

Research Update:

ZF Friedrichshafen Outlook Revised To Stable From Negative On Deleveraging Prospects Despite Supply Chain Disruptions

March 29, 2022

Rating Action Overview

- Auto supplier ZF Friedrichshafen AG is pursuing its efforts to deleverage its balance sheet following the debt-funded acquisition of Wabco in 2020, which should lead to a funds from operations (FFO)-to-debt ratio to above 20% in 2022 from about 18% in 2021.
- In addition, ZF's end market diversity and supportive financial policy should mitigate operating risks linked to incremental supply chain disruption from Russia's military intervention against Ukraine and persisting inflation, and ensure that the company's discretionary cash flow (DCF) to debt sustainably exceeds 5%.
- We revised our outlook to stable from negative and affirmed our 'BB+' long-term issuer credit rating on ZF; we also affirmed our 'BB+' issue rating and '3' recovery rating on ZF's unsecured debt.
- The stable outlook reflects ZF's commitment to reduce its leverage such that its FFO-to-debt ratio increases to above 20% in the next 12 months despite rising input costs and supply chain disruptions.

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Rating Action Rationale

We think that ZF's management will maintain its focus on deleveraging through cost discipline and a supportive financial policy. In 2022, market conditions will likely remain challenging for auto suppliers such as ZF, due to incremental supply chain disruptions from the Russia-Ukraine conflict and persisting inflation resulting in higher energy, logistics, and raw material costs. In that context, the company's continued discipline on costs and success in its negotiations with customers to offset rising input costs will be key to mitigate a potential dilution in its EBITDA margin. In our base-case scenario, we assume that ZF's EBITDA margin will decline to 8.0%-8.5% in 2022 from 8.7% in 2021. Yet for 2022, we forecast that the company's FFO-to-debt ratio will increase to above 20% (from 18% in 2021) and its debt-to-EBITDA ratio will decrease to below 4.0x

(from 4.3x last year), which reflects our view of ZF's resilience to bumpy market conditions. In our scenario, deleveraging will be supported by asset disposals and relatively small dividend payout (of 10%-12% of free operating cash flow [FOCF]). This leads us to assume that ZF will sustain a DCF-to-debt ratio to above 5% from 2022 onward, a level we consider commensurate with the 'BB+' rating. Conservative financial policy is an important pillar of our credit view on ZF. To accelerate deleveraging after the large debt-funded Wabco acquisition, we understand ZF could consider additional asset sales that we do not include in our base-case scenario, to accelerate debt repayments.

ZF's exposure to commercial vehicles, aftermarket, and industrial segments helps finance investment to exploit growth opportunities from auto sector megatrends. Scale and end market diversity are a material consideration in our view of the company's above-average resilience in 2022. With revenue of €38.3 billion, ZF is one of the largest auto suppliers globally. Thanks to its exposure to industrial, aftermarket, and commercial vehicles, we believe the company will be less affected by bumpy market conditions for light vehicles in 2022. More importantly, the earnings contribution of these businesses (which accounted for about 31% of 2021 sales) exceeds the group's average and helps financing elevated research and development (R&D) investments necessary to maintain ZF's competitiveness in the field of e-mobility, software, and autonomous driving.

Relaxation of R&D investment will boost ZF's FOCF in 2023. The bulk of the company's investments focus on the development of innovative products in e-mobility (including e-motors, inverters) and automated driving assistance systems. Over the next two years, we assume that ZF will maintain elevated expenses in R&D to adapt its product portfolio to the transforming trends in the auto sector. Nevertheless, in our view, the reallocation of capital from mature products into new ones and the start of production of new components and systems will help reduce the intensity of R&D investments as a percentage of sales (to 6.5%-6.6% on average over 2023-2024 from 6.8% in 2021), thereby supporting an improvement in EBITDA margin toward 9% and in FOCF toward €1.2 billion in 2023 (from €0.6 billion in 2021).

Outlook

The stable outlook reflects ZF's commitment to reduce its leverage such that its FFO-to-debt ratio increases to above 20% in the next 12 months despite rising input costs and supply chain disruptions. It also reflects our expectation that ZF will improve its FOCF-to-debt ratio toward 10% while maintaining its DCF-to-debt ratio well above 5%.

Downside scenario

We could lower our rating on ZF if the difficult market environment, with persisting inflation and supply chain bottlenecks, led to a weakening in ZF's credit metrics such that its:

- FFO to debt stays below 20%.
- FOCF to debt fails to recover to close to 10%.
- DCF to debt remains below 5%.

Upside scenario

We could raise our rating on ZF if the company's investment in e-mobility, software, and autonomous driving technologies allow the company to increase its market share in these fast-growing fields translating into an EBITDA margin exceeding 10%. An upgrade would also hinge on the company's supportive financial policy leading to its FFO to debt approaching 30% and FOCF to debt close to 15%.

Company Description

Headquartered in Friedrichshafen, Germany, ZF is a global leader in driveline and chassis technology, as well as safety technology after acquiring TRW Automotive in 2015. With €38.3 billion in revenue, ZF is the third-largest auto supplier worldwide, behind Robert Bosch GmbH and Denso Corp. Its operations are organized into nine main divisions:

- Electrified powertrain technology, which provides automatic or manual transmissions, axle drives, and powertrain modules (23% of 2021 sales)
- Car chassis technology (18%)
- Active safety systems (13%)
- Passive safety systems (10%)
- Commercial vehicle technology (9%)
- Industrial technology (8%)
- Commercial vehicle control systems (7%)
- Aftermarket (7%)
- Electronics and advanced driver-assistance systems (4%)

The ZF group is 93.8% owned by the Zeppelin Foundation, which is managed by the city of Friedrichshafen. The foundation uses its profits for philanthropic purposes. The remaining 6.2% are owned by the Dr. Jürgen and Irmgard Ulderup Foundation. The company has a global footprint, operating in 188 locations in 31 countries at end-2021.

Our Base-Case Scenario

Assumptions

- Global real GDP rising by about 4.2% in 2022 versus 5.6% in 2021, followed by expected growth of 3.7% in 2023.
- Global light vehicles unit production increasing by 3%-4% in 2022 after a modest growth of about 2% in 2021, then rebounding by 8%-10% in 2023.
- ZF's sales growing by 6%-8% in 2022 after growth of 17.5% in 2021, then increasing by 7%-9% in 2023. We assume that the company will expand slightly faster than the auto market thanks to strong demand of e-mobility components and automated systems. ZF's industrial and aftermarket segments should grow in line with GDP, while we expect continued solid growth in

the commercial vehicles related segments based on the current order book.

- EBITDA margin of 8.0%-8.5% versus 8.7% in 2021, reflecting the impact from higher costs of raw material, energy, and logistics that are not fully offset by negotiations with customers or productivity gains. The increase in EBITDA margin in 2023 toward 9% mostly reflects the lower amount of R&D as a share of sales (although still increasing in absolute terms).
- Working capital outflow of up to €100 million in 2022 and 2023 to fund growth.
- Capital expenditure (capex) of €1.6 billion-€1.8 billion in 2022 and €1.9 billion-€2.1 billion in 2023, up from €1.5 billion in 2019.
- Dividends of €119 million in 2022, followed by €100 million-€150 million in 2023, compared with €59 million in 2021 and in line with the company's financial policy to distribute 18% of the previous year's net income.

Key metrics

ZF Friedrichshafen--Key Metrics*

Bil. €	--Fiscal year ended Dec. 31--					
	2018a	2019a	2020a	2021a	2022e	2023f
Revenue	36.9	36.5	32.6	38.3	40.0-42.0	43.0-45.0
Revenue growth (%)	1.3	(1.1)	(10.7)	17.5	6-8	7-9
EBITDA	3.4	2.9	1.8	3.3	3.4-3.6	3.9-4.1
EBITDA margin (%)	9.2	8.1	5.6	8.7	8.0-8.5	8-9
Funds from operations (FFO)	2.6	2.4	1.2	2.5	2.8-3.0	3.1-3.3
Capital expenditure	1.7	1.7	1.3	1.5	1.6-1.8	1.9-2.1
Free operating cash flow (FOCF)	0.7	0.5	0.6	0.5	0.9-1.1	1.0-1.2
Dividends (mil. EUR)	235	199	118	59	119	100-150
Debt	7.8	8.4	15.9	14.3	13.2-13.6	12.4-12.8
Debt to EBITDA (x)	2.3	2.8	8.7	4.3	3.5-4.0	3.0-3.5
FFO to debt (%)	33.3	28.9	7.6	17.8	20-22	24-26
FOCF to debt (%)	8.9	5.4	3.7	3.8	7-9	8-10
DCF to debt (%)	5.9	3	3	3.4	6-8	7-9

*All figures adjusted by S&P Global Ratings. Key debt adjustments include €3.9 billion of pension liabilities. a--Actual. e--Estimate. f--Forecast.

Liquidity

We expect ZF will maintain strong liquidity. We anticipate that sources of liquidity will exceed uses by more than 1.5x over the 12 months after Dec. 31, 2021, and by more than 1.0x in the following 12 months. We would also expect liquidity sources to exceed uses even if EBITDA unexpectedly fell 30% below our base-case forecast.

ZF maintains well-established bank relationships and access to debt capital markets, as demonstrated by its frequent refinancing activities over recent years that have left it with a fairly

long-dated maturity profile. The company also demonstrates generally prudent risk management and financial covenant headroom, which we expect will continue. It has debt maturities in 2022 that are well covered by existing, unused committed credit lines and on-balance-sheet cash.

Principal liquidity sources include:

- Cash of about €2.1 billion (net of €300 million of cash that is not immediately available).
- An undrawn committed line of credit of about €3.0 billion maturing in July 2023.
- Estimated reported cash FFO of €2.8 billion-€3.0 billion in the next two years.

Principal liquidity uses include:

- About €0.6 billion to repay short-term borrowings in the coming 12 months.
- Capex of €1.6 billion-€1.8 billion.
- Seasonal working capital requirement of about €500 million.
- Small dividend payouts of €119 million.

Covenants

Under the agreement for its senior facility, ZF is subject to financial maintenance covenants stipulating that net debt to EBITDA should not exceed 3.75x until Sept. 30, 2022; 3.5x from Dec. 31, 2022-Sept. 30, 2023; and 3.25x from Dec. 31, 2023. We forecast covenant headroom of about 30% in 2022-2023 in our base-case scenario.

Issue Ratings - Recovery Analysis

Key analytical factors

- Our issue rating on ZF's senior unsecured debt is 'BB+', with a '3' recovery rating based on our expectation of meaningful (50%-70%; rounded estimate: 55%) recovery prospects in a default scenario.
- The recovery rating reflects the company's fairly strong business position but is constrained by a large amount of unsecured debt.
- In our hypothetical default scenario, we envision a downturn in the industry that will be further exacerbated by intense competition. This would lead to drop in volumes, along with a fall in prices, which would cause the sales of the company to decline.
- We value ZF as a going concern, based on its strong market position in the auto supply industry, specifically in the manufacture of transmission and chassis, and its diverse base of customers.

Simulated default assumptions

- Year of default: 2026
- Jurisdiction: Germany (jurisdiction ranking A)

Simplified waterfall

- Emergence EBITDA: €2.0 billion
- --Capex: 3% of revenue
- --Cyclicality adjustment: 10%, standard for the sector
- --No operational adjustment
- Multiple: 5.5x
- Gross recovery value: €10.8 billion (including an adjustment for pension liabilities)
- Net recovery value for waterfall after administration expenses (5%): €8.4 billion
- Total senior unsecured debt claims: €14.6 billion
- --Recovery range: 50%-70%; rounded estimate: 55%
- --Recovery rating: 3

All debt amounts include six months of prepetition interest.

Ratings Score Snapshot

Issuer Credit Rating: BB+/Stable/--

Business risk: Satisfactory

- Country risk: Low
- Industry risk: Moderately high
- Competitive position: Satisfactory

Financial risk: Significant

- Cash flow/leverage: Significant

Anchor: bbb-

Modifiers:

- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Strong (no impact)
- Management and governance: Fair (no impact)
- Comparable rating analysis: Negative (-1 notch)

Stand-alone credit profile: bb+

ESG credit indicators: E-2, S-2, G-2

Related Criteria

- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- Criteria | Corporates | Recovery: Methodology: Jurisdiction Ranking Assessments, Jan. 20, 2016
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Ratings List

Ratings Affirmed; Outlook Action

	To	From
ZF Friedrichshafen AG		
Issuer Credit Rating	BB+/Stable/--	BB+/Negative/--
Ratings Affirmed		
ZF Finance GmbH		
ZF Europe Finance B.V.		
ZF North America Capital Inc.		
TRW Automotive Inc.		
Senior Unsecured	BB+	
Recovery Rating	3(55%)	

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