Article Title: ARCHIVE | Criteria | Corporates | Industrials: Revised Methodology For Oil And Natural Gas Price Assumptions Data: (EDITOR'S NOTE: — This criteria article is no longer current. It has been superseded by the article titled, "Methodology For Crude Oil And Natural Gas Price Assumptions For Corporates And Sovereigns," published on Nov. 19, 2013. This article supersedes "Assumptions: Revised Oil Price Assumptions For 2011, 2012, And 2013," published July 22, 2011.) 1. Standard & Poor's Ratings Services is updating its methodology for determining oil and natural gas price assumptions. We are publishing this article to help market participants better understand the key price assumptions for companies operating in the oil and gas industries. We typically review these assumptions quarterly and adjust them as our perception of industry developments warrant (for example, when prices change significantly). In determining its oil price deck, Standard & Poor's bases its assumption on two price benchmarks, West Texas Intermediate and Brent. The prices between these two can vary depending on supply and demand fundamentals regionally as well as globally. We base our natural gas price deck assumptions on the benchmark Henry Hub price. SCOPE OF THE CRITERIA 2. These criteria pertain to corporate credit ratings and focus on companies that sell oil and natural gas. These companies primarily operate in the natural gas and oil exploration and production industry. These price assumptions will not apply to Standard & Poor's recovery ratings. For our recovery rating assumptions and methodologies, see "Revised Assumptions For Assigning Recovery Ratings To The Debt Of U.S. Oil And Gas Exploration And Production Companies," published Sept. 30, 2010. SUMMARY OF CRITERIA 3. Standard & Poor's uses its price assumptions to assess a company's credit quality and to compare credit quality among oil and gas companies. Although these price assumptions provide the basis for financial modeling to assess credit strength, they are not forecasts of expected future prices. Frequently, but not always, the short-term price deck assumption includes a conservative discount to the hydrocarbon forward price curves. The long-term price deck factors in supply and demand fundamentals and industry cost curves, among others. IMPACT ON OUTSTANDING RATINGS 4. We expect that these criteria revisions will result in few, if any, changes to our current ratings and outlooks. EFFECTIVE DATE AND TRANSITION 5. These criteria are effective immediately. METHODOLOGY Using price assumptions 6. These price assumptions provide a comparable basis for evaluating the creditworthiness of companies that sell oil and natural gas. They are part of the analysis to project a company's revenue, EBITDA, earnings, and cash flow. Where appropriate, the analysis includes a company's hedging program as well as realized (or "well head") prices, which can differ from the Henry Hub benchmark. This is known as basis differentials. This can occur due to geographical or regional supply/demand issues or due to quality. 7. The analysis of speculative-grade issuers (rated 'BB+' and below) places greater weight on near-term risk factors, generally spanning no more than two years (see "Standard & Poor's Revises Its Approach To Rating Speculative-Grade Credits," published May 13, 2008). Therefore, the analysis of these companies focuses on the less-than-two-year, market-reflective prices. 8. Investment-grade ratings ('BBB-' and above) are based on the long-term (beyond two years) pricing assumptions. Recognizing the volatility in hydrocarbon prices and the unpredictable nature of prices over a longer time frame, the long-term price assumptions reflect a somewhat conservative base case that focuses on fundamental analysis. Typically, over the longer term, investment-grade companies are less likely to experience rating volatility during stressed industry conditions than speculative-grade issuers. While long-term price assumptions should not be interpreted as floor prices or as reflecting a stress case, incorporating these assumptions in the analysis helps to assess how well investment-grade oil and gas producers withstand a more difficult price environment. 9. However, our short-term price assumptions are factored into the two-year rating outlook horizon for investment-grade companies. These assumptions are used to consider if prices would likely affect a company's capacity to reduce debt after an acquisition, and whether a company has set up hedges. These assumptions are also used in determining whether companies will generate negative free cash flow after capital spending and dividends--and thus higher debt, as is currently the case for many of these companies. Calculating price assumptions 10. The short-term price assumptions are built off forward market prices. Generally speaking, the short-term deck applies a 15%-20% discount to the forward curve to account for the volatility of these commodity prices. However, the price assumption ultimately applied will depend on near-term supply/demand fundamentals, GDP growth outlook, and recent pricing trends, although assumptions tend to remain conservative. For example, the short-term price deck never exceeded $90 per barrel in 2008 despite prices approaching $150 per barrel because we believed prices were in a speculative bubble. However, in certain cases, our short-term pricing assumptions have been higher than the futures curve, as was the case in 2009 when oil prices were about $35-$40 per barrel because our sentiment was that prices had troughed. 11. For the long-term price deck, these assumptions arise through a qualitative process that includes: 12. Supply and demand fundamentals: Standard & Poor's gathers and analyzes the factors underlying future supply/demand and spare capacity trends to gain an understanding of the direction for hydrocarbon prices. We also consider Standard & Poor's economic forecasts and assumptions. Inventory levels can signal overcapacity or undercapacity in the industry. 13. Industry cost curves: Cost curve analysis is important, particularly to the long-term price deck. Break-even costs (calculated by cash lifting cost plus finding and development costs--which can amount to more than 50% of total costs) tend to support price floors, especially in the long term. In the shorter term, however, companies typically will produce as long as they cover cash operating costs. Indeed, a number of exploration and production companies currently have all-in costs greater than current commodity prices, but they continue to produce because they are covering operating cash costs and generating cash flow. However, because of steep reserve declines in many basins and the need to reinvest to replace this production, ultimately companies will likely curtail investment when their all-in costs (the investment hurdle rate, including finding and development) exceed current hydrocarbon prices, thus contributing to a decline in hydrocarbon production but providing support to long-term pricing. 14. Other factors: Hydrocarbon futures price curves, companies' strategic planning and their pricing assumptions, recent price trends and volatility, and industry research and street forecasts, among others, may all come into play. For example, in our analysis we may review and consider research from the U.S. Energy Information Administration, International Energy Agency, Platts, and IHS Herold. RELATED CRITERIA AND RESEARCH Principles Of Credit Ratings, published Feb. 16, 2011 These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as Standard & Poor's Ratings Services' assessment of the credit and, if applicable, structural risks for a given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment.