Article Title: ARCHIVE | Criteria | Insurance | Bond: S&P; Global Ratings' Methodology For Setting The Capital Charge On Project Finance Transactions Data: (EDITOR'S NOTE: —This criteria article is no longer current. It has been superseded by "Methodology And Assumptions For Analyzing Bond Insurance Capital Adequacy," published on July 1, 2019.) In recent years, project debt issuers worldwide have increasingly been using financial guarantee insurance provided by monoline insurers, also referred to as monoline wraps. A key element in the process of the monoline wrap is the capital charge S&P; Global Ratings assigns. This capital charge is important for determining the capital adequacy of, and ultimately the rating on, the monoline insurers. A monoline wrap provides an "unconditional and irrevocable" financial guarantee from the insurer to pay all or a certain portion of a project's scheduled principal and interest on time and in full to debt providers if the project is unable to do so. The project debt guaranteed by the monoline is assigned a higher rating than the project's underlying rating. This higher rating is equalized with the financial strength rating on the monoline. The underlying project debt rating, which S&P; Global Ratings assigns to each wrapped project, is generally lower, reflecting the project's real underlying business and financial risks. As a result of providing the guarantee, monolines are exposed to the underlying risk of the project. This determines their portfolio risk and the charge to capital. Each project finance transaction is unique, both in terms of risks and structural features, and so is the capital charge. Consequently, S&P; Global Ratings uses the same methodology for every monoline insured project to calculate the applicable capital charge. Capital charges have been assigned by S&P; Global Ratings since the mid 1980s but have been adjusted over time to reflect credit conditions and market trends. Defining The Capital Charge Capital charge is the theoretical loss based on a worst-case economic environment, i.e. an economic depression case. The capital charge is expressed as a product of: Likelihood of default by the issuer (i.e. default risk or frequency); and Severity of default measured in terms of loss in asset value recovery. The default risk is equivalent to S&P; Global Ratings' default probability at a given rating. It does not vary between different projects that have been assigned the same rating. The severity factor is transaction specific, however, because each project has a unique combination of asset-related risks and contractual, financing, and legal issues. Consequently, the capital charge varies across asset classes and primarily reflects differences in the recovery potential. Once the two factors have been determined, the capital charge for issues is a percentage of par value. S&P; Global Ratings applies the same capital charge across an entire rating category. Issues rated 'A', 'A+', and 'A-', for example, have the same capital charge. Once a capital charge has been assigned, S&P; Global Ratings reviews it regularly as part of its surveillance. Furthermore, the same capital charge is used for all the insurers involved in that project, irrespective of which insurer provides the wrap. This is because the transaction default frequency and severity measure reflect the project risks and are independent of the insurance company that insures the project debt. The process of estimating capital charges can be complex and involve reasoning and modeling. Empirical data on new asset classes or new financing types, for example, is not always available or useful. Estimating loss-given default can also be complex in countries where the creditor regime has not been tested or the enforcement of security is complex and lengthy. The fundamental approach to calculating the capital charge for project debt is generally the same as that adopted for corporates. Nevertheless, the financing and structural aspects of a project can demand subjective judgment of recovery potential, and therefore the capital charge. Even so, similar transactions under a similar creditor regime are often likely to provide a good benchmark for a new transaction. Prerequisites Assigning an underlying rating to the project is a required step toward enabling the calculation of the capital charge. The underlying rating is determined in the same way as an unwrapped project debt rating and is based on the same criteria. The underlying rating is determined irrespective of whether the monoline guarantee applies to all the project debt or only a portion of it. S&P; Global Ratings relies only on in-house determinations of default frequency and recovery estimates. Ratings and recovery values estimated by other rating agencies or professional bodies are not used as reference points for assigning the capital charge. The in-house data enable S&P; Global Ratings to maintain consistency across various jurisdictions, transactions, and operating environments. Calculating The Capital Charge Default frequency The default frequency for a given rating is determined using S&P; Global Ratings' corporate default study. The default study identifies the highest historical default rates across various sectors by rating category over a period of years. The leading global economies, the U.S. and Europe, have not, over the past 15 years, represented a worst-case depression-like scenario, and so the default rates are grossed up to what S&P; Global Ratings believes to be worst-case levels. Through simulations of such scenarios across various sectors, S&P; Global Ratings calculates worst-case default frequency for long-term risks across the rating categories (see table). Worst-Case Default Frequency RATING CATEGORY WORST-CASE DEFAULT FREQUENCY (%) AAA 4.2 AA 5.9 A 7.1 BBB 14.8 BB 55.4 B 66.9 CCC 80.0 Loss-given default Loss-given default is unique for each project, for the reasons given above in "Defining The Capital Charge". It can differ between two assets in the same sector and jurisdiction. There can also be different degrees of confidence regarding recovery. Subjective judgments are critical for deciding how to stress collateral values in hypothetical post-default scenarios, but market trends can supplement theoretical estimates. For the purposes of assigning a capital charge, S&P; Global Ratings currently assumes a maximum recovery of 90%. Example.This example gives an illustration of how the capital charge on a project rated 'A' is determined. The steps are: to determine the 'A' underlying rating on the project; read the default frequency from the table above; estimate the loss-given default; and finally determine the capital charge. The project's underlying rating is 'A'. The default frequency for the 'A' rating category is 7.1%. The estimated asset recovery value is 60%. The loss-given default is 40% (100% minus 60%). The capital charge is 7.1% multiplied by 40%: 2.84% of par value. Cross-border issuance Projects located in one country often raise debt in another market. Such situations give rise to sovereign-related risks that could affect the ability and willingness of the entity to service its foreign currency debt. In the past, we adjusted capital charges to reflect these risks. Based on evidence that sovereigns under political and economic stress are less often restricting nonsovereign entities' access to the foreign exchange needed for debt service, cross-border transactions (even without structural sovereign risk mitigation features) can be rated above the sovereign foreign currency rating, up to the "Transfer and Convertibility Risk Assessment" for the relevant sovereign jurisdiction. Project ratings incorporate all transfer and convertibility risk and other relevant country risks. Furthermore, many cross-border project finance transactions contain significant additional structural mitigants for direct sovereign interference risk, which make an additional "sovereign risk" adjustment to the capital charge unnecessary. Our new methodology for setting the capital charge for cross-border project finance transactions is therefore based on the default rate associated with the transaction's foreign currency rating and severity of loss-given default. The latter will continue to be an analytical assessment based on the unique characteristics of each individual transaction analyzed by S&P; Global Ratings. Surveillance Of The Capital Charge The capital charge is dynamic and all projects that have a monoline wrap have been surveilled since 2005. This surveillance enables an adjustment to the capital charge if the underlying project's default risk or recovery prospects improve or worsen. The Capital Charge And New Ratings Project debt issuers and monoline insurers are encouraged to begin dialogue with S&P; Global Ratings at an early stage in the project-financing process to help avoid any surprises later on. Early dialogue is particularly important because most projects are rated at the lower end of the rating scale, where the capital charge is substantially higher and can affect the premium payable to the monoline. Borderline differences in rating outcome can have a substantial impact on the applicable capital charge. S&P; Global Ratings is often asked by monoline insurers to give indicative capital charges, sometimes even before the rating process is initiated. We provide this indication based on estimated default risk and recovery levels. Only once the rating (default risk) has been assigned to a project and the recovery rate determined is the final capital charge calculated. The final capital charge can therefore differ from the indicative one, as the latter is based on estimates and on very limited information. Revisions And Updates This article was originally published on Sept. 12, 2007. Changes introduced after original publication: We republished this article on Dec. 29, 2014, to add the "Frequently Asked Questions" section, which addressed the worst-case default frequencies assigned to project finance transactions with S&P; Underlying Ratings in various categories. Following our periodic review completed on Feb. 24, 2015, we updated the contact information. Following our periodic review completed on Feb. 23, 2016, we updated the contact information, updated criteria references, and deleted outdated text that was no longer relevant. In addition, we incorporated the contents of the "Frequently Asked Questions" section, which had been added on Dec. 29, 2014, into the "Worst-Case Default Frequency" table by providing factors for 'AAA', 'B', and 'CCC' in this table, and therefore deleted the "Frequently Asked Questions" section. Following our periodic review completed on Feb. 20, 2018, we updated the contact information and deleted text relating to the initial publication of our criteria, which had previously been moved to an appendix and was no longer relevant. On Feb. 27, 2019, we republished this criteria article to make nonmaterial changes to the contact information. 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