

Article Title: ARCHIVE | Criteria | Corporates | Industrials: Standard & Poor's Lowers Its Near-Term Base-Case Metals Prices On Weakening Demand Data: (EDITOR'S NOTE: —This criteria article was originally published On Dec. 18, 2008. We are republishing the article following our periodic review completed on July 28, 2010. It has been superseded by the article titled "Standard & Poor's Raises Gold And Nickel, Lowers Aluminum And Zinc Price Assumptions For Rest Of 2010 And 2011; Keeps Other Metals Prices, Including Long-Term Prices, Unchanged," published July 21, 2010.) Base-Case Metals Price Assumptions For 2009 And Beyond Standard & Poor's Ratings Services has made significant revisions to its base-case metals price assumptions for 2009 and beyond, reflecting the rapid deterioration of the global economic outlook (see table). Our revisions, however, are not uniform, because each metal is subject to its own supply-demand balance and long-term economic influences. Generally speaking, our expectations reflect weak demand in the near term, which we believe companies will manage by aggressively reducing their output. In our opinion, the availability of credit will be a major contributor to supply cuts, as liquidity-constrained companies will cut output sooner than in previous downturns, as ballooning volumes of lower-priced inventories become increasingly difficult to finance. Output could diminish as new developments are put on hold. In contrast, Standard & Poor's has made some upward revisions to our long-term prices, which we believe represent mid-cycle pricing conditions. This is largely because we expect that, much like the last trough in the late 1990s, poor industry conditions and weak financial markets receptivity will impair the industry's ability to fund new development projects, while demand prospects remain favorable in the longer term. Our expectations for output growth in the next few years are significantly diminished, because the sharp reduction in capital expenditure plans in 2008 will likely extend into 2010.

	2009	2010	2011	LONG TERM
Aluminum (US\$/lb.)	0.80	0.85	0.90	1.00
Copper (US\$/lb.)	1.50	1.50	1.50	1.50
Nickel (US\$/lb.)	4.00	4.50	4.75	5.00
Zinc (US\$/lb.)	0.60	0.75	0.90	1.00
Gold (US\$/oz.)	750	750	650	500

Marginal assets are now generating cash losses. Our near-term base-case prices are driven by forward curves, which we believe most accurately embody current market expectations of future pricing. Currently, forward curves are in the unusual state of being upward sloping, reflecting expectations of higher prices. Near-term prices are depressed by a massive amount of speculative selling, which has pushed spot prices to below the economic break-even point in many cases, all while the industry's cash production costs remain historically high. Our base-case prices have a similar slope because we expect that the numerous smaller, higher-cost assets that have accounted for a significant share of marginal supply in recent years have quickly become uneconomic under current market conditions. As such, Standard & Poor's believes that higher medium-term prices will be supported by a rapid reduction in output, albeit at the expense of considerable volumes. Inventories are widely mixed across the spectrum of base metals. For example, weak construction and transportation demand, combined with sustained high levels of output, have driven aluminum inventories to a decade high amid prices that are uneconomic for at least 25% of the industry. On the other hand, copper demand has been less severely affected, considering its uses in electronics and infrastructure, while a few marginal mines have shut down or will likely shut down soon, keeping inventories near historically low levels. The following summarizes Standard & Poor's view of each metal: Aluminum. Aluminum is suffering the most severe disruption among metals, with weakened demand exacerbated by the industry's large capacity overhang and producers' willingness to maintain output levels despite generating cash losses. Policies in China that support elevated production—for example, the reduction or elimination of export taxes—are among the biggest factors that have driven London Metals Exchange (LME) inventories up 80% since June 2008 and spot prices down by almost 50%. We believe that all producers in the fourth quartile of the cost curve are currently unprofitable, but we also believe that such conditions are not sustainable, particularly in light of weak global liquidity conditions. As such, our base-case prices are modestly upward sloping over the next several years, as economic rationality eventually compels producers to cut back. That said, numerous aluminum smelters are not operating to rational economic outcomes, as some government-sponsored producers are acting in their sovereign's interest. The cost curves we've examined indicate that the cash break-even point for the highest-cost producers is more than US\$1.00 per pound (/lb), indicating long-term price support above that level, notwithstanding severe short-term weakness. Copper. Copper prices have had the largest drop among metals since mid 2008, falling more than 60% from their peak. This, however, belies the best market conditions

among base metals. The vast majority of producers remain profitable amid inventories that remain consistently modest at about 3.5 weeks of supply. The cost curve for copper producers is extremely steep, meaning that only a small fraction of mining operations are cash-flow negative after the drop in prices. As such, current and forward prices reflect the industry's long-standing structural tightness, which unlike aluminum, has meant that incremental changes in output have been satisfied by high-cost capacity that has shut down as prices have dropped. Our long-term prices for copper are well above the historical average of about 90 U.S. cents/lb, reflecting the aforementioned long-term tightness. For the interim, our flat price assumptions stem from our belief that the risk of further near-term weakness is not nearly as acute as for other metals.

Nickel. Nickel prices peaked much earlier than other metals, and have been declining throughout 2008. Inventories have been climbing since mid 2007, and now stand at a decade-high 64 kilotonnes, or more than 5% of annual consumption. Consequently, prices remain stubbornly below top-quartile cash costs of more than US\$5.00/lb, compelling some dramatic production cutbacks that Standard & Poor's expects will reverse inventory growth. The long-term prospect for nickel remain sound, with seemingly insufficient new supplies to satisfy even modest demand growth, such that the deferral of major projects could contribute to deficits similar to those in 2005 and 2006.

Zinc. Like nickel, zinc prices have been falling since mid 2007 amid a modest surplus throughout 2008, which is likely to persist into 2009. Although LME inventories are at their highest level since July 2006, they remain only one-quarter of this decade's peak. Our long-term price assumption is most buoyant for zinc, as reserve exhaustion will compel permanent mine closures in the next several years, which could result in significant supply deficits as demand eventually rebounds.

Gold. We are not revising our base-case gold prices, as near-term price strength is supported by investors seeking a hedge on economic risks and turbulent financial markets. Forward curves remain in their natural contango state, with long-term prospects supported by the precious metal's properties as a safe-haven and, to a lesser extent, by the physical demand for jewelry.

Use of base-case price assumptions in our analysis Standard & Poor's metals and mining ratings team employs a standard set of price assumptions for rated metal producers to equitably compare the projected financial performance across companies. We use these assumptions to evaluate a company's ability to repay its short- and long-term debt obligations, to compare the relative credit quality of a broad and diverse set of peer companies, and to assess the likelihood that operating cash flow will be sufficient to fund a company's capital requirements and support its overall strategy. Furthermore, changes in our assumptions will have a more immediate effect on speculative-grade credits, given our shorter rating horizon compared with investment-grade companies, and for those companies with more limited diversity, high capital spending programs, or recent debt-funded acquisitions.