

Research Update:

Russian Titanium Producer VSMPO-AVISMA Rated 'BB+'; Outlook Stable

March 25, 2021

Rating Action Overview

- Public Stock Company Corporation VSMPO-AVISMA is the world's largest titanium producer, with particularly strong positions in the aerospace industry, where its market share reaches 30%, and strong EBITDA margins above 30%.
- We expect that, despite COVID-19-related setbacks in the aviation industry, VSMPO-AVISMA's funds from operations (FFO) to debt will be at least 60% on average over the next few years, thanks to working capital management and postponed dividends
- We assigned our 'BB+' long-term rating to VSMPO-AVISMA.
- The stable outlook reflects our expectation that VSMPO-AVISMA will focus on preserving FFO to debt above 60%, while its operating performance, alongside the overall industry, gradually recovers from the pandemic-driven downturn.

Rating Action Rationale

Leading positions in the global titanium market, high barriers to entry, and long-standing relationships with top aircraft and engine manufacturers are VSMPO-AVISMA's key strengths.

VSMPO-AVISMA is the largest supplier of titanium in the world, with a global market share of about 25%. The company is also one of the world's oldest industrial suppliers of titanium, and its alloys, particularly for aerospace industry, date back to 1933. The company's history points to its large knowledge base, developed technology and excellent quality track record. VSMPO-AVISMA's key market is aerospace (aircraft and jet engines), where it generates roughly three quarters of its revenue and holds nearly 30% of the market. Furthermore, the group has been supplying key global aircraft manufacturers with alloys (usually with aluminum and vanadium) for more than 25 years (since its first contract with Boeing in 1994). VSMPO-AVISMA's high-quality products, which is one of the critical requirements for aviation materials, underpins the company's long-standing relationships with its key customers (such Boeing and Airbus).

PRIMARY CREDIT ANALYST

Mikhail Davydov
Moscow
+ 7 49 5662 3492
mikhail.davydov
@spglobal.com

SECONDARY CONTACT

Alexander Griaznov
Moscow
+ 7 49 5783 4109
alexander.griaznov
@spglobal.com

ADDITIONAL CONTACT

Industrial Ratings Europe
Corporate_Admin_London
@spglobal.com

VSMPO-AVISMA's foothold in the titanium industry--where unique product characteristics create high barriers to entry--provide good long-term demand fundamentals. Titanium, thanks to its high strength-to-density ratio, has multiple unique uses, such as in landing gear, engine pylons, and critical structural elements in aircraft manufacturing, particularly jet engines, and in aggressive environments, such as chemical and desalination plants, thanks to its resistance to corrosion. Additionally, its biocompatibility lends itself to medical uses, such as surgical instruments and implants. Exceptional quality standards in the aerospace industry--VSMPO-AVISMA's key market--means it takes between five and 15 years to introduce a new alloy or certify a new supplier, and this creates natural barriers to entry. However, this gives producers with long-term quality track record, such as VSMPO-AVISMA, an advantage in one of the most lucrative titanium-consuming sectors. We note that quality could be at least as important as price for the aerospace customers. Long certification process also means fast replacement of titanium with another material in aviation would be nearly impossible, since any new plane with a different material used would take more than a decade to develop, giving producers enough time to adjust to the change in demand. At this time, newer planes such as Airbus a350 or Boeing 787 are actually using incrementally more titanium since it performs much better than aluminum in places where it is used alongside composites (they result in aluminum corroding).

High country risk in Russia and exposure to a single metal are key rating constraints.

VSMPO-AVISMA is fully exposed to the titanium market and the aerospace segment. The latter, in particular, can be volatile at times of stress in the world economy when the aviation industry slows down, as was the case in 2009 or due to travel restrictions like the ones implemented during the current coronavirus pandemic. Furthermore, with its three largest customers generating 46% of revenue in 2020, the group has a very high customer concentration. This is a clear constraining factor, in our view, despite the clients being industry leaders. We understand that VSMPO-AVISMA is gradually expanding into other industries. Expansion won't be a fast process, however, because the company will need to increase production capacity, which is normally almost fully utilized with aerospace orders. VSMPO-AVISMA's exposure to Russia, where all of its assets are located, is another rating constraint. The changing regulatory environment and taxation practices are among the key risks for VSMPO-AVISMA. Russia's confrontation with the western countries could lead to business disruptions for Russian companies, especially for those that produce materials used by the defense industry (the U.S. department of commerce actually put VSMPO-AVISMA on the export control list, by mistake, before quickly removing it in 2020). The Russian government might consider limiting export of strategic material if tension with the western countries continue escalating, but this is not our base case. Moreover, we note that VSMPO-AVISMA continues to sell up to a third of its products domestically (although at a somewhat lower price), controlling roughly 90% of the domestic titanium market.

Low cost of production, thanks to low labor costs and cheap ruble, and high profitability support VSMPO-AVISMA's resilient EBITDA generation. We expect VSMPO-AVISMA's EBITDA to contract in 2021 to about \$310 million-\$330 million from \$466 million in 2020. This decline suggests relative resilience, however, considering our expectation of revenue to drop by up to 15% in 2021 due to muted sales volumes and slightly lower prices. EBITDA should start to recover in 2022 to \$360 million-\$390 million and further in 2023 to \$410 million-\$440 million, on the back of a rebound in sales following the recovery of aircraft deliveries by major manufacturers. However, we don't expect the company will reach the pre-COVID-19 EBITDA level of \$589 million any time soon. We note that the depreciating ruble has contributed to EBITDA's resilience. The ruble was

about 10% lower in 2020 than in 2019, and we anticipate a limited likelihood of appreciation in the coming years. In 2020, the company took measures focused on reducing production, as well as targeting of lower waste, energy efficiency, reduction of administrative costs and higher labor productivity. As a result, the 37% EBITDA margin in 2020 was actually slightly better than the 36% posted in 2019. We expect the margin to fall to about 30% in 2021 with gradual recovery thereafter.

VSMPO-AVISMA's leverage should remain conservative with FFO to debt of at least 60% for the next few years thanks to effective working capital management and cost optimization.

The company has responded to the severe COVID-19-related setbacks with cash-preserving measures, including deferring of the dividends and reducing production, thereby releasing its working capital. Until 2020, VSMPO-AVISMA had paid \$200 million-\$400 million dividends per year, so deferring the payment in 2020 materially eased the strain on cash flow. We expect the company to return paying up to \$250 million per year in 2022, with no payments in 2021. Working capital management, which has led to significant working capital release of \$163 million (partly thanks to advance purchases by some large customers), was another efficiency measure in 2020. In 2021-2022, we expect slightly negative working capital as further elevated purchases from suppliers might not be achievable.

The group's track record of non-strategic investments is a constraining factor for the rating.

VSMPO-AVISMA has made several sizable, non-strategic investments in the past, such as two purchases of RusHydro shares, spending \$126 million in 2017 and \$211 million in 2018. There is no operational or strategic synergy between the companies and we consider such investments as high risk. The group also purchased \$102 million worth of gold bars in 2019, which was opportunistic and unrelated to the core business. Additionally, we note that in 2020 the group put most of its cash on a short-term deposit in a single relatively small bank, which we view as an aggressive treasury policy. The deposit has since expired and was placed in large Russian banks while the treasury policy was updated to avoid such cases in future. We understand the company does not expect to make any nonstrategic investments in the future, but any reassessment of its financial policy would hinge on a track record of the updated policies.

The board's lack of independence also constrains the rating, in our view.

We view VSMPO-AVISMA's board composition as not sufficiently independent as most of its members have previously worked at or were related to Rostec, a 25% shareholder of the company, or the chairman of VSMPO-AVISMA's board and Rostec's CEO, Mr. Sergey Chemezov. We note that the current majority shareholder, Mr. Mikhail Shelkov, is a former Rostec employer and a former advisor to Mr. Chemezov. Although the board had no negative impact on VSMPO-AVISMA's operations, except for approving the aforementioned nonstrategic investments, we view current governance set up as somewhat weaker than that of the rated peers in our investment-grade category. As such, we do not expect to rate the company above the current rating level in the near term.

Outlook

The stable outlook reflects our expectation that VSMPO-AVISMA will sustain solid operating performance in the current challenging conditions. Although we expect VSMPO-AVISMA's EBITDA to decline further in 2021 to \$320 million-\$340 million, we expect FFO to debt will remain above 60% thanks to cost-cutting and postponing of dividends to preserve cash and liquidity buffers. We expect the company to abstain from investment in non-strategic assets as it has done in the past,

while maintaining prudent treasury policy.

With relatively high maturities in the coming years we expect the company to maintain at least adequate liquidity at all times.

Downside scenario

We could lower the rating in case of protracted, more severe crisis in the aviation industry, pushing FFO to debt toward 45%. We could also lower the rating if the identified weaknesses in governance and policies result in related-party transactions, sizeable non-core investments or credit-negative decisions.

At this stage we believe that further tensions between Russia and western countries will not create any disruptions for VSMPO-AVISMA as it would be fairly difficult for U.S. and European producers to replace them. However, if the conflict escalates more than we expect, VSMPO-AVISMA might inadvertently be affected by operational setbacks.

Upside scenario

We see limited upside potential in the rating at the moment, given that structural improvements in governance and building a track record of conservative financial management will take longer than 12 months.

Company Description

VSMPO-AVISMA, headquartered in Verkhnyaya Salda, is the world's largest vertically integrated manufacturer of titanium products, such as slabs, ingots, plates, coils, tubes, pipes, forged and machined products. The company's operations span the full production cycle: From raw materials to finished machined products. The company has virtually no mining operations. VSMPO-AVISMA has two major production sites, both in Russia:

- VSMPO, located in Verkhnyaya Salda, produces titanium alloys from titanium sponge and then processes them into wide range of semi-finished products
- AVISMA, located in Berezniki, produces high quality titanium sponge which it sells to VSMPO for further processing

The company today supplies around 90% of Russia's and 25% of global titanium requirements. It has strategic alliances with leading aircraft and engine manufacturers like Boeing, Airbus, and Rolls-Royce, among others. In 2019, the company generated revenue of around \$1.3 billion and EBITDA of around \$451 million.

VSMPO-AVISMA is controlled by Mr. Mikhail Shelkov who ultimately owns 65.27% stake. The blocking minority stake of 25% plus one share is owned by Rostec, a Russian state-owned corporation which holds government's stakes in technology companies from defense, aerospace, pharmaceutical, electronics and other industries. Although Rostec is listed on the U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) Sectoral Sanctions Identifications list, there is no spillover effect on VSMPO-AVISMA thanks to its low stake in the company.

Our Base-Case Scenario

Assumptions

- A 10% decline in sales volumes in 2021 (primarily in export markets), after a 28% decline in 2020, as we expect demand from aviation industry to remain depressed despite some pick up in plane deliveries by key aircraft manufacturers. Volumes will start to increase by up to 10% in 2021 and another 5% in 2023, but at a slower pace than the rebound in aircraft deliveries due to large stock of both planes (particularly at Boeing, due to its high 737 MAX inventory) and titanium at the manufacturers. We expect deliveries for narrow-body planes, which have significantly lower titanium content, to rebound first with the rebound of deliveries for wide-body planes taking much longer.
- Average selling prices to decline by up to 4% in 2021, after a 5% decline in 2020, due to different product mix, as VSMPO-AVISMA has increased sales to industries outside its key aerospace market. Average price will be gradually rebounding by up to 3% per year in 2022-23 as sales to that sector start to recover.
- Annual capital expenditure (capex) of up to \$120 million in 2021 and \$150 million in 2022-2023, which is somewhat below historical capex levels. The company will keep maintenance and some modernization capex, while postponing the expansion one, as existing capacity will be fully sufficient to meet demand for at least next few years.
- Working capital outflow of up to \$50 million per year in 2021-23, after \$169 million inflow in 2020, as we expect somewhat higher inventory accumulation as industry recovers from the crisis.
- Nil dividends in 2021, for a second year in a row. VSMPO-AVISMA returning to making annual payment of no more than \$250 million annually in 2022-2023.
- No sizable acquisitions, non-strategic investments, extraordinary dividends, or other cash outlays.

Key metrics

Public Stock Company Corporation VSMPO-AVISMA Key Metrics*

(Mil. USD)	--Fiscal year ended Dec. 31--				
	2019a	2020a	2021f	2022f	2023f
Sales (000s tons)	32,474	25,863	22,500-24,500	23,500-25,500	24,500-26,500
Exchange rate at year-end (RUB:US\$)	64.74	72.3	73	75	75
Russian CPI (%)	5	3	4	4	4
EBITDA	588.9	466.4	310.0-330.0	360.0-390.0	410.0-440.0
Funds from operations (FFO)	412.9	395.8	250.0-270.0	315.0-345.0	350.0-380.0
Working capital changes	(195.0)	163.2	Neutral	Up to (50.0)	Up to (50.0)
Capital expenditures	255.7	117.4	Up to 120.0	Up to 150.0	Up to 150.0
Dividends	313.9	0.4	Nil	Up to 250	Up to 250

Public Stock Company Corporation VSMPO-AVISMA Key Metrics* (cont.)

(Mil. USD)	--Fiscal year ended Dec. 31--				
	2019a	2020a	2021f	2022f	2023f
Discretionary cash flow	(299.2)	507.3	100.0-150.0	(100.0)-(150.0)	(70.0)-(120.0)
Debt/EBITDA (x)	2.0	1.3	0.9-1.3	1.1-1.5	1.2-1.6
FFO/debt (%)	35.5	66.8	75.0-85.0	65.0-75.0	60.0-70.0

*All figures adjusted by S&P Global Ratings. Insert here footnotes highlighting the key debt adjustments. a--Actual. e--Estimate. f--Forecast.

Liquidity

We assess the company's liquidity as adequate as we expect sources to exceed uses by more than 1.2x over the next 12 months. The company liquidity is supported by sizeable cash reserve, still solid cash flow generation and its decision to not pay dividends in 2020. We note that VSMPO-AVISMA lacks experience in the public markets and focuses on relationships with a few key banks only.

Principal liquidity sources for the 12 months started Jan. 1, 2021:

- Available cash of \$777 million.
- Cash FFO of around \$250 million.

Principal liquidity uses for the same period:

- Short term debt maturity of around \$435 million.
- Capex of around \$120 million.

Environmental, Social, And Governance

We view environmental risks of VSMPO-AVISMA as generally in line with that of its industry peers. Although titanium production is extremely energy intensive, with energy required to produce one kilo of titanium being almost twice that for kilo of aluminum, itself an energy intensive metal, we don't see the company as particularly deficient compared with other titanium producers. VSMPO-AVISMA might be set back by the introduction of carbons taxes, such as the proposed EU carbon tax. But given high titanium prices, the tax will be less harmful than for steel or aluminum producers. We note that VSMPO-AVISMA's production facilities are located in the Urals area of Russia, where there is a heavy reliance on thermal power, which makes switching to renewable supplies in the near term unlikely. Apart from energy intensity, titanium production generates toxic iron chloride, which needs particular care, although does not need to be dumped as it has several industrial uses.

We regard VSMPO-AVISMA's social risks as being similar to that of other industry players. The company is a large employer in its key facility locations, like the steel producers, and provides continuous support to the local communities.

We view the group's governance risks as somewhat higher than that of its rated peers, primarily due to the lack of board independence. That said, over the past few years, no board decision has had a materially detrimental effect on the company.

Ratings Score Snapshot

Issuer Credit Rating: BB+/Stable/--

Business risk: Fair

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

Financial risk: Modest

- Cash flow/leverage: Modest

Anchor: bbb-

Modifiers:

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

Stand-alone credit profile: bb+

Related Criteria

- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, 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
- General Criteria: Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010

Ratings List

New Rating

PSC Corporation VSMPO-AVISMA

Issuer Credit Rating BB+/Stable/--

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. A description of each of S&P Global Ratings' rating categories is contained in "S&P Global Ratings Definitions" at https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceld/504352 Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column. Alternatively, call one of the following S&P Global Ratings numbers: Client Support Europe (44) 20-7176-7176; London Press Office (44) 20-7176-3605; Paris (33) 1-4420-6708; Frankfurt (49) 69-33-999-225; Stockholm (46) 8-440-5914; or Moscow 7 (495) 783-4009.

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