ACRA

Principles of Assessing Industry Factors in the Rating Analysis of Non-financial Corporations

Chemicals

This document is part of the Methodology for Assigning Credit Ratings to Non-financial Corporations under the International Scale (hereinafter, the Methodology) and describes the specifics of conducting rating analyses of the operational and financial profiles of chemical companies.

The document provides a list of indicators used, factor weights, assessment score boundaries for quantitative factors, and the principles of assessing qualitative factors for the chemical industry.

1 Industry Companies

The assessment approaches described in this document are applicable to companies whose core business is the production of inorganic and organic chemicals, potash and phosphate fertilizers, and other products.

2 Rating Factor Structure

Creditworthiness analyses of rated entities in the chemicals industry is based on assessing eight indicator blocks, which are combined in two profiles and have their own weights totaling 100%. The weights presented in Table 1 are base weights, i.e. they may change depending on the assessment scores derived for indicator blocks (see subsection 4.1.3 of the Methodology for a description of the floating weights concept).

Table 1. Scorecard for the chemical industry

Profile	Factors	Factors weighting	Sub-factors
Operational profile	Business profile	20%	Market position
			Added value and cyclicality of demand
			Product and geographic diversification
	Financial policy and corporate governance	15%	Financial policy
			Corporate governance
Financial profile	Size	15%	Revenue (USD bln)
			Net fixed assets (USD bln)
	Profitability	10%	EBITDA margin
			Return on assets (ROA)
	Leverage	15%	Total debt to funds from operations (FFO) before interest payments
			Qualitative leverage assessment
	Coverage	15%	FFO before interest payments to interest payments
	Liquidity	5%	Liquidity ratio
			Qualitative liquidity assessment
	Cash flow	5%	Free cash flow (FCF) margin
			Qualitative assessment of FCF stability

Source: ACRA

3 Operational Profile

The following describes the basic factors in the rating analysis of the operational profile, the degree of their influence when determining the credit rating of a non-financial corporation, and assessment specifics.

To assess operational profile qualitative indicators for rated entities in the industry, ACRA uses a set of characteristics specific to the industry that translate into a qualitative assessment category. Operational profile indicator weights are shown in Table 5.

3.1. Business Profile

The business profile assessment of chemical industry companies is part of analyzing their creditworthiness, given the volatility of commodity prices, cyclical markets and high capital intensity of production.

The companies in the sector operate in conditions of constantly changing commodity prices, so it is important to assess their ability to maintain a sufficient level of profitability regardless of the price situation. Additional uncertainty regarding the creditworthiness of companies is due to changes in the balance of supply and demand. Important factors in improving the financial reliability of companies in the sector are creation of high value added products, production efficiency, and diversification of the product line.

The business profile is assessed taking into account the following subfactors subject to qualitative assessment.

3.1.1. Market position

A company’s market position is assessed in terms of its share in global markets, the cost of production and the presence of barriers to entry into the key market.

The qualitative assessment category for the market position is determined according to Table 2.

Table 2. Qualitative assessment of the market position

Assessment category	Main features
I	One of the largest producers in the world, high level of revenue diversification, one of the lowest cost producers; most stable market position and leadership in production processes almost completely protect against new competitors and create very high market entry barriers
II	Key global producer in a number of segments, revenues are well diversified by final markets, low cost producer; strong market position and high-tech production are protected by moderately high market entry barriers
III	Industry average cost producer, revenue is somewhat concentrated on a few products and markets, some technological advantages and minor threats to the market position are partly protected by the presence of market entry barriers
IV	Cost of production is medium or high, revenue is highly dependent on a single product or a limited number of markets in a single region, no technological advantage, low market entry barriers, a high threat to the occupied market position
V	High cost of production, revenue totally dependent on one product or one target market, significant structural and technological barriers to development of the company

Source: ACRA

3.1.2. Added value and cyclicality of demand

Producing high added value products (with a stable supply-demand balance in the target market) allows the volatility of the financial metrics of a company to be reduced and the predictability of its operating and financial performance to be increased. Market stability reduces potential risks associated with sharp fluctuations in both the prices and demand for the products sold, thereby increasing the creditworthiness of companies. Integrated production processes help reduce the risks of involving third parties in the production of intermediate products which could potentially entail disruption of the production run (especially in times of crisis). Vertical integration, if any, smooths out fluctuations in the prices of products at individual processing stages, which favorably affects financial performance.

The qualitative assessment category for added value and cyclicality of demand is determined according to Table 3.

Table 3. Qualitative assessment of added value and cyclicality

Assessment category	Main features
I	Target market exhibits very low cyclicality; company produces high added value products and integrates the complete added value chain for its products
II	Target market is low to moderately cyclical; company has a well-diversified range of both high value added products and commodity-type products with a low share of sales in highly cyclic markets
III	Target market is moderately cyclical; company integrates a part of the added value chain for its products, which includes several processing stages
IV	Target market is highly cyclical; company produces one commodity-type product and has a moderate market position or sells its products in a cyclic market in one region; no vertical integration in the added value chain
V	Target market is highly cyclical; company produces commodity-type products that either have limited use and a limited range of consumers or is sold in a highly cyclic local market

Source: ACRA

3.1.3. Product and geographic diversification

Assessing the product diversification of a company involves analyzing its product line. Offering a single product makes a company more vulnerable during periods of declining demand for that product. By contrast, a diversified range distributes the risks associated with structural changes in consumption and supply of a particular product.

Geographic diversification is assessed in terms of whether a company has operating assets in several countries (improved access to regional markets and reduced foreign trade policy change risks) and whether there is no concentration of production in one place or in a limited number of production sites (reduced risks of disrupted production due to accidents or adverse events).

The qualitative assessment category for product and geographic diversification is determined according to Table 4.

Table 4. Qualitative assessment of product and geographic diversification

Assessment category	Main features
I	Well-diversified product line, no concentration of production assets in any single country
II	Diversified product line, moderate concentration of production in one country
III	Product line is limited to several low-margin commodity-type products; average production diversification with production assets concentrated in one country
IV	Weak product diversification, product line is concentrated on one low-margin commodity-type product with a moderate position in a limited number of target markets; production assets are located in the same country
V	Very weak product diversification, product line is limited to one low-margin commodity-type product; very weak diversification of production, concentration in one production site

Source: ACRA

3.2. Financial Policy and Corporate Governance

To assess the financial policy and corporate governance of rated entities in the chemicals industry, ACRA uses a common set of characteristics that translate into a qualitative assessment category for all industries (for a general description of the concept of the corporate governance qualitative assessment, see Section 5 of the Methodology). The assessment of financial policy and corporate governance is carried out according to Table 5.

4 Financial Profile

The following describes the basic factors in the rating analysis of the financial profile, the degree of their influence when determining the credit rating of a non-financial corporation, and assessment specifics.

To assess the qualitative indicators in the financial profile of rated entities, ACRA uses a common set of characteristics that translate into a qualitative assessment category for all industries (for a general description of the qualitative assessment of financial profile indicators, see Section 6 of the Methodology).

Quantitative indicators in the financial profile are assessed in points based on being part of a particular range, with qualitative indicators based on qualitative assessment categories according to Table 6.

4.1. Size

To assess the business scale of companies in the industry, ACRA uses the size of their revenue and the size of their net fixed assets. These indicators are important for assessing the creditworthiness of rated entities, as they affect market stability and ability to raise capital. The scale of business can show, among other things, whether a company is able to operate in a stable manner in times of changing demand for its products and rising expenditures, and whether it is able to fund cutting-edge technology research and have a better bargaining position in its relations with customers or suppliers of raw materials.

4.2. Profitability

The profitability of companies in the industry is assessed by using EBITDA and ROA. ACRA believes that the EBITDA margin indicator allows the profitability of a company to be assessed without

taking into account the capital intensity of production; i.e., considering only the current product offering. ROA allows the efficiency of asset management to be assessed, while taking into account the capital intensity of production for a particular product line.

4.3. Leverage

Leverage is a key factor in analyzing the financial sustainability of companies in the industry.

To assess leverage, ACRA uses an indicator calculated as the ratio of total debt to FFO before interest payments. Qualitative characteristics of debt are also used to assess leverage.

4.4. Coverage

To assess coverage, ACRA uses an indicator calculated as the ratio of FFO before interest payments to interest payments.

4.5. Liquidity

To assess liquidity, ACRA uses the short-term liquidity ratio and qualitative characteristics.

4.6. Cash Flow

To assess cash flow, ACRA uses the FCF margin, as well as the qualitative assessment of FCF stability.

The ability to fund an investment program with operating cash flow is important to companies in the industry, as their market position is largely dependent on the technological level of production and the depreciation level of fixed assets. Dividend payouts are analyzed separately. Amid high capital costs, high dividend payouts can exert significant pressure on the FCF.

Table 5. Assessment of indicator blocks within the operational profile

Factors	Sub-factors	Sub-factors weighting	Sub-factors score				
			5	4	3	2	1
Business profile	Market position	40%	V	IV	III	II	I
	Added value and cyclicality of demand	30%	V	IV	III	II	I
	Product and geographic diversification	30%	V	IV	III	II	I
Financial policy and corporate governance	Financial policy	50%	V	IV	III	II	I
	Corporate governance	50%	V	IV	III	II	I

Source: ACRA

Table 6. Assessment of indicator blocks within the financial profile

Factors	Sub-factors	Sub-factors weighting	Sub-factors score				
			5	4	3	2	1
Size	Revenue (USD bln)	50%	[0;1)	[1;5)	[5;10)	[10;50)	[50; ∞)
	Net fixed assets (USD bln)	50%	[0; 1)	[1; 2)	[2; 5)	[5; 15)	[15; ∞)
Profitability	EBITDA margin	70%	(−∞; 5%)	[5%; 10%)	[10%; 20%)	[20%; 30%)	[30%; ∞)
	ROA	30%	(−∞; 0%)	[0%; 5%)	[5%; 10%)	[10%; 20%)	[20%; ∞)
Leverage	Total debt to FFO before interest payments	70%	(6; ∞)	(4; 6]	(2.5; 4]	(1; 2.5]	[0; 1]
	Qualitative leverage assessment	30%	V	IV	III	II	I
Coverage	FFO before interest payments to interest payments	100%	(−∞; 2)	[2; 4)	[4; 10)	[10; 20)	[20; ∞)
Liquidity	Liquidity ratio	50%	(−∞; 0.8)	[0.8; 1)	[1; 1.25)	[1.25; 1.5)	[1.5; ∞)
	Qualitative liquidity assessment	50%	V	IV	III	II	I
Cash flow	FCF margin	50%	(−∞; −10%)	[−10%; 0%)	[0%; 5%)	[5%; 10%)	[10%; ∞)
	Qualitative assessment of FCF stability	50%	V	IV	III	II	I

Source: ACRA

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