Article Title: ARCHIVE | Criteria | Corporates | Utilities: International Utility Ratings and Ratios Data: Standard & Poor's has for many years published risk-adjusted ratio guidelines and ratio medians for various industry sectors. With the disaggregation of electricity and natural gas markets around the world into the separate functions of transmission, distribution, retail supply, and electricity generation, it is appropriate to look at typical ratio ranges for the different utility types. Please note that the following discussion and financial ratio ranges do not relate to U.S. utilities. Rating Methodology The majority of international electric utility and natural gas systems are becoming disaggregated, which results in disparate risks for generation, transmission, distribution, and supply functions. In order to evaluate these diverse credit risks, Standard & Poor's rating methodology for global power utilities incorporates two basic components: Business profile (qualitative analysis); and Financial profile (quantitative analysis). The two components are inextricable. For example, a utility with a strong business profile could have less financial protection than one with a weaker business profile, yet they could still achieve the same rating. Conversely, a utility with a weak business profile could require a more robust financial profile than one with a stronger business profile in order to get the same rating. This conceptual approach is depicted in chart 1. Chart 1 Standard & Poor's uses business profile assessments to measure a utility's qualitative credit fundamentals. Business profiles are expressed on a scale of 1 (strong) to 10 (weak), and incorporate country risk, sector risk, and utility-specific risk. Tightly regulated transmission and distribution utilities generally face lower-than-average business risk, and tend to exhibit stable revenues and sound profitability. The typical electricity transmission utility achieves a business profile score of 1 or 2, while the typical distribution utility usually achieves a business profile score of between 2 and 5. Conversely, generation and retail supply companies operating in a very competitive environment face higher business risk with potential pressure on margins as well as cash flow volatility, and usually achieve a business profile score of between 4 and 8. The financial analysis is predominantly quantitative, but not entirely. In addition to the financial ratios discussed in this article, there are the important issues of a company's financial policies (such as dividend payout policy, interest and debt maturity profiles, foreign exchange policy, and capital structure policy) and financing flexibility (including an assessment of a company's access to capital markets). The tables that follow list certain observed financial ratio ranges for transmission, distribution, and generation utilities. The figures represent ratio ranges derived mainly from utilities rated by Standard & Poor's in the developed, disaggregated markets of Continental Europe and Australasia. The study has been confined to utilities operating in countries with a high investment grade credit rating ('AA+' or better) so as to narrow the ratio ranges and make them more useful. These ratios would not, for instance, apply to disaggregated utilities in Argentina, where greater levels of business and regulatory risk are evident. The ratio ranges have been derived from a total of 75 utilities, and were categorized as being predominantly involved in one of the following functions: Transmission (high-voltage electricity wires or high-pressure gas pipelines); Distribution (local network distribution of electricity or natural gas, often combined with a retail supply function); Generation (power generating utilities, often combined with a retail supply function); or Integrated (a combination of some or all of transmission, distribution, generation, and retail supply). Many utility ratings are influenced by their ownership situation. For instance, a weak stand-alone utility might have its rating notched up because it is owned by a strongly rated regional government. Conversely, a strong utility might have its rating constrained by the rating on a weaker parent. In those situations, for the purposes of this study, the stand-alone rating has been used because the financial ratios drive the stand-alone rating and are not directly relevant for the final rating. For more details on how Standard & Poor's approaches electricity utility ratings and the key rating factors, see 'Rating Methodology for Global Power Utilities', published in August 1999 on RatingsDirect, Standard & Poor's Web-based credit analysis system. Since utilities are rarely involved in only one activity, Standard & Poor's has therefore categorized them according to their predominant activity (for instance, where it accounts for more than about 75% of total cash flows). Where no single activity is predominant, the utility has been classed in a separate category as an integrated utility. Ratio Ranges Should be Used With Caution The ratio ranges shown in this article have been observed at the international utilities Standard & Poor's has rated--they should not be seen as hurdles or prerequisites to be achieved to attain a specific debt rating. Ratio ranges are helpful in broadly defining a company's position relative to rating categories. The ranges are not meant to be precise; rather, they are intended

to convey ranges that characterize levels of credit quality as represented by the rating categories. Note that the ratio ranges between rating categories overlap somewhat, which reflects the importance of business risk in the rating decision. Standard & Poor's financial analysis utilizes many ratios, including the four shown in the following tables. The cash flow-based ratios, such as funds from operations (FFO) interest coverage, and FFO to total debt, are given more weight in the analysis, but a wide range of ratios are looked at. Obviously, strengths evidenced in one financial measure can offset, or balance, relative weakness in another. Also, the ratio trend is important, as an adequate but constantly declining set of ratios might be cause for concern. Caution should be exercised when using the ratio ranges because: Ratings are designed to be valid over the entire business cycle, and ratios of a particular firm at any point in the cycle may not appear to be in line with its assigned debt ratings. Standard & Poor's makes various adjustments to pro forma or published figures to reflect analytical judgment (including, for instance, capitalizing some off-balance-sheet obligations, or including debt at intermediate holding companies). Ratings are forward-looking and, therefore, forecast financials and ratios are more important than historical actuals; Ratios cannot encapsulate all elements of a financial analysis (such as financial policy or financing flexibility); and There are many nonnumeric distinguishing characteristics that determine a company's creditworthiness. Transmission Utilities Transmission utilities operate in the least risky segment of the disaggregated energy market. They have large, long-life assets--electricity wires or high-pressure gas pipelines--and the majority of their revenues is tightly regulated and stable. Some transmission utilities, although not all, are not subject to volume-risk because they operate under a 'revenue cap' mechanism. Moreover, transmission utilities do not usually take commodity risk--essentially, they transport the energy for a fee rather than take ownership of the commodity (that is, they do not buy and sell energy). As a result, the business risk of rated transmission utilities is generally quite low and, as the following table shows, they can generally achieve a given rating with less financial cushioning than other utilities. The main factors that prompt Standard & Poor's to distinguish the business position of one transmission utility from another include: Tariff-setting mechanism; Regulatory efficiency and investment requirements; Transparency of regulatory arrangements; Extent of volume-risk taken by transmission utility; Age and condition of assets; Operational efficiency relative to peers; Trend and stability in demand for energy in service area; Potential for assets to be nominated as 'stranded' by a regulator; Responsibilities for conducting the market (or power pool) function; Willingness to invest in non-core activities; Physical layout of network, and dependence on a particular region for power or gas supply; and Responsibility for system planning and augmentation. The numbers in table 1 represent the financial ratio range into which the majority of rated transmission utilities fall. Table 1 Ratio Ranges for Transmission Utilities 'AA' 'A' 'BBB' Pretax* interest coverage (x) 2.0 to 3.0 1.5 to 2.5 1.0 to 1.7 FFO interest coverage (x) 3.0 to 4.0 2.0 to 3.3 1.5 to 2.0 FFO to total debt (%) 12 to 17 10 to 15 5 to 10 Total debt to total capital (%) 50 to 60 55 to 70 65 to 80 *Earnings before interest and tax. FFO-funds from operations. Distribution Utilities Distribution utilities are the local network businesses that deliver energy from the offtake point of the high-voltage or high-pressure transmission system (generally from an electricity substation or natural gas city gate) to the consumer. It operates at a lower voltage or pressure than the transmission utility and has a larger number of smaller assets. Concentration to a smaller service area than the transmission company increases exposure to the local market conditions. The fundamental function of the distribution utility is the same as the transmission utility--to transport energy--however, in reality, most distribution utilities are also suppliers (or retailers) of the energy. Standard & Poor's regards retail energy supply as riskier than distribution, so all other things being equal, a utility with a supply function will be classed as having a weaker business position than a network-only distribution utility. The relative contribution of each function to overall earnings and cash flows will determine the relative risk. If, on average, the retail supply business represents more than about 25% of total earnings, then the distribution utility is unlikely to be classed as having an above-average business position. The relative business position of distribution utilities is usually determined by the following factors: Proportion of earnings and cash flow derived from pure network function; Risk entailed in other lesser functions (such as retail supply); Network tariff-setting mechanism, including regulatory efficiency and investment requirements; Transparency of regulatory arrangements; Extent of volume-risk taken by distribution utility; Quality of management; Customer-base composition; Age and condition of assets; Operational efficiency relative

to peers; Trend and stability in demand for energy in service area; and Potential for assets to be determined as 'stranded' by a regulator. The numbers shown in table 2 represent the financial ratio range into which the majority of rated distribution utilities fall. Table 2 Ratio Ranges for Distribution Utilities 'AA' 'A' 'BBB' Pretax* interest coverage (x) 4.0 to 5.5 2.0 to 4.0 1.3 to 2.5 FFO interest coverage (x) 5.0 to 7.0 3.0 to 5.0 2.0 to 3.0 FFO to total debt (%) 30 to 40 13 to 25 8 to 16 Total debt to total capital (%) 20 to 40 40 to 60 55 to 80 *Earnings before interest and tax. FFO-funds from operations. Generation Utilities Generation utilities operate in the part of the disaggregated energy market that is fully (or predominantly) open to competition. These functions are at the riskier end of the spectrum, and invariably require better financial ratios than transmission, distribution, and integrated utilities to achieve a given credit rating. The wholesale electricity markets, in which the rated generators operate, are now largely open to competition. Electricity generation is the riskiest segment of the electric utility industry because of complex operating risks and the increasingly competitive nature of the business. The generators do not normally have the protection of the regulatory umbrella, so their success depends on their ability to compete in the market, and by mitigating the risk through, for instance, contracting strategies or obtaining access to a retail customer base to obtain a partial hedge over price and volume movements. Retail energy suppliers are rarely rated on their own because they tend to be associated either with a distribution utility or a generator. In the absence of a well-established brand name, to operate solely as an energy retailer would be a risky strategy, and one not conducive to strong credit ratings. The main factors that prompt Standard & Poor's to distinguish the business position of one generation utility from another include: Management's appetite for risk; Risk-management procedures and expertise, and level of counterparty risk; Operating performance of generating assets; Level of competition in market and prospect for electricity prices; Production costs relative to competitors, and competitiveness of fuel sources; Diversity of generating assets; Robustness of market framework; Impact of transmission constraints; Impact of environmental laws; Natural hedge available between generation and supply; and Contractual position. The numbers shown in table 3 represent the financial ratio range into which the majority of rated generation utilities fall. Table 3 Ratio Ranges for Generation Utilities 'A' 'BBB' 'BB' Pretax* interest coverage (x) 4.0 to 6.0 3.0 to 5.0 2.0 to 3.5 FFO interest coverage (x) 5.5 to 8.0 3.5 to 5.5 2.5 to 4.0 FFO to total debt (%) 30 to 45 20 to 35 10 to 20 Total debt to total capital (%) 20 to 30 30 to 45 35 to 50 *Earnings before interest and tax. FFO—funds from operations. The debt-to-total-capital ratios for generation utilities show a significant variation, which reflects different asset valuation methodologies and various levels of capital intensity. For this reason, this ratio is de-emphasized in preference to the cash flow-based ratios. Integrated Utilities This final utility category covers all other utilities, which, by history or design, have significant operations in more than one utility function. Roughly a quarter of the rated international utilities are classified as integrated utilities. Because electricity markets—and, to a lesser extent, natural gas markets--around the world are being disaggregated into discrete functions, a lot utilities have decided to specialize in one of the functions, either transmission, distribution, retail supply, or electricity generation. In fact, in some jurisdictions there are legal impediments to undertaking more than one function. Where possible, however, many utilities have adopted the vertical integration business model, believing the benefits of diversification and access to more than one part of the market adds stability and commercial benefits. The main risk factors for the integrated utility are the same as for the individual functions outlined earlier. The business risk profile of an integrated utility depends, firstly, on the strength of the company in its various functions, and secondly, any potential benefit arising from having a diversity of operations. The numbers shown in table 4 represent the financial ratio range into which the majority of rated integrated utilities fall. Note that for a given rating category, the ratio ranges tend to fall in between those for a distribution utility and a generation utility. Table 4 Ratio Ranges for Integrated Utilities 'AA' 'A' 'BBB' Pretax* interest coverage (x) 4.0 to 7.0 2.5 to 4.5 1.5 to 2.5 FFO interest coverage (x) 5.0 to 8.0 3.0 to 5.5 2.5 to 3.5 FFO to total debt (%) 30 to 45 15 to 35 10 to 15 Total debt to total capital (%) 25 to 45 40 to 60 60 to 75 *Earnings before interest and tax. FFO—funds from operations. Appendix Financial ratio definitions. Pretax interest coverage: Earnings from continuing operations before interest and taxes; divided by gross interest. FFO interest coverage: Net income from continuing operations plus depreciation, amortization, deferred income taxes, other noncash items, and gross interest; divided by gross interest. FFO to total debt: Net income from continuing operations plus depreciation,

amortization, deferred income taxes, and other noncash items; divided by total debt. Total debt to total capital: Total debt; divided by total debt plus shareholders' equity (including minority interest and preferred stock).