

Bond Analysis: FS Luxembourg S.a.r.l 10.00% 2025

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876-960-5000

vmclientservices@myvmgroup.com

Vmwealth.mygroup.com

53 Knutsford Boulevard, Kingston 5



Bond Recommendation:

Appetite for Low Risk: UNDERWEIGHT Appetite for Moderate Risk: OVERWEIGHT Appetite for High Risk: OVERWEIGHT

ABOUT THE COMPANY

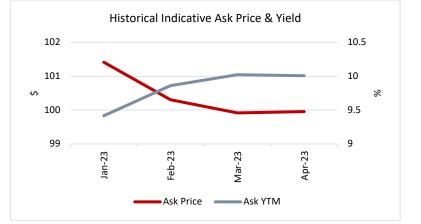
FS Agrisolutions Industria de Biocombustiveis (FS) is a limited liability company domiciled in in the State of Mato Grosso, Brazil with its main activity being the production and sale of ethanol derived from corn. FS also commercializes coproducts generated in the ethanol production process, including dried distiller's grains (DDGs), wetcake, corn oil for livestock feed, and electricity. Ethanol is an important industrial chemical that is used as an additive to automotive gasoline.

According to Moody's, FS is among the six largest ethanol producers in Brazil, itself being the largest in the use of corn as raw material. The company sources most of its corn from the northern and central regions of Mato Grosso, where most Brazilian corn production is concentrated.

Favourable access to corn enables it to be a low-cost producer of ethanol, as the processing plants are in these regions, and demand for its animal feed co-products here is strong. This unique business model is unlikely to be reproduced as efficiently in other regions of Brazil.

FS established FS Luxembourg S.a.r.l as a special purpose vehicle (SPV) to issue bonds on its behalf.

FS Luxembourg: Bond Term Summary			
Parent Company	FS Agrisolutions Industria de		
	Biocombustiveis (FS)		
Issuer	FS Luxembourg S.a.r.l		
Currency	USD		
Issued Amount	680,000,000		
Issue Date	December 15, 2020		
Tenor	5.0 years		
Ask Price (Indicative)	\$99.958		
Ask Yield to Maturity (Indicative)	10.00%		
Coupon	10.00%		
(Semi Annual)			
Credit Rating / Outlook	Moody's: Ba3/Stable		
Outlook (S&P / Moody's)	Stable		
Maturity Type	Callable (American)		
	Dec 15, 2023 – Dec 15, 2024 → \$105.0		
	Dec 15, 2024 – Dec 15, 2025 → \$102.5		
Maturity	December 15, 2025		
Day Count Basis	30/360		
Use of proceeds	General corporate purposes		



• Recommendation: The FS Luxembourg 10.00% 2025 bonds currently trade at around \$99.95 with a yield of approximately 10.00% and are secured on a first priority basis by collateral including real estate property and equipment. The recent decline in the price of these bonds presents an opportunity for investors to gain from the potential upside of this investment within the energy sector. Company strengths include a stable outlook poised for growth, improving EBITDA figures and adequate liquidity.



ECONOMIC OVERVIEW - BRAZIL (S&P RATING: BB-/Stable)

The International Monetary Fund (IMF) has forecasted Brazil's GDP growth to be 0.9%, 1.5% and 1.9% in 2023, 2024 and 2025 respectively. Additionally, on June 15, 2022, Standard and Poor's (S&P) affirmed Brazil's credit rating at 'BB-' with a stable outlook. The rating was supported by the following fundamentals:

- Brazil is a stable democracy with extensive checks and balances in place, including an effective judiciary. Despite a recent
 contentious election, Brazil has maintained its track record of political stability, which serves as a positive foundation for
 economic policies. At the same time, an intricate constitution and fragmented political and economic interests make reaching
 consensus to approve and implement policies a time-consuming task.
- S&P also expects Brazil to post modest growth over 2023-2025 period. In 2022, GDP was estimated to have grown by 2.5% against the backdrop of resilient consumption and investment. However due to restrictive financing conditions in 2023 S&P expects GDP growth to slow to 0.6%. During 2024-2025 S&P expects that GDP growth should rebound to roughly 2.0% in each year, in conjunction with monetary easing and higher than pre-pandemic investment levels.

COMPANY OUTLOOK

Large scale, low-cost producer benefiting from sustained demand for biofuels.

A stable outlook for FS accounts for its large scale among ethanol producers in Brazil. It is also the largest producer of ethanol in Brazil that is derived from corn. Through economies of scale, the Company has been able to achieve the status of a low-cost producer. This is also aided by favourable access to corn, as the Company's operations are located in one of Brazil's top corn-producing states, Mato Grosso. According to Moody's, FS has benefited from a sustained demand for biofuels. In fact, most of Brazil's car fleet can run on 100% ethanol due to flex fuel engines, and due to this S&P expects that the upward trend in demand should continue. We therefore expect that ethanol producers such as FS should continue to benefit from this vibrant market going forward.

The exposure to corn prices as an input is partially offset by its animal nutrition business

FS faces exposure to the dynamics of the ethanol and corn markets and the potential susceptibility to sharp price volatility, event risks, weather imbalances and global trade flows. However, its exposure to corn prices is partially offset by its animal nutrition revenue segment. The State of Mato Grosso is agriculturally intensive and in addition to corn production, there is a vibrant livestock industry. Through this, FS benefits from the high demand for animal nutrition which is a co-product from the ethanol production process. The price of animal nutrition closely tracks the price of corn and other grains such as soymeal. This means that if the price of corn goes up, the price for which animal nutrition can be sold also increases, providing some level of protection and diversification benefits for FS that may help mitigate some of the risks associated with this exposure. Notwithstanding, the Company's concentration in a single-line commodity, production in two plants and in a single region heightens commodity risks to some degree.

Construction of third mill should drive further growth in revenue and stabilize operating income.

The Company is currently undertaking the construction of a 3rd mill. The new mill should take FS' ethanol production capacity to 2.0 billion liters starting in the 2023-24 harvest. We expect that this new investment should benefit FS' competitive position and scale in the Brazilian corn ethanol market by increasing its already leading scale in Mato Grosso. The Company has demonstrated a strong record of execution, rapidly expanding its production capacity from 265 million liters with its first mill in 2017 to the current 1.4 billion liters.



CREDIT RATING (MOODY'S: Ba3/Stable)

On June 15, 2022, Moody's upgraded FS' credit rating to 'Ba3' from 'B1' while maintaining a stable outlook. The credit rating incorporates the Company's gradual reduction in debt since the entity was first assigned a rating by Moody's and the expectation that FS should maintain adequate leverage and liquidity through commodity cycles and while it undertakes the construction of its 3rd mill. The new mill should increase FS' ethanol production capacity to 2.0 billion liters starting in the 2023-24 harvest from 1.4 billion liters in 2021-22. Moody's also believes the new investment should benefit FS' competitive position and scale in the Brazilian corn ethanol market by increasing its already leading scale in Mato Grosso. According to Moody's, FS is slated to become one of the four largest ethanol producers in Brazil, behind BP Bunge (2.4 billion liters), Atvos Agroindustrial Investimentos S.A. (3.2 billion liters), and Raizen Energia S.A. (Baa3 stable) (6.0 billion liters), all three sugarcane ethanol producers.

The stable rating outlook incorporates Moody's expectation that FS should maintain a sustained EBITDA generation with gross leverage below 4.0x even as it advances in the construction of its third mill. The outlook also considers prudent shareholder distributions which should not jeopardize liquidity and leverage.

BRL ('000)	FY 2020/21	FY 2021/22	9M 2021/22	9M 2022/23
Revenue	3,107,703	6,635,302	4,830,519	5,684,504
EBITDA	1,160,080	2,621,767	1,995,844	1,903,027
Interest Expense	289,537	845,530	791,034	643,421
Total Equity	236,510	547,848	417,482	507,179
Long Term Debt	3,197,710	4,338,018	3,944,181	2,607,687
Short Term Debt	751,890	955,552	974,300	3,906,946
Total Debt	3,949,600	5,293,570	4,918,481	6,514,633
Operating Cash Flow	67,250	1,449,619	640,561	300,607
Total Debt to EBITDA (X)	3.4x	2.0x	1.8x	2.6x
EBITDA Margin (%)	37.3%	39.5%	41.3%	33.5%
Interest Coverage Ratio (X)	4.0x	3.1x	2.5x	3.0x

FINANCIAL ANALYSIS: Nine Months Ending December 31, 2022 (9M 2022/23)

For the nine months ended December 31, 2022 (9M 2022/23), FS recorded total revenue of BRL 5.6 billion when compared to revenue of BRL 4.8 billion recorded in the previous year for the same period. This represented an increase of 17.7% year-over-year (YoY). Higher revenue for the period was driven primarily by growth in the animal nutrition segment for which sales increased by 25.7% YoY. This improvement arose from the higher volume sold and an increase in the net sales prices of animal nutrition products. There were also improved results from the increase in corn marketing operations.

Growth in the animal nutrition segment was partially offset by a 9.6% reduction in the ethanol sales segment, as the average net sales price of ethanol declined during the period when compared to the previous year. The decline in the price for ethanol was mainly driven by the reduction in fuel taxation promoted by the Brazilian government. To mitigate the impact of the price decrease, FS has advised that it has reduced the volume of ethanol sold as part of its strategy to take advantage of better pricing dynamics by postponing some sales to the upcoming quarter when it expects higher net prices.



During the period, Cost of Goods Sold (COGS) outpaced revenue growth, increasing by 42.7% to BRL 3.6 million from BRL 2.4 billion in the previous year. The increase was driven by higher raw material costs for inputs such as corn, chemicals, and enzymes. Additionally, labour costs were also higher due to wage inflation, higher bonuses and higher headcount related to operations. Due to the foregoing, Gross Profit declined YoY by 10.3% to BRL 2.0 billion from BRL 2.2 in the previous year. Lower Gross Profit consequently led to lower EBITDA for the period, which fell to BRL 1.9 billion when compared to almost BRL 2.0 billion recorded during the previous year, or a decrease of 4.7% YoY.

At the end of 9M 2022/23, total gross debt reached BRL 6.5 billion and total cash closed at BRL 1.4 billion, resulting in a net debt of BRL 5.1 billion, 34.4% higher than 9M 2021/22. The increase in gross debt was driven by the additional issuance of Certificate of Agribusiness or Real estate receivables (CRA)¹ and working capital lines. FS increased its leverage (Total Debt-to-EBITDA) to 2.6x in 9M 2022/23 when compared to leverage of 1.8x in the previous year for the same period as a result of the increase in gross debt.

Despite increased leverage, as of February 27th, 2023, FS had repurchased and retired USD 81.0 million of the FS Luxembourg S.a.r.l 10.0% 2025 bonds in the market as it sees this debt as one of its most expensive lines of credit. Thereafter, FS took the opportunity to raise cheaper financing in the local markets. There is now USD 599.0 of outstanding principal on the bonds due in 2025.

S.W.O.T Analysis

Strengths:	Weaknesses:
 Improving credit metrics with a stable outlook, sufficient liquidity and contained leverage. FS is large scale among Brazilian ethanol producers with a business model that is competitive against ethanol producers that utilize sugar cane. Low production cost and adequate access to low-cost feedstock (raw material) within the region. Supportive demand for animal feed within the region of the production plants Low maintenance capital spending for the business as a result of not producing its own feedstock. 	 Geographic concentration of the business in a few plants and a single region, which intensifies event risks and price volatility. Lack of diversified business activities. FS is constrained by concentration and single commodity exposure of the corn ethanol and relating co-products business.
Opportunities	Threats
 Completion of construction of third plant should boost production and thus revenues. Brazil has been making progress towards the implementation of more renewable fuels, this should benefit ethanol producers by supporting more demand for this product. 	 High margins could be constrained by quickly increasing competition. Price volatility and event risks related to the commodities markets, including corn and ethanol prices.

¹ Certificate of Agribusiness or Real estate receivables (CRA) are financial instruments that allow companies to raise funds by selling receivables related to agribusiness or real estate transactions to investors.



CONCLUSION

The FS Luxembourg 10.0% 2025 notes currently trade at around \$99.95 with a yield of approximately 10.00% and are secured on a first priority basis by collateral including real estate property and equipment. The recent decline in the price of these bonds presents an opportunity for investors to gain from the potential upside of this investment within the energy sector. The Company's creditworthiness is also supported by a stable outlook poised for growth, improving EBITDA figures and adequate liquidity. Although FS' debt remains high, positive earnings momentum continues to support the leverage, and its use of debt towards expansion efforts seem to be benefiting the company's production capacity, driving higher sales. The Company's location within the corn-producing State of Mato Grosso and its hedging activities also benefits its cost structure. With the foregoing we recommend that investors invest in these this instrument based on their risk appetite as follows:

Appetite for Low Risk: UNDERWEIGHT Appetite for Moderate Risk: OVERWEIGHT Appetite for High Risk: OVERWEIGHT



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SOURCES

Bloomberg, IMF, Moody's, Fitch Ratings, Standard & Poor's, FS Agrisolutions Company Website, FS Agrisolutions Quarterly Reports, FS Agrisolutions Financials Statements, Reuters.

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DEFINITIONS

- **OVERWEIGHT** Security is deemed to be undervalued and is expected to outperform compared to the average market return and/or return of comparable securities in the same sector or industry.
- MARKETWEIGHT Security is expected to provide similar returns compared to the market in general or at the same pace as comparable companies; neither strongly positive nor negative.
- UNDERWEIGHT Security is deemed to be overvalued and is expected to underperform compared to the average market return and/or return of comparable securities in the same sector or industry.
- ZEROWEIGHT This security is substantially distressed or at risk of a shock which may significantly impair its value.