

Article Title: ARCHIVE | General Criteria: Criteria Update: Joint-Support Criteria Refined Data: (EDITOR'S NOTE: — This criteria article has been superseded by "Methodology And Assumptions For Rating Jointly Supported Financial Obligations," published May 23, 2016.) Standard & Poor's Ratings Services has refined its criteria for rating jointly supported obligations, when each obligor is fully responsible for the entire obligation. In this situation, a default on the obligation would occur only if both obligors default. Common examples of joint support include a primary obligor plus a guarantor or a primary obligor and a letter-of-credit (LOC) provider. The risk that both obligors will default is less than the risk that either one will. As a result, the obligation may be rated higher than the rating on the stronger obligor (supporter). Standard & Poor's introduced the application of probability theory to jointly supported obligations more than 10 years ago. The fundamental concept is now widely accepted by market participants. Our compilation of extensive data on speculative-grade default risk during the past decade—especially our in-depth analysis of default risk correlation—has prompted the criteria refinements. This research also underpins CDO Evaluator Version 3.0, Standard & Poor's proprietary modeling tool for CDOs, which was released on Dec. 19, 2005. Summary The revised criteria contain the following key elements: The rating for the jointly supported obligation will be derived from one of three reference tables, one each for obligor pairs that have high, medium, and low default correlation (see charts 1, 2, and 3). Under Standard & Poor's old criteria, a single table was used for all eligible obligors. The new tables were generated with a more sophisticated calculation of the joint default probability, including explicit default correlation assumptions. Obligations of very highly correlated entities remain ineligible for credit enhancement. Application of the criteria is extended to speculative-grade entities. Previously, the criteria were applicable only to investment-grade obligors. The joint-support criteria will not be used to rate issues or issuers that receive less-formal support, such as the benefits enjoyed by many government-owned enterprises. In other words, these issues will continue to be rated no higher than the rating on the government or parent company providing support. On Nov. 2, 2005, Standard & Poor's published "Request for Comment: Refinements To Joint Support Criteria Proposed," which is available on RatingsDirect. We thank market participants who sent us comments, and we are encouraged by the positive response. The new criteria are largely the same as those in the November proposal. It should be noted, however, that the underlying probabilities of default (displayed in table 1) were slightly modified to maintain consistency with those in CDO Evaluator. As a result, charts 1, 2, and 3 differ somewhat from those in the November proposal. Joint Probability Of Default Calculation The joint probability of default (PD) is calculated as follows: For the rating on each obligor, the corresponding 10-year cumulative PD (displayed in table 1) is used. After the joint PD is calculated, the number is converted back into the closest corresponding rating for the 10-year time horizon. The underlying PDs associated with each rating are consistent with those used by Standard & Poor's for rating CDOs. The following example is illustrative. If a French bank rated 'A+' (PD of 1.458%) guarantees an obligation of an American manufacturing company rated 'BB+' (PD of 13.179%), and the assumed default correlation is 15%, the jointly supported rating would be 'AA' (joint PD of 0.800%).

Table 1 Correspondence Between Ratings And Probabilities Of Default

RATING	PROBABILITY OF DEFAULT (%)
AAA	0.362
AA+	0.536
AA	0.872
AA-	1.13
A+	1.458
A	1.782
A-	2.479
BBB+	3.842
BBB	5.876
BBB-	10.637
BB+	13.179
BB	18.258
BB-	24.197
B+	30.565
B	38.145
B-	48.559
CCC+	65.517
CCC	75.853
CCC-	88.268

Under the old joint-support criteria, the joint PD was calculated simply by multiplying the stronger obligor's PD (different PDs were used in 1995) by 0.5 to crudely reflect potential default correlation. This is comparable with assuming the weaker obligor is rated 'B-' and that default risk of the two obligors is completely independent. The revised, more refined approach reflects our analysis of empirical default correlations. Under the new criteria, default correlations of 25%, 20%, or 15% are explicitly assumed based on the obligors' characteristics, as shown in table 2.

Table 2 Default Correlation Guidelines

DEFAULT CORRELATION (%)	CHARACTERISTICS
Too high	No benefit
(1)	Affiliated companies, (2) government and its owned/supported entities, (3) economically codependent entities, (4) both obligors in the same country, and its sovereign government is rated speculative grade*
High 25	Both obligors share two of the following: same industry, same region, speculative grade*
Medium 20	Both obligors share one of the following: same industry, same region, speculative grade*
Low 15	Obligors are in different industries and regions, and at least one is investment grade*

\*When rating a jointly supported foreign currency issue, the foreign currency ratings on the obligors and

sovereign are relevant, but the result is constrained by the transfer and convertibility limit. In lieu of a single table for all eligible obligors, as under the old criteria (table 3), three different reference tables (charts 1, 2, and 3) for different degrees of correlation are now employed. To facilitate implementation, relatively simple guidelines are used to determine which table is appropriate. The main factors are whether the obligors are in the same industry, in the same region, or speculative grade. The relevance of these intuitive criteria is supported by Standard & Poor's default correlation research. Most eligible jointly supported issues are expected to fall in the medium or low correlation categories. In the U.S., a region will generally be defined as a state. Outside the U.S., a region will generally be defined as a country. However, we will also make case-specific analytical conclusions about correlation when appropriate. To date, joint-support criteria have typically been applied to transactions involving a bank and either a U.S. corporate or a U.S. public finance entity. When assessing geographic correlation, a large bank, with a globally diverse business profile, will not be treated as in any particular U.S. state. In other words, a major bank with its home office in New York would not be considered in the same region as a New York State municipality. On the other hand, smaller banks with significant geographic concentrations in one to three states may be considered to be in the same region as entities from any of those states. As sovereign default risk moves through the rating spectrum, default correlation for entities within the country, regardless of industry, typically rises and falls geometrically. The default correlation guidelines take this phenomenon into account, with some smoothing of the ups and downs. No credit enhancement for joint support will be permitted when both obligors are in the same country with a sovereign government rated 'BB+' or lower, and the benefit caps shown below will be used to reduce the credit cliff. When both obligors are in the same country and its government is rated: 'AA-' or higher, there is no benefit cap. In the 'A' category, there is a three-notch benefit cap. In the 'BBB' category, there is a one-notch benefit cap. 'BB+' or lower, there is no joint-support benefit. Table 3 Old Criteria For Jointly Supported Obligations AAA AA+ AA AA- A+ A A- BBB+ BBB BBB- AAA AAA AAA AAA AAA AAA AAA AA+ AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA AAA AA+ AA+ AA+ AA- AAA AAA AAA AA+ AA+ AA+ AA+ AA+ AA+ AA+ AA+ AA+ AAA AA+ AA+ AA+ AA+ AA AA AA- A AAA AAA AAA AA+ AA+ AA AA AA- AA- A+ A- AAA AAA AAA AA+ AA+ AA AA- A+ A+ A BBB+ AAA AAA AA+ AA+ AA AA- A+ A A A- BBB AAA AAA AA+ AA+ AA AA- A+ A A- BBB+ BBB- AAA AAA AA+ AA AA- A+ A A- BBB+ BBB The colors in charts 1, 2, and 3 illustrate a comparison of the new criteria to Standard & Poor's old criteria. Yellow indicates that the new rating is lower, light blue indicates that the new rating is one notch higher, dark blue indicates that the new rating is more than one notch higher, and white indicates no rating change.

**Entities To Which The Criteria Are Applicable** The main application of the joint-support criteria to date has been for LOC-backed issues. Nearly 400 such issues are currently rated based on Standard & Poor's joint-support criteria. The LOC-backed issues are split between those for which the primary obligor is a U.S. public finance (tax-exempt) entity and those with a U.S. corporate primary obligor. Banks providing the LOCs range from local U.S. commercial banks to large multinational institutions based in a number of countries. Virtually all transactions to which the criteria are applied include at least one financial institution obligor. Under the new criteria, Standard & Poor's will continue to exclude very highly correlated entities—such as affiliated companies—from any joint-support benefit. Obligations insured by the monoline bond insurers will remain ineligible for joint-support credit enhancement (above the rating on the insurer), reflecting the significant correlation between the insurer and its portfolio of insured obligations. The joint-support approach remains inappropriate for U.S. public finance double-barreled bonds, which are backed by economically codependent payment sources (e.g., a general obligation pledge and revenue from water and sewer charges). Nor should it be applied to obligations of government-owned or -supported enterprises when the joint obligors are the issuer and its government owner/supporter. Government-supported entities (GSEs) When rating a GSE and its obligations, Standard & Poor's has long recognized the benefits afforded to them, originating from the supporting government (see "Revised Rating Methodology for Government-Supported Entities," published on RatingsDirect on June 5, 2001). Based on government support, GSEs are often rated above their stand-alone credit quality, sometimes as high as the government providing support, even in the absence of an explicit guarantee. Standard & Poor's does not plan to apply a probabilistic approach to GSE ratings. After appropriately elevating the ratings on the GSE to account for support, it would be

double counting to raise the rating further, above the rating on the government, in an attempt to incorporate the GSE's independent ability to continue paying its obligations when the government is in default. The more likely scenarios are that they will both default or the GSE will default and the government will not. Although default risk might not be identical, there is clearly a very high degree of default correlation between a government and a GSE that is owned by and depends on meaningful support from it. Under the new joint-support criteria, the high correlation category assumes default correlation of only 25%, well below the default correlation of a GSE and its government benefactor.

**Short-term and dual ratings** Jointly supported short-term obligations will remain eligible for credit enhancement. This is accomplished by converting the indicated long-term rating into the corresponding short-term rating. A substantial number of LOC-backed issues have a short-term put or demand feature. Every seven days, the interest rate is reset and investors may demand repayment. Standard & Poor's assigns a dual rating (e.g., 'AA/A-1+') to these instruments. Standard & Poor's will continue to apply its current criteria with the new reference tables, as explained below.

**Corporate obligors** Using the long-term rating on each obligor, the final long-term rating is found in the appropriate (low, medium, or high correlation) joint-support reference table. Then, based on this long-term rating, the final short-term rating is generally determined by the standard long/short correlation table. When there is a choice, the more conservative option is usually employed, but the jointly supported short-term rating will never be lower than the actual short-term rating on the stronger obligor. For example, a Japanese bank rated 'A-' provides an LOC for an issue of a U.S. manufacturing company rated 'B+'. The low correlation joint-support reference table shows that the long-term rating would be 'A', which, in turn, conservatively corresponds to a short-term rating of 'A-2'. Thus, the jointly supported issue would be rated 'A/A-2'. The long-term rating on the primary obligor fully reflects its liability for the obligation, including the possible put.

**U.S. public finance obligors** Technically, both the LOC provider and the primary obligor are obligated to meet both the scheduled long-term payments and the put option. However, Standard & Poor's has concluded that U.S. public finance obligors, even those with high investment-grade ratings, do not have the capacity to meet the sudden put. Accordingly, we recognize joint support for the long-term component but not for the short-term rating. The short-term rating on the LOC provider is assigned to the short-term portion of the obligation.

**Third obligor** When there are three obligors, each fully responsible for the obligation (such as a primary obligor, an LOC provider, and a confirming LOC provider), the joint-support criteria will now be applied to the best two out of three. We will use the joint-support criteria reference table (high, medium, or low correlation) for the two obligors that produce the highest rating, which will often be the two most highly rated obligors. Here is an example: The primary obligor is a health care entity rated 'BBB-', an LOC is provided by a bank rated 'BBB+', and a confirming LOC is provided by a bank rated 'AA-'. The primary obligor and LOC provider are both in the U.S. state of Georgia; the confirming LOC provider is in Germany. We would use the medium correlation table for the two banks (same industry, different regions, and both investment grade), resulting in a rating of 'AA+'. If the health care firm is upgraded a notch to 'BBB', a 'AAA' rating could be achieved by combining the primary obligor with the confirming LOC provider in the low correlation reference table (different region and industry). Under our old joint-support criteria, the primary obligor was disregarded.

**Legal And Structural Considerations** Both the new and old joint-support criteria are only applicable when the obligation is legal, valid, and enforceable against both (or all three) obligors. Any preference payment or clawback risk must be addressed in the structure of the transaction. Analysts will exercise judgment to determine whether the joint-support criteria should be applied if the obligation is unusual or unpredictable, such as a GIC.

**Implementation** To ensure transparency of Standard & Poor's public ratings, the joint-support approach will only be applied when both obligors have a public long-term and, if relevant, short-term rating unless the joint-support criteria affect only one element of a complex transaction. Standard & Poor's plans to enhance its published reports on LOC-backed issues. A notation will be added when joint-support criteria are applied. (Responses to the request for comment indicated the importance of this disclosure.) If the rating on a supporting obligor is placed on CreditWatch, Standard & Poor's will either place the rating on the jointly supported issue on CreditWatch or state publicly that the latter rating will be unaffected by the obligor's rating review.