ESG Research

Decarbonizing Cement Part Two: Companies Could See Pressure On Ratings As The EU Firms Up Carbon Rules

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The next half decade could see the regulatory landscape shift for the cement industry in Europe. Better prepared companies could see less pressure on profitability, while adapting to the evolving regulatory environment.

This report does not constitute a rating action

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This second part of our research into decarbonizing cement explores the regulatory environment that the European sector could be facing in light of the EU's envisaged more stringent region-wide carbon legislation, and how we can analyze this from a credit perspective. We leverage S&P Global Ratings' data on the industry to perform a scenario analysis of the potential implications of the regulations for our ratings on cement companies. This research complements the first part of our research, "Decarbonizing Cement Part One: EU Makers Are Reducing Emissions While Building Business Resilience," published Oct. 27, 2022, in which we present our views on trends in the European cement industry's carbon footprint and manufacturers' decarbonization strategies.

Key Takeaways

- Our current credit ratings on European cement companies factor in significant uncertainties related to future climate-related technologies, market developments, and regulatory and policy initiatives.
- We see European cement companies' profits, competitive positions, and cash flows as potentially the most vulnerable to the EU's aim to accelerate the reduction of greenhouse gas emissions by at least 55% by 2030 (from 1990). Fit for 55 calls for reduced free carbon allowances and increased carbon costs in sectors with the highest emissions.
- Our scenario analysis found that annual carbon costs could reach 75% of EU cement companies' EBITDA on average, assuming a complete phase-out of allowances. We also found that cement companies with high emissions and with a high share of business in the EU could see significant profitability pressures post-2027.
- Geographic diversification—and having the time and capacity to adapt operationally and financially—could be credit supports for cement companies. We also believe steady demand and limited cement substitutes should allow for significant cost pass-through, which could ease pressure on profitability.

Our Ratings On European Cement Manufacturers Reflect Currently Manageable Decarbonization Risks

The current regulation, Phase 4 of the EU's Emissions Trading System, has only slightly increased carbon costs for cement companies but the proposed ramp-up of emissions reductions to 55% by 2030 will likely increase pressure on credit ratios.

The EU Emissions Trading System (ETS) dates from the 2000s and covers the power and heavy industrial sectors, including cement, and more recently aviation. Under current regulations, cement manufacturers receive slightly fewer free emissions allowances from EU member states. These allowances, until now, have materially alleviated companies' carbon-price cost pressures. Annual allowance reductions have gathered pace, by 2.20%, under the current Phase 4, from 1.74% under Phase 3 (2013-2020). The aim is to encourage faster decarbonization efforts.

Beyond 2024, if Phase 4 continues, carbon costs will not likely top 10% of cement companies' EBITDA on average by 2030. This is why we have not yet taken any rating actions on entities in the European sector related to carbon-price risk. EU ETS reform will continue to evolve, and the implications for cement producers remain uncertain.

In 2019-2021, carbon costs represented 0%-3% of cement companies' EBITDA. Under Phase 4, we think carbon costs will increase slightly but still comprise a modest share of total costs. More notably, we have not highlighted any material differences in competitive positions among European players based on their carbon intensity. This reflects that differing levels of carbon intensity have had little financial or business impact on the sector, so far. The sector's ability to pass-through these marginal cost increases is an important credit support and reflects sustained

demand ahead of construction backlogs (see chart 1). Low carbon costs until recently means most companies still benefit from a surplus of received allowances carried over from past years (see chart 2). This means their exposure to carbon costs is still broadly contained, even in today's higher carbon price environment.

Climate Transition Risk And The Rating Implications For Cement Makers

Cement companies are high emitters of CO2. They have among the highest carbon intensity of all sectors, and as such are exposed to climate transition risk (see "Environmental, Social, And Governance Principles In Credit Ratings," published Oct. 10, 2021). Carbon regulation and raising carbon costs is a key risk for cement manufacturers as their profitability can be undermined in the medium term. Production or product innovation could potentially reduce carbon emissions. But decarbonization can be very expensive and some technologies to capture carbon are still in prototype.

Climate transition risk has so far had limited influence on our ratings on cement manufacturers. This is because the costs linked with high carbon emissions have been contained, reflecting limited (EU) or no carbon regulation (elsewhere). The EU ETS dates from the 2000s, but cement companies have received free allowances covering a large share of their carbon emissions. We also note there are few cement alternatives at present, which should preserve steady volumes in the medium-to-long term and enable cement producers to pass-through higher costs.

We factor climate transition risks into our ratings on cement companies when we assess a company's business risk and financial risk profiles. More specifically, we incorporate climate transition risks into our assessment of a company's competitive position and cash flow/leverage analysis. Among the key factors we consider for our competitive position assessment are:

- Effective local carbon regulation, which typically translates into monetary costs associated with carbon emissions (for instance, free allowances and/or carbon price/tax).
- How high an issuer’s carbon emissions are, and its carbon intensity relative to the sector average.
- The issuer's commitment to cut emissions, how far advanced it is, and whether it has a track record of emissions reductions.
- Technologies adopted to reduce emissions and associated capital investments.
- Investments in R&D to develop innovative technologies to capture emissions.
- Risk of cement substitution with other products, and cement demand trends.
- Innovative product offerings such as low-carbon cement or concrete, or the use of recycled or new binder materials; significant price premium gained by using such products compared with standard cement products; share of innovative products in total revenues.

In our cash flow/leverage analysis we incorporate the monetary costs associated with carbon emissions if present. We also reflect the capital spending linked to carbon reduction initiatives and greener production processes. Both can reduce a company's free operating cash flow.

The EU Will Likely Accelerate Decarbonization Targets: Fit For 55 Will Up The Ante For Cement Decarbonization

The EU is farthest along globally in cement industry regulation. Its emissions trading scheme currently covers about 4% of the world's cement production. In the U.S., only 13 states currently have a carbon pricing mechanism for power generation, and California is the only one that applies a carbon price to cement production. China's ETS only covers coal and gas power generation emissions at the moment, but the government has signaled its intent to include emissions from industries such as cement production. The EU-only scope of this research reflects that the other regulations are still evolving, which does not allow us to determine easily the assumptions for this research.

Still pending EU members' approval is a proposal to increase the 2030 target to a 55% reduction in carbon emissions, up from 40% currently. It would tighten annual caps and therefore reduce the supply of free carbon allowances, much more so than the current Phase 4. The linear reduction factor (LRF; the annual decrease of allowances) would almost double to 4.2%, from 2.2%, and be accompanied by a small one-off reduction.

Furthermore, the EU is proposing to gradually introduce a Carbon Border Adjustment Mechanism (CBAM) to impose fees on imports from neighboring countries based on emissions incurred in their production, and cement is included. We understand the policy intent is to both protect European manufacturers from unfair competition as well as to avoid a flight to production sites outside the EU ("carbon leakage"). However, the CBAM would be accompanied by a complete phase-out of free allowances in 10 years, from 2026 to 2035.

In June 2022, the European Parliament voted on ETS reform and the CBAM, agreeing that the latter would not start until 2027. The European Commission had initially posited 2025. The later starting date, however, comes with a much faster phase-out of free allowances, down to five years from 10 initially, between 2027 and 2032. This would accelerate carbon deficits for cement companies.

Reflecting the market's perception that regulatory pressure is increasing in Europe, the EU ETS price has soared since 2020, with a monthly average approaching €90 per metric ton in January 2022 from below €10/ton on average over the past decade. The gas crisis in Europe amid the Russia-Ukraine conflict and the resulting increased use of high-carbon-emitting coal sources has somewhat reduced ETS prices in 2022.

Chart 1

EU ETS price has significantly increased in 2021-2022
Historical price development (€ per ton of CO2)

Source: Bloomberg.

A Faster Free Allowances Phase-Out Would Be A Risk For Producers' Profitability

The European Parliament's step forward is not the final one for EU ETS reform. Details are lacking, but we understand the EU Parliament, the Council, and the Commission are in negotiations. The reform has complex implications, which makes it difficult to fully grasp what it means for the European cement sector. We also recognize that under the current implementation timeline of 2027, sector players would still have time to adjust their operations

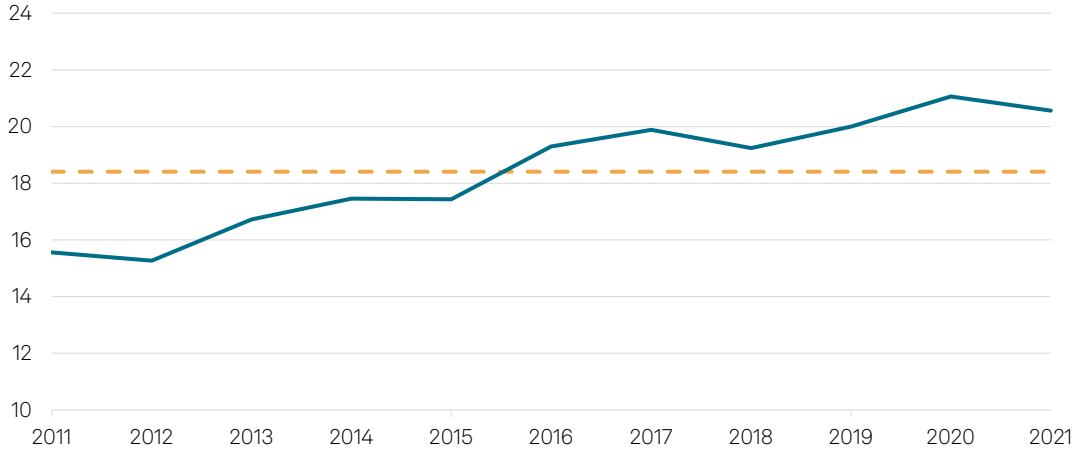
and capital structures in the face of potential regulatory changes. Given the uncertainties, our ratings do not currently incorporate these potential evolutions; the direction and visibility of those climate-related factors could change rapidly. Therefore, our research focuses on assessing, with scenario analysis, how companies' profitability could be affected by new regulations (see section below: How Companies' Profitability Could Actually Be Impacted: Findings Of Our Scenario Analysis).

The so far limited effect of carbon costs on cement companies' profits and financial risk profiles could change under the proposed EU ETS reform. This is because most manufacturers would likely rapidly consume any stockpiled carbon allowances and start paying much higher carbon costs. Their ability to sustainably pass-through much higher costs to customers would be tested. We note that so far, amid rising energy prices in Europe, cement manufacturers have been able to increase cement prices, albeit with some time lag, largely preserving their EBITDA and sales volumes.

Under the proposed EU ETS reform, companies that are further along the decarbonization path, with lower carbon intensity, would be better off. Larger companies that have invested more to cut emissions or diversified in favor of circularity and low carbon products are in a comparatively stronger position. Smaller producers could risk a slump in profitability and cash flows, potentially leading to market exits. That said, most of our rated EU producers are regional or global, with lower-than-market-average carbon intensity. This means their competitive positions could even benefit from such market disruption. Larger issuers also generally benefit from geographic diversification outside the EU, with a meaningful share of revenues not subject to EU ETS rules.

Chart 2

EU-based rated cement companies' EBITDA margins currently average 19%-21%
Average S&P Global Ratings-adjusted EBITDA margin (%)



Note: Average calculated on the following companies: Cementir, Titan Cement, Buzzi Unicem, Holcim, CRH, Heidelberg Cement. Source: Companies' reported data, S&P Global Ratings calculations.

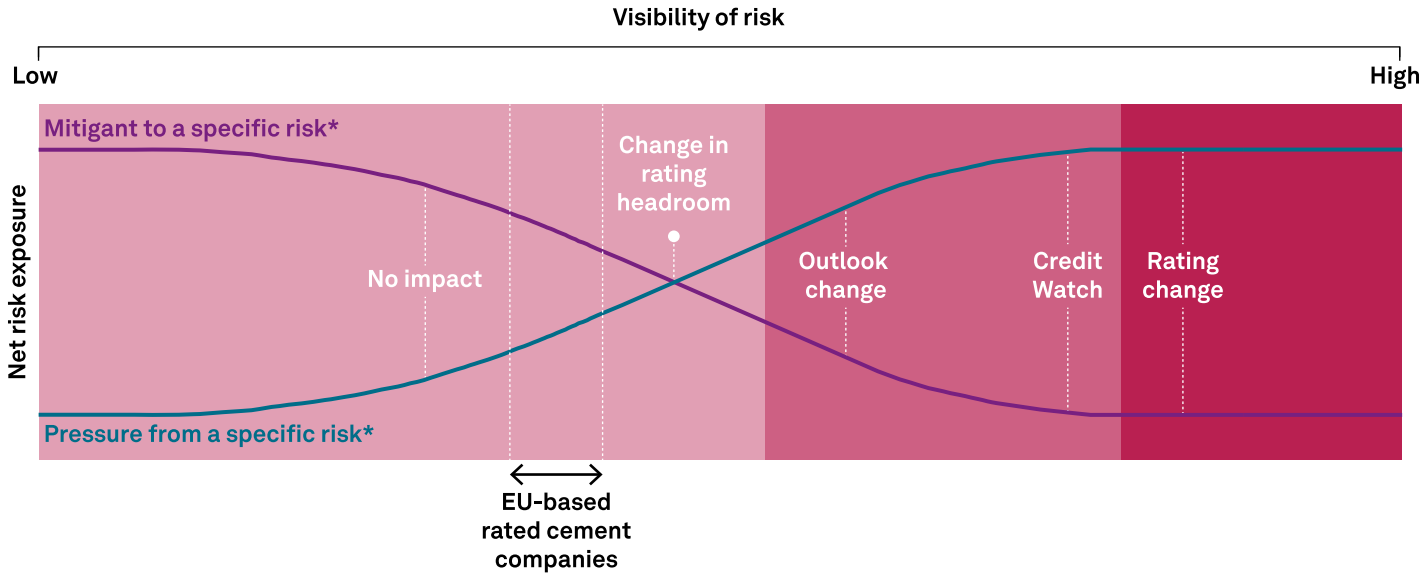
If higher carbon costs lead an EU cement manufacturer to post a below-average S&P Global Ratings-adjusted EBITDA margin—that is, sustainably below 15%—we would revise down our business risk assessment. For context, the EU cement sector's EBITDA margin currently averages 19%-21% (see chart 2). Our business risk assessment also factors in an entity's ability to increase (pass-through) prices when costs rise, and its productive efficiency relative to peers. If lacking, we could revise down our assessment. This could lead to us taking negative rating actions, absent any remedial measures. We could consider downgrading companies that do not adjust their financial policies or cannot rapidly adapt their assets to mitigate rising carbon costs.

Other considerations would be whether carbon capture technology became widely available and affordable; or if the lack of cement substitutions continued to allow cost pass-throughs; or if low-carbon cement products become widely available.

If future developments in technology, regulation, carbon pricing, demand, or cost pass-through become more visible and influential to our analysis of creditworthiness, we will reflect them in our ratings. This could, for example, see us update the headroom for credit metrics currently available in our ratings, potentially leading to rating actions (see chart 3).

Chart 3

Visibility of risks: Impacts on ratings



Source: S&P Global Ratings.

How Companies' Profitability Could Potentially Be Impacted By The EU New Proposals: Findings Of Our Scenario Analysis

We conducted two simulation exercises under our hypothetical scenario analysis to compare the two EU proposals and their potential implications for our ratings on cement companies. One scenario is under the July 2021 European Commission Proposal. The second assumes EU members will pass the June 2022 EU parliamentary vote on ETS reform and the CBAM, with the later starting date of 2027 accompanying a much faster phase-out of free allowances, between 2027 and 2032. In both simulations we assumed a more favorable and less favorable scenario, which reflects different business conditions and companies' ability to pass-through carbon costs.

Table 1

The key findings from our hypothetical scenario analysis

	July 2021 European Commission Proposal	June 2022 EU Parliament Vote
More favorable scenario*	**Carbon cost trend** Annual carbon costs rising progressively, reaching about 40% of EBITDA on average in 2030 and about 75% in 2035, when the phase-out is complete. • **Companies more diversified** geographically and in business lines would likely see annual carbon costs not exceed 45% of their EBITDA by 2035. • **Smaller and less diversified companies** would likely see annual carbon costs exceed 100% of their EBITDA by 2035.	**Carbon cost trend** Annual carbon costs would be less pronounced until 2026 but would grow swiftly from 2027 when the phase-out of free allowances starts, reaching 75% of EBITDA on average by 2032 when the phase-out ends.
	EBITDA trend EBITDA decrease would likely be limited, reflecting companies' prolonged ability to pass-through higher costs. By 2030, EBITDA would likely be about 10% lower than 2022 levels. • **Companies with lower emissions** would likely be able to largely pass-through higher carbon costs to clients. • **Companies with higher emissions** could suffer from prolonged post-pass-through time-lags, which would likely constrain their profitability.	**EBITDA trend** EBITDA decrease would likely be more pronounced, reflecting less effective pass-through policies ahead of the accelerated phase-out of free allowances. In 2032 EBITDA would likely drop by 20% compared with 2022, on average. EBITDA would likely recover only partially thereafter. • **Companies with lower emissions** would likely be able to largely pass-through higher carbon costs to clients and would likely see a limited and temporary profitability decline. • **Companies with higher emissions** would likely suffer longer time-lags, and their EBITDA decline would likely exceed 30% by 2032, and would not recover, all else being equal. • The EBITDA spike in 2027 reflects that a few companies still have carbon credits and could therefore benefit from higher cement prices in Europe.
	Ratings impact • **For companies with lower emissions** we anticipate a moderate weakening of credit metrics but likely with no change in ratings, all else being equal • **For companies with higher emissions** we anticipate a significant erosion of available ratings headroom. We would not rule out negative rating actions, absent offsetting mitigants.	**Ratings impact** • **For companies with lower emissions** a deterioration of credit metrics could be more pronounced during the five years of the allowances phase-out, and could translate into negative rating actions, absent offsetting mitigants. • **For companies with higher emissions** we believe that, compared with the June 2021 European Commission proposal, ratings headroom could erode faster, thereby increasing the likelihood of negative rating actions.
Less favorable scenario*	**Carbon cost trend** Same as more favorable scenario	**Carbon cost trend** Same as more favorable scenario
	EBITDA trend EBITDA decline would likely be more marked across the sector because of less-effective pass-through strategies ahead of weaker business conditions. On average, the EBITDA drop would likely be about 20% by 2035 versus 2022. • **Companies with lower emissions** would likely be able to limit their profitability decline. • **Companies with higher emissions** would likely see prolonged and permanent reductions in EBITDA.	**EBITDA trend** EBITDA decline would be even more pronounced than under the July 2021 proposal. On average, EBITDA would likely decline by close to 25% by 2032 compared with 2022. • **Companies with lower emissions** would be able to limit their profitability decline. • **Companies with higher emissions** would likely see prolonged reductions in EBITDA of at least 35% by 2032.
	Ratings impact • **For companies with lower emissions** tightened ratings headroom could translate into negative rating actions, absent offsetting mitigants. • **For companies with higher emissions** negative rating actions are likely, especially for those with a high share of business in the EU.	**Ratings impact** • **For companies with lower emissions** tightening ratings headroom could translate into negative actions, absent offsetting mitigants. • **For companies with higher emissions** we believe that the likelihood of negative rating actions would further increase compared with the July 2021 proposal, especially for those with a high share of business in the EU.

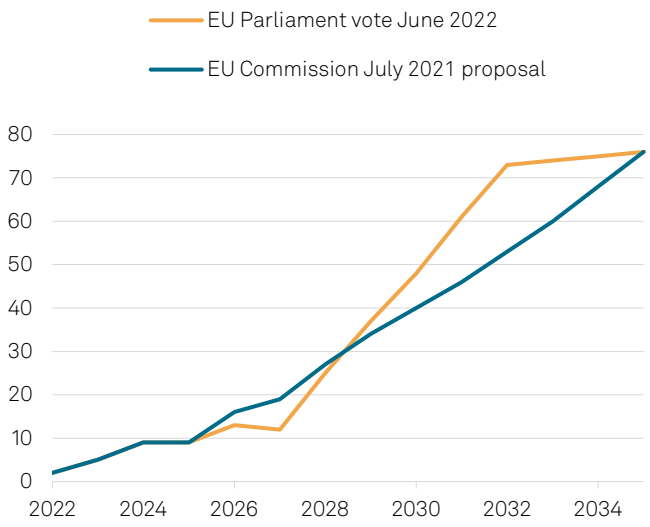
***See box below on main assumptions underlying our scenario analysis for more details on more favorable and less favorable scenarios.**

Our scenario analysis concludes that more geographically diverse cement companies, and those with lower carbon costs, would see a much smaller EBITDA decline.

We also anticipate that leaders in carbon emissions reductions would be better off than less efficient companies because their marginal cost of cement production would be lower. This would increase their competitive edge in the sector. This is why we anticipate market consolidation with several small players being acquired by larger players or exiting the market. Most of the companies we rate in the EU are regional or global producers with lower-than-market-average carbon intensity, and geographic diversification outside the EU. Still, decarbonization paths differ within the EU; large companies such as HeidelbergCement are better positioned than purely regional players, reflecting their lower CO2 emissions and their higher investments in projects to capture carbon. We would consider negative rating actions if we observed structurally weaker profitability due to higher carbon costs, leading to weaker credit metrics. We believe that financial policy (and the ability of a company to balance shareholder remuneration with managing credit metrics) will be a key rating driver.

Chart 4

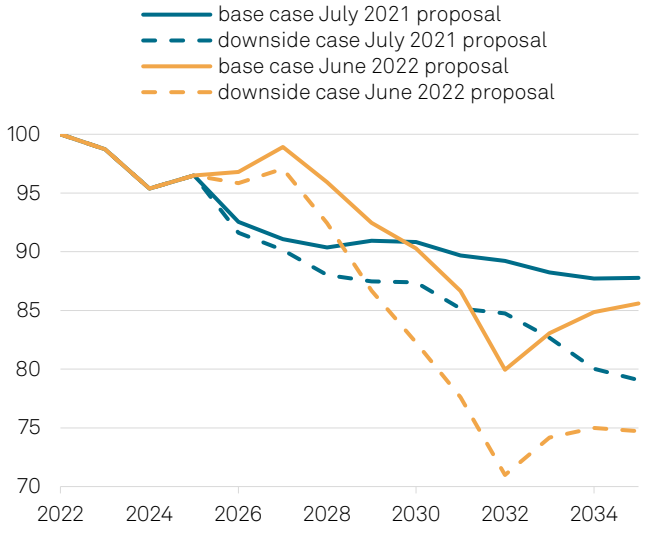
EU-based rated cement companies' possible carbon costs trend in 2023-2035
% of EBITDA



Source: S&P Global Ratings.

Chart 5

EU EU-based rated cement companies' EBITDA trend in favorable and less-favorable scenarios
Index: 2022=100



Source: S&P Global Ratings.

There are some factors not included in our scenario analysis, which may change the outcome.

Our scenario analysis does not incorporate the potential benefits arising from the widespread adoption of CCUS technology at the end of this decade. For example, if HeidelbergCement's new 2030 carbon reduction target were to become the industry standard, carbon costs could be lower than we have assumed. Our scenarios also do not consider the effects of a widespread adoption of carbon regulations outside the EU, which would likely translate into higher carbon costs as well as accelerated investments to reduce emissions. We also do not factor in risks of structural decline in demand due to increased efficiencies and more readily available alternatives in the construction process.

The main assumptions underlying our scenario analysis:

- Constant cement volumes in both the EU and the outside EU.
- Revenue and EBITDA growth of 1% per year from 2022 (sector average).
- Our estimation of chargeable CO2 emissions in the EU based on our discussions with rated companies.
- Reduction of CO2 emissions in the EU, through to 2030, as per companies' public commitments, or based on more detailed assumptions that companies have shared with us.
- Our estimation of carbon-free allowances received in 2021 and stocks of carbon credits carried over from previous years based on our discussions with rated companies.
- Free allowances will reduce, as per the European Commission's Fit for 55 proposal of July 2021 (4.2% load factor and progressive phase-out of free allowances in 2026-2035) and as per the EU's June 2022 parliamentary vote on Fit for 55 (that is, a higher load factor and progressive phase-out of free allowances in 2027-2032).
- Companies would first utilize their available stocks of carried-over free allowances, when available, to cover their CO2 deficits.
- Progressive increase in CO2 prices from €100 in 2025 to €125 in 2030 and €150 in 2035, as per S&P Commodities Insights' published forecasts.
- No carbon leakage in the EU, prevented by the CBAM.
- In our more favorable scenario associated with stable operating conditions, we assume that cement companies with lower-than-average emissions would be able to largely pass higher carbon costs through to clients, albeit with a lag of six-to-nine months following the introduction of the CBAM. Higher-emitting companies would experience a longer lag before being able to pass on costs, which would weigh on their profitability. We assume a longer lag for cost pass-through if the EU phases out free allowances in five years, as per the parliamentary vote, given the significant drop in carbon allowances and the sudden increase in carbon deficits that would follow.
- In our less favorable scenario, we assume that cement companies' pass-through strategies are less effective. This would largely reflect weaker operating conditions, for example due to prolonged business contraction, reduced demand, or a decline in pricing discipline. In this scenario, the cost pass-through lag would widen compared with the more favorable scenario.

S&P Global Ratings Related Research

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