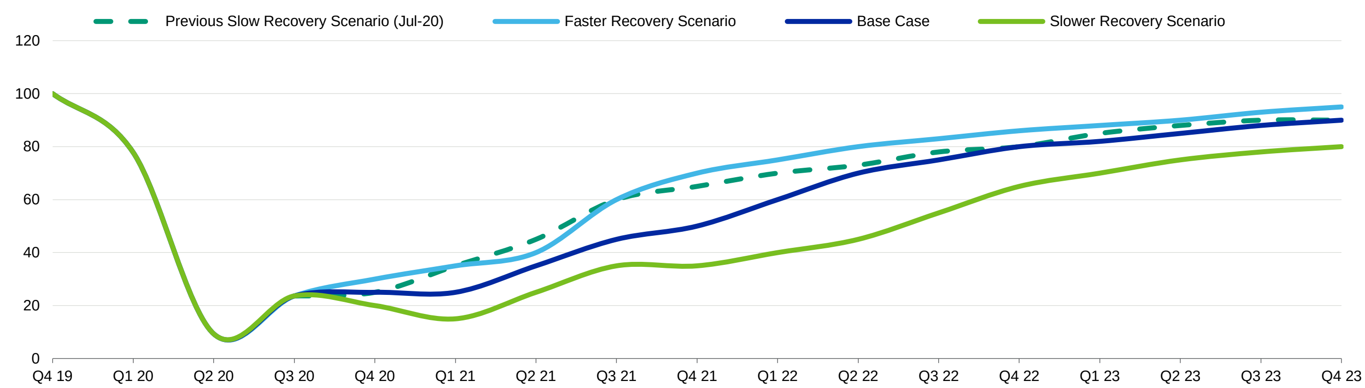
» The coronavirus pandemic continues to disrupt the whole travel sector. Consumer health concerns, government travel restrictions and weakened economic conditions have resulted in limited supply, as well as significantly lower demand. We expect some improvement in the second half of the year, though with significant variation across regions and segments. In particular, European markets are at risk from increasing travel restrictions as governments seek to control new variants of the virus, which could limit the hoped-for recovery in the second half of 2021. Recovery in Europe will lag the US, and international travel will remain more depressed than domestic travel.

» We believe that air travel, a key facilitator of tourism spending, will gradually recover in 2021, but the situation remains highly uncertain. We model a range of outcomes. Our base case assumes that global passenger volumes increase from the current 30% of 2019 levels toward 50% by the end of the year, while a full recovery to anywhere close to pre-pandemic levels is unlikely until 2023 or beyond.

Exhibit 66

Global passenger airline recovery still multiyear and was revised downward in November 2020

Our projections for passenger volumes compared with 2019 (2019 = 100)



Source: Moody's Investors Service

» Businesses that mainly rely on long-haul international travel, such as air caterer gategroup Holding AG (Caa2 negative) and VAT refund service company Franklin UK Midco Limited (Planet, B3 negative), will likely lag. We also expect business travel recovery to be slow because of a combination of health concerns, cost-cutting measures and increasing use of online video platforms such as Zoom and Microsoft Teams. Travel related to internal meetings and conferences are at the highest risk of substitution or slow recovery.

» A largely domestic customer base, affordable holiday options, own transport access and the ability to maintain social distancing will be the key features that allow a quicker than average recovery for companies including holiday park operators Awaze Limited (B3 negative) and Rose Beachhouse B.V. (Roompot, B2 stable). Broad international diversification allowed companies such as Tripadvisor, Inc (Ba3 stable) to benefit from a recovery in local demand across different countries this year. We expect this trend to continue through 2021 until the health threat reduces via vaccinations and travel constraints ease.

» Strong liquidity and continued access to capital markets have been crucial to withstand pandemic-driven lockdowns. Tripadvisor, Dufry AG (B1 negative) and eDreams ODIGEO (B3 negative), all publicly listed companies, entered the crisis with relatively low leverage and were able to secure additional liquidity from a combination of debt, equity and government support.

» Asset-light models for online businesses such as Tripadvisor and Planet helped to quickly reduce costs and keep cash burn low. By contrast, some fixed rents for Dufry and Pax Midco Spain (Areas, B3 negative) and a high proportion of fixed labour costs for gategroup did not allow for quick cost-cutting in line with revenue reduction and resulted in large cash burn.

Travel-related services: rating positioning and rationale

Exhibit 67

Company	Rating	Rating Positioning	Rationale	Liquidity
Tripadvisor	Ba3 Sta	Adequate	The rating reflects the company's position as the leading online travel platform, favourable long-term industry growth prospects beyond the pandemic's impact, disciplined financial policies and high free cash flow (FCF) conversion. It also reflects a significant reduction in revenue because of the pandemic, the rapidly evolving online travel industry, the need to drive growth in revenue metrics for business lines beyond hotel auctions, and the concentration of voting rights by Liberty Tripadvisor Holdings.	Good
Durfy	B1 Neg	Weak	The rating reflects Dufry's historically leading market position, broad geographical diversification, history of stable profitability and positive FCF, and fundamentals conducive to steady organic growth. However, because of its direct exposure to air travel volumes, Dufry's earnings have been hit hard by the pandemic and will remain depressed until the airline industry recovers.	Adequate
Roompot	B2 Sta	Adequate	The rating reflects Roompot's solid position in the Netherlands' holiday park market, flexible cost structure, sizeable real estate asset base and solid FCF generation. It is constrained by the company's small size and seasonality, geographical concentration and elevated leverage.	Adequate
Areas	B3 Neg	Weak	The rating reflects Areas' adequate liquidity, diversification across main transport hubs, leading market position in key EU countries, growing presence in the US and high barriers to entry. It also reflects the company's exposure to air passenger demand, a potential reduction in footfall on railways or motorways, the general economic fallout from the coronavirus pandemic, weak key credit ratios and negative FCF.	Adequate
Awaze	B3 Neg	Weak	The rating reflects Awaze's established position in the European and UK holiday rental markets, business diversification, resilient business model, solid margins and adequate liquidity. The rating is constrained by its high leverage, technological risk and relatively seasonal business.	Adequate
Planet	B3 Neg	Weak	The rating reflects Planet's leading global position in VAT refund processing and the dynamic currency conversion segment, and its diverse client base. However, the pandemic has disrupted the travel business, and the rating is constrained by the company's leveraged capital structure and significant geographical exposure to certain countries by origin and by destination.	Adequate
VFS	B3 Neg	Weak	The rating reflect VFS's leading market position, positive industry fundamentals underpinning visa-outsourcing services before the pandemic, and the company's very broad geographic footprint. The rating is constrained by high sensitivity to temporary shocks in international air travel, high customer concentration and foreign-exchange exposure.	Adequate
eDreams	B3 Neg	Weak	The rating reflects the company's leading positions in the European flight segment, continued migration to the online travel market and conservative financial policies. eDreams' credit standing is challenged by geographical concentration, disintermediation risk and sensitivity to variable costs per booking.	Adequate
TUI	Caa1 Sta	Weak	The rating reflects TUI's standing as the world's leading tourism business, its integrated business model, valuable stakes in joint ventures, the large share of earnings contributed by asset-heavy lines of business, and leisure travel's expected recovery in the longer term. The rating also reflects disruptions to the travel business because of the pandemic, significant cash burn, high leverage and a weaker business profile following potential sales of attractive assets to support liquidity and the capital structure.	Weak
Hotelbeds	Caa1 Neg	Weak	The rating reflects Hotelbeds' leading market position in a fragmented market, customer diversity and operational gearing. Significant challenges exist in the form of the coronavirus pandemic, uncertainty over revenue recovery prospects, the highly competitive accommodation distribution market and exposure to cyclical demand conditions, as well as risks from exogenous shocks.	Weak

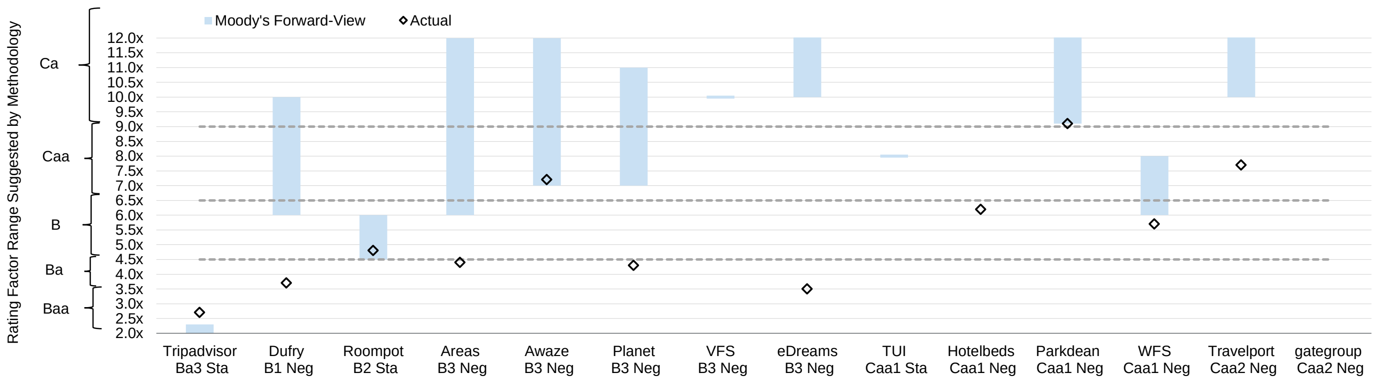
Parkdean	Caa1 Neg	Weak	The rating reflects the company's leading market position in the UK, its potential to quickly recover when the market reopens, and relative stability in three of its four business segments. However, Parkdean faces challenges from high leverage and weakening liquidity, the continued increase in the UK's national living wage and the expected recession in the UK.	Weak
WFS	Caa1 Neg	Weak	The rating reflects WFS' strong position in the cargo handling business, good geographical diversification and relatively stable client base. It also reflects significant challenges from the pandemic, operational headwinds from the cargo business and weak liquidity.	Weak
Travelport	Caa2 Neg	Weak	The rating reflects Travelport's leading market position, diversified customer base with a balanced geographical footprint, track record of cross-selling periphery services, and stronger security package following its debt restructuring. It also reflects challenges from the uncertainty of the pace of business recovery, the risk of increasing competition from companies with stronger financial profiles, unsustainable leverage over the next 12-18 months, weak liquidity, and the high risk of a future additional distress exchange.	Weak
gategroup	Caa2 Neg	Weak	The rating is supported by gategroup's leading position in the independent airline catering business, with long-standing customer relationships and good geographic diversification, supported by a broadly flexible cost base and supportive shareholders willing to provide liquidity. It also reflects very high leverage and cash burn expected through 2021, revenue tied to passenger volumes and increased debt restructuring risk.	Weak

Note: Ratings weakly positioned are highlighted in orange.
Source: Moody's Investors Service

See end of the section for analyst contact details and links to companies' home page on Moodys.com

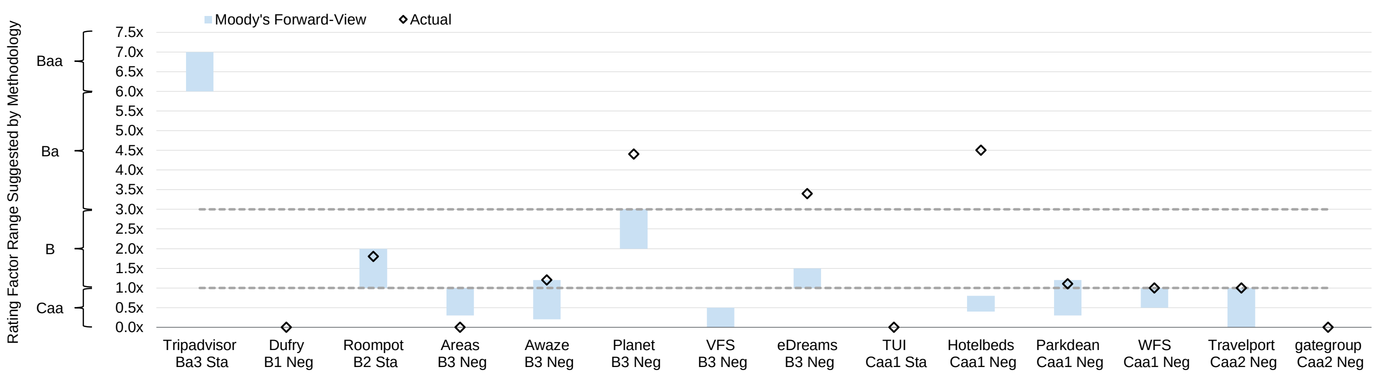
Travel-related services: leverage, interest cover and cash flows

Exhibit 68
Moody's-adjusted debt/EBITDA



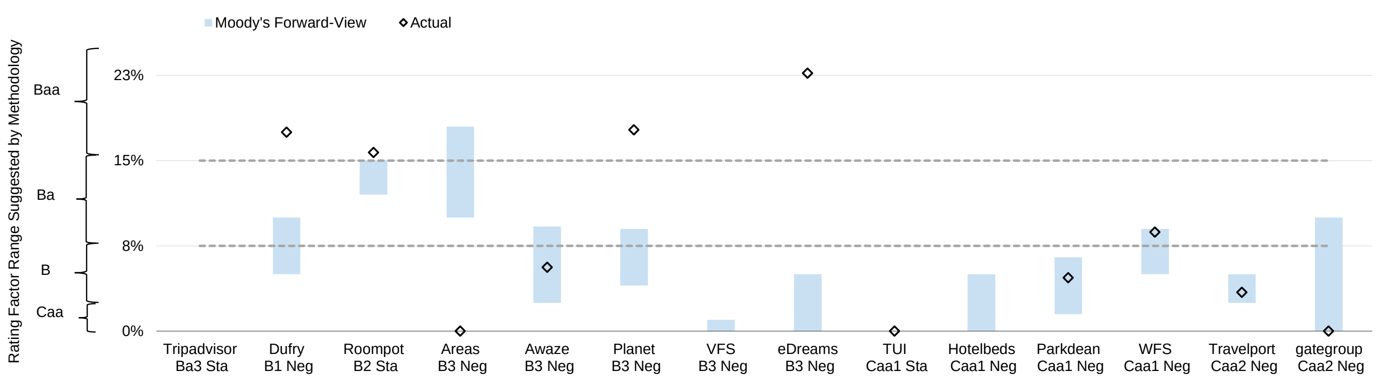
Note: VFS' leverage is expected to remain above 10x, TUI's around 8x, Hotelbed's between 25x and 27x, and gategroup's between 13x and 20x.
Source: Moody's Investors Service

Exhibit 69
Moody's-adjusted EBITA/interest expense



Note: Dufry's, TUI's and gategroup's interest cover is expected to remain below zero.
Source: Moody's Investors Service

Exhibit 70
Moody's-adjusted RCF/net debt



Note: Tripadvisor's RCF/net debt is expected at 100%; TUI's is expected to remain negative.
Source: Moody's Investors Service

Global business and consumer service industry rating methodology

Exhibit 71

Global business and consumer service industry methodology scorecard based on Moody's forward-view

Company Name	Actual Rating	Demand Characteristics	Competitive Profile	Revenue ($bn)	EBITA margin	EBITA / Interest	Debt / EBITDA	RCF / Net Debt	Financial Policy	Scorecard-indicated rating
Tripadvisor	Ba3	Ba	Ba	1.2 - 1.4	13% - 16%	6.0x - 7.0x	2.0x - 2.3x	100%	Ba	Ba1
Dufry	B1	N/A	N/A	4.0 - 6.0	Negative	Negative	6.0x - 10.0x	5% - 10%	Ba	B1
Roompot	B2	B	B	0.4	8% - 13%	1.0x - 2.0x	4.5x - 6.0x	12% - 15%	B	B3
Areas	B3	N/A	N/A	1.4 - 1.8	2% - 6%	0.3x - 1.0x	6.0x - 12.0x	10% - 18%	B	Caa1
Awaze	B3	B	Ba	0.6 - 0.8	3% - 12%	0.2x - 1.2x	7.0x - 12.0x	3% - 9%	B	Caa1
Planet	B3	B	B	0.2 - 0.3	6% - 12%	2.0x - 3.0x	7.0x - 11.0x	4% - 9%	B	B3
VFS	B3	B	Ba	0.4	3% - 6%	0.0x - 0.5x	>10.0x	0% - 1%	B	Caa2
eDreams	B3	B	B	0.3 - 0.4	10% - 14%	1.0x - 1.5x	10.0x - 15.0x	-5% - 0%	Ba	Caa1
TUI	Caa1	Ba	Ba	10.0 - 18.0	Negative	Negative	>8.0x	Negative	B	B2
Hotelbeds	Caa1	Ba	B	0.4 - 0.5	15% - 17%	0.4x - 0.8x	25.0x - 27.0x	-5% - 0%	Ba	B3
Parkdean	Caa1	B	B	0.4 - 0.6	5% - 14%	0.3x - 1.2x	9.1x - 16.5x	2% - 7%	B	Caa1
WFS	Caa1	B	Ba	1.3 - 1.4	3% - 6%	0.5x - 1.0x	6.0x - 8.0x	5% - 9%	B	Caa1
Travelport	Caa2	Ba	Ba	1.4 - 1.6	10% - 15%	0.0x - 1.0x	10.0x - 14.0x	3% - 5%	Caa	B3
gategroup	Caa2	B	Ba	3.0 - 4.0	Negative	Negative	13.0x - 20.0x	-8% - 2%	Ba	B3

Notes: [1] Scorecard indicated ratings higher (lower) than the actual ratings are shown in green (red). [2] Based on metrics published in Moody's latest Credit Opinion report. [3] The table above is based on the Global Business and Consumer Service Industry rating methodology published on 3 October 2016.
Source: Moody's Investors Service

Key for sub-factor ratings:

Aaa	Aa	A	Baa	Ba	B	Caa	Ca

Travel-related services: analytical coverage

Company	CFR entity	Analyst
Awaze	Compass III Limited	Ramzi Kattan
Dufry	Dufry AG	David Beadle
eDreams	eDreams ODIGEO S.A.	Gianni Fabrizio Marchesi
Planet	Franklin UK Midco Limited	Maria Maslovsky
gategroup	gategroup Holding AG	Egor Nikishin
Hotelbeds	HNVR Midco Limited	Gianni Fabrizio Marchesi
VFS	Kiwi VFS SUB I S.a r.l.	Kristin Yeatman
Areas	Pax Midco Spain	Eric Kang
WFS	Promontoria Holding 264 B.V.	Nathalie Tuszewski
Parkdean	RICHMOND UK HOLDCO LIMITED	Ramzi Kattan
Roompot	Rose Beachhouse B.V.	Nathalie Tuszewski
Travelport	Toro Private Holdings II, Limited	Luigi Bucci
Tripadvisor	Tripadvisor, Inc.	Carl Salas
TUI	TUI AG	Vitali Morgovski

Moody's Investors Service

Travel-related services: analyst contact details

Analyst	Title	Phone	Email
Eric Kang	VP-Senior Analyst	33-1-53-30-338	Eric.Kang@moodys.com
David Beadle	VP-Sr Credit Officer	4420-7772-5390	David.Beadle@moodys.com
Gianni Fabrizio Marchesi	VP-Senior Analyst	33-1-53-30-1024	Fabrizio.Marchesi@moodys.com
Carl Salas	VP-Sr Credit Officer	1212-553-4613	Carl.Salas@moodys.com
Egor Nikishin	Analyst	4420-7772-8737	Egor.Nikishin@moodys.com
Maria Maslovsky	VP-Senior Analyst	4420-7772-5502	Maria.Maslovsky@moodys.com
Nathalie Tuszewski	AVP-Analyst	4685-1791-262	Nathalie.Tuszewski@moodys.com
Luigi Bucci	Analyst	4420 7772-1961	Luigi.Bucci@moodys.com
Vitali Morgovski	AVP-Analyst	4969-7073-0767	Vitali.Morgovski@moodys.com
Ramzi Kattan	VP-Senior Analyst	4420-7772-1090	Ramzi.Kattan@moodys.com
Kristin Yeatman	VP-Senior Analyst	4420-7772-5213	Kristin.Yeatman@moodys.com

Travel-related services: related research

Lodging earnings linked to leisure travel will rebound more quickly as business travel lags, 17 February 2021

More infections, stringent travel restrictions will slow air travel recovery in 2021, 18 November 2020

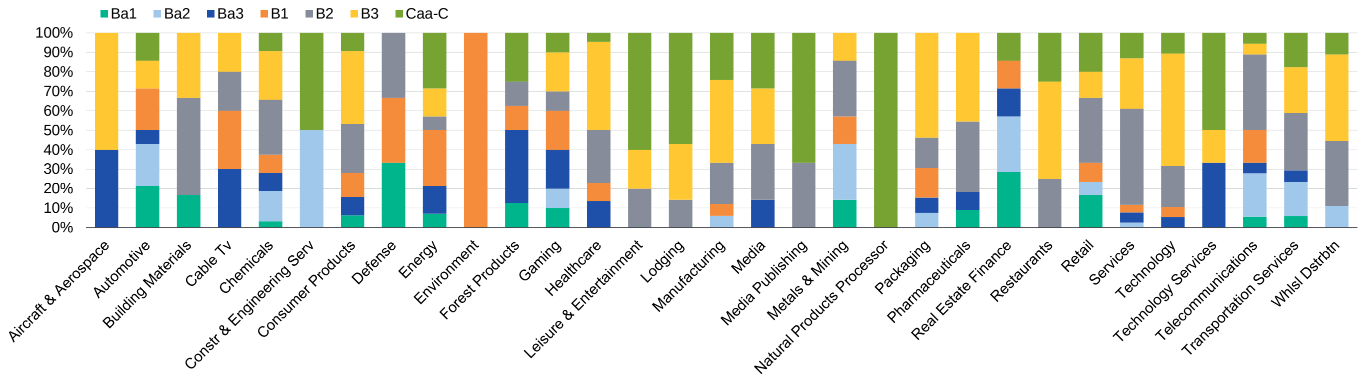
Business and Consumer Service Industry Rating Methodology, 3 October 2016

Appendices

Sector statistics

Exhibit 74

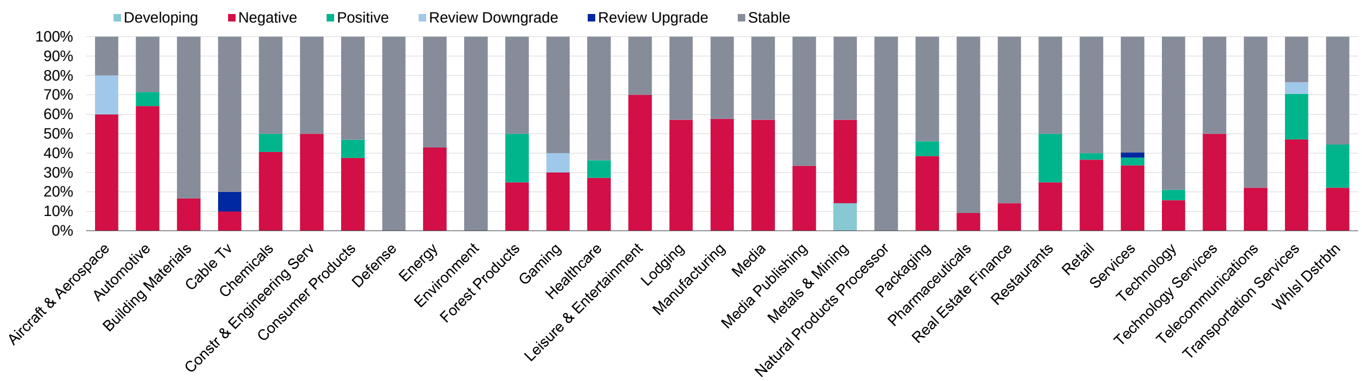
Corporate family rating (CFR) distribution by industry – Western Europe
As of 31 January 2021



Source: Moody's Investors Service

Exhibit 75

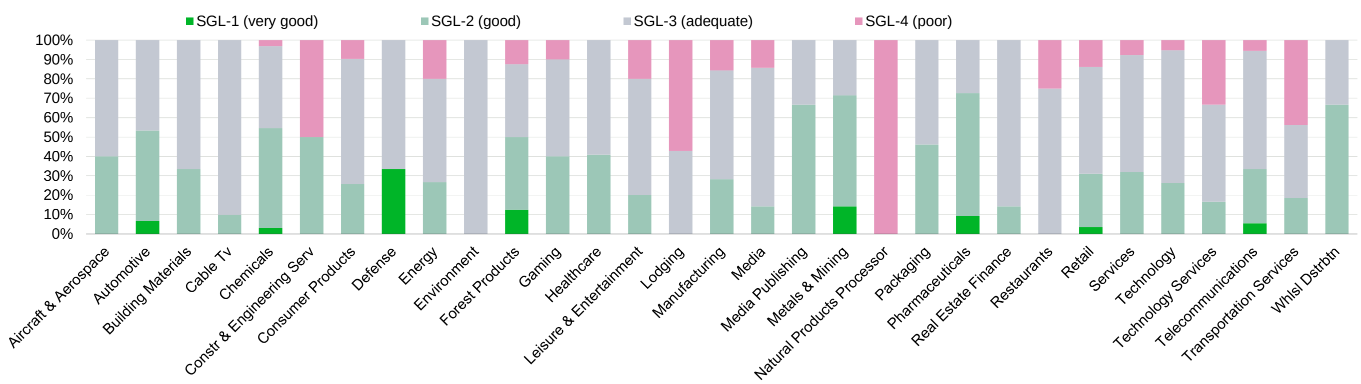
Rating outlook distribution by industry – Western Europe
As of 31 January 2021



Source: Moody's Investors Service

Exhibit 76

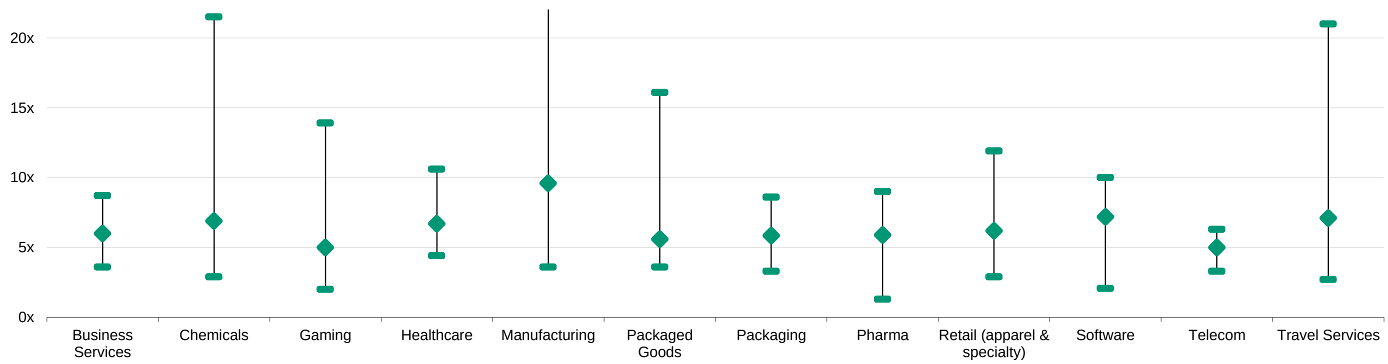
Speculative-grade liquidity scores by industry – Western Europe
As of 31 January 2021



Source: Moody's Investors Service

Exhibit 77

Moody's-adjusted leverage by selected industry



Notes: [1] Based on actual leverage published in Moody's latest Credit Opinion reports for the companies included in the report. [2] The maximum leverage for Manufacturing sector stands at 40x.
Source: Moody's Investors Service

Endnotes

1 PCR tests detect whether someone has the virus and are done by taking a nose or throat swab.

2 A serology test is a blood test that can detect whether a person has antibodies to the virus that causes COVID-19. Antibodies are typically detected in people who have been infected with the virus at some time in the past or are recovering from it.

3 To March 2021 for cash advances.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

REPORT NUMBER 1262727

MOODY'S INVESTORS SERVICE