General Criteria:

Understanding S&P Global Ratings' Rating Definitions

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*(**Editor's Note:** On Dec. 18, 2018, we republished this criteria article to make nonmaterial changes. See the "Revisions And Updates" section for details.)*

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Executive Summary

S&P Global Ratings' credit ratings are designed primarily to provide relative rankings among issuers and obligations of overall creditworthiness; the ratings are not measures of absolute default probability. Creditworthiness encompasses likelihood of default, and also includes (i) payment priority, (ii) recovery, and (iii) credit stability.

In addition, our rating symbols are intended to connote the same general level of creditworthiness for issuers and bonds in different sectors and at different times. In order to promote the comparability of ratings across sectors, geographies, and over time, we use stress scenarios associated with each rating category. These stress scenarios are an important tool for calibrating our criteria to help maintain comparability. The scenarios are not part of the rating definitions. Nor are they the sole or primary drivers of our criteria.

S&P Global Ratings is committed to maintaining confidence in ratings.

This article is designed to help market participants better understand what our credit ratings mean and to attribute clearer meanings to different rating categories. Although the official definitions appear outwardly to be very simple, they embody multiple factors that compose the overall assessment of creditworthiness.

S&P Global Ratings strives to maintain comparability of ratings across sectors. This is done by relating all ratings to common default behavior and measurement and by common approaches to risk analysis. In the spirit of promoting greater transparency, S&P Global Ratings also articulates a set of economic stress scenarios enumerated in Appendix IV, which we use as benchmarks for enhancing the consistency and comparability of ratings across sectors and over time. Each scenario describes particular conditions of economic stress, which we associate with a particular rating level, as described in the appendix. Credits rated in each category are intended to be able to withstand particular conditions of economic stress without defaulting (though they might be downgraded significantly as economic stresses increase).

Key Attributes Of S&P Global Ratings' Credit Ratings

Rank ordering of creditworthiness

Our credit ratings express forward-looking opinions about the creditworthiness of issuers and obligations (see "S&P Global Ratings Definitions" for a description of "issuer" and "issue" ratings). More specifically, our credit ratings express a relative ranking of creditworthiness. Issuers and obligations with higher ratings are judged by us to be more creditworthy than issuers and obligations with lower credit ratings.

Creditworthiness is a multi-faceted phenomenon. Although there is no "formula" for combining the various facets, our credit ratings attempt to condense their combined effects into rating symbols along a simple, one-dimensional scale. Indeed, as discussed below, the relative importance of the various factors may change in different situations.

The term creditworthiness refers to the question of whether a bond or other financial instrument will be paid according to its contractual terms. At first blush, the idea of creditworthiness seems entirely straightforward. However, delving beneath the outward simplicity reveals the true multi-dimensional nature.

Primary factor -- likelihood of default

In our view, likelihood of default is the centerpiece of creditworthiness. That means likelihood of default--encompassing both capacity and willingness to pay--is the single most important factor in our assessment of the creditworthiness of an issuer or an obligation. Therefore, consistent with our goal of achieving a rank ordering of creditworthiness, higher ratings on issuers and obligations reflect our expectation that the rated issuer or obligation should default less frequently than issuers and obligations with lower ratings, all other things being equal.

Although we emphasize the rank ordering of default likelihood, we do not view the rating categories solely in relative terms. We associate each successively higher rating category with the ability to withstand successively more stressful economic environments, which we view as less likely to occur. We associate issuers and obligations rated in the highest categories with the ability to withstand extreme or severe stress in absolute terms without defaulting. Conversely, we associate issuers and obligations rated in lower categories with vulnerability to mild or modest stress. (See Appendix IV for stress scenarios by rating level that we intend to use in promoting ratings comparability. Appendix V contains a listing of historical examples of stress conditions, including the magnitude of stress that we associate with each.)

Looking to absolute stress levels is part of how we try to achieve comparability of ratings across different types of securities, different times, different currencies, and different regions. That is, we strive to make our rating symbols correspond to the same approximate level of creditworthiness wherever they appear. Thus, when we use a given rating symbol, we intend to connote roughly the same level of creditworthiness to the widely disparate issuers on a global basis, such as a Canadian mining company, a Japanese financial institution, a Wisconsin school district, a British mortgage-backed security, or a sovereign nation.

We use the hypothetical stress scenarios described in Appendix IV as benchmarks for calibrating our criteria across different sectors and over time. The scenarios are not part of the rating definitions. Nor are they the sole or primary drivers of our criteria. However, they are an important

tool for calibrating our criteria to help maintain comparability across sectors and over time. That is, we consider the stress scenarios in the process of associating both qualitative and quantitative factors with different rating categories. For example, for corporate credits, we consider the stress scenarios (along with everything else that we consider) in assessing the levels of leverage and profitability that we associate with credits in different rating categories. Likewise, for structured finance issues, we consider the stress scenarios in assessing the levels of credit support that we associate with the different rating categories.

The scenarios represent hypothetical stress conditions corresponding to each rating category. The scenario for a particular category would reflect a level of stress that credits rated in that category should, in our view, be able to withstand without defaulting (though they might be downgraded to levels near default). Significantly, the scenarios do not supplant consideration of sector-specific and company-specific risk factors in our criteria or in assigning individual ratings. Rather, they apply in addition to such factors.

Notably, we do not attach specific probabilities to particular types of potential economic environments. Therefore, we do not ascribe a specific "default probability" to each rating category. On the contrary, we recognize that the observed default rates for all rating categories rise and fall as the economic environment progresses through periods of expansion and contraction (see note 1). Moreover, any given economic cycle generally does not produce the same degree of stress in all sectors and regions. Accordingly, only over the very long term (e.g., covering multiple economic cycles), would we expect to be able to observe whether similarly rated issuers from different market segments actually experience similar long-term default frequencies. These observations inform future changes to our criteria and analytics.

Secondary credit factors

Beyond likelihood of default, there are other factors that may be relevant. For example, one such factor is the payment priority of an obligation following default. Our ratings reflect the impact of payment priority in a very visible way: When a corporation issues both senior and subordinated debt, we usually assign a lower rating to the subordinate debt. For most issuers, the likelihood of default is exactly the same for both senior and subordinated debt because both default at the same time when an issuer goes into bankruptcy. A further example is the "structural subordination" of a holding company's debt to the debt of its operating subsidiaries. (See "Reflecting Subordination Risk In Corporate Issue Ratings," published March 28, 2018.)

Another secondary factor is the projected recovery that an investor would expect to receive if an obligation defaults. For example, our ratings on speculative-grade corporate obligations reflect adjustments for the expected recovery following default. (See "Recovery Rating Criteria For Speculative-Grade Corporate Issuers," published Dec. 7, 2016.) (See note 2.)

A third secondary factor is credit stability. Some types of issuers and obligations are prone to displaying a period of gradual decay before they default. Others may be more vulnerable to sudden deterioration or default. In essence, some types of credits tend to give a warning before they default, while others do not. In addition, the likelihood of default for some types of credits may suddenly change because of changes in key aspects of the economic or business environment. For other credits, the likelihood of default may be less sensitive to changing conditions. Both kinds of differences are described by the term "credit stability." Differing degrees of stability constitute differences in creditworthiness (see "Credit Stability Criteria," published May 3, 2010).

Creditworthiness is complex and while there is no formula for combining the different factors into an overall assessment, the criteria does provide a guide in considering these factors. Payment priority and recovery apply more often in the context of rating specific obligations than in rating

issuers. Also, payment priority and recovery have increasing significance as likelihood of default increases (i.e., at lower rating levels). In contrast, credit stability has increasing significance as likelihood of default decreases (i.e., at higher rating levels). In addition, the relative importance of the several factors may wax or wane with changes in market conditions and the economic environment. The rating criteria for different types of credits details the specifics of how payment priority, recovery, and stability factor into our analysis.

Our ratings are forward-looking. That is, they express opinions about the future. Indeed, the issue that they address -- credit quality -- is at its core future-oriented. Ratings at the lower end of the rating scale reflect our view as to the rated entity's vulnerability to cyclical fluctuations and, accordingly, generally address shorter time horizons and may reflect specific economic forecasts and projections. Conversely, ratings at the higher end of the rating scale generally address longer time horizons and are usually less reflective of forecasts or projections of what is likely to occur in the near term. Instead, they reflect greater emphasis of our view as to what might occur in unlikely (or highly unlikely) future scenarios.

Given the movement in economic and credit cycles, we expect ratings to change over time as the creditworthiness of rated issuers and obligations rises and falls. To address the inherent variability of creditworthiness, we maintain surveillance on our ratings. Our approach to changes in creditworthiness is to take prompt rating actions when we believe, based on our surveillance, that an upgrade, downgrade, or an affirmation is appropriate. Along with the ratings themselves, we strive to explain the basis for our analysis by publishing a clear rationale for the ratings we issue. In many cases, we not only describe our reason for assigning a particular rating, but also discuss future developments that could cause us to change it.

Measuring Ratings Performance

As noted earlier, the key objective of our ratings is rank ordering the relative creditworthiness of issuers and obligations. Accordingly, a key measure that we use for assessing the performance of our ratings is how well they have rank-ordered observed default frequencies during a given test period (usually one year). That is, when our ratings perform as intended, securities with higher ratings should display lower observed default frequencies than securities with lower ratings during a given test period.

Our performance studies have shown mostly strong rank ordering of default frequencies within each major segment of the fixed-income market (e.g., corporate bonds, structured finance, public finance, etc.). However, as noted above, economic cycles do not produce the same degree of stress in all geographic regions and in all market segments at any point in time. Accordingly, although we strive for comparability in our ratings, we expect to observe less consistency in rank ordering of observed default frequencies among regions and market segments. Only over very long periods –- covering multiple economic cycles -– would we expect to be able to observe whether similarly rated credits from different market segments actually experience similar long-term default frequencies.

Small sample sizes also sometimes affect measurements of actual default frequencies. Comparisons of default rates between sub-sectors that contain small numbers of credits can be distorted by small sample sizes and by idiosyncratic factors.

Beyond the primary measure of rank ordering, we secondarily consider whether ratings have effectively incorporated other aspects of creditworthiness. In that vein, we examine whether the observed default rate for each rating category during a given test period is higher or lower than has been historically observed during past periods of similar economic and financial conditions. We examine rating transitions and sudden defaults to consider the degree to which ratings have

captured credit stability. Likewise, we examine recoveries following default to assess whether their impact has been captured. However, the secondary measurements do not figure into the ultimate measurement of ratings performance, which remains focused on an assessment of rank ordering.

Conclusion

Our ratings express forward-looking opinions about relative creditworthiness of issuers and obligations. Creditworthiness is a multi-dimensional phenomenon. We view likelihood of default as the single most important dimension of creditworthiness. We place the greatest emphasis on rank ordering default likelihood in applying our rating definitions, in developing rating criteria, and in rating specific issuers and obligations.

In addition, we place secondary emphasis on absolute likelihoods of default as part of how we strive for comparability of ratings. In an indirect way, our consideration of absolute default likelihood can be viewed as associating "stress tests" or "scenarios" of varying severity with the different rating categories. We do not expect to observe constant default frequencies over time; we expect observed default frequencies for all rating categories to rise and fall with changes in economic conditions.

Beyond likelihood of default, we also consider secondary dimensions of creditworthiness: payment priority, recovery, and credit stability. Those can become critical elements of how we apply our rating definitions in developing criteria for particular situations.

However, when we conduct studies to measure the performance of our ratings, we return to the touchstone of relative ranking of observed default frequency. We may measure and report on absolute default frequencies or on secondary factors, but our primary emphasis for performance measurement always remains the relative ranking of default frequency during any given study period.

Notes

(1) We generally apply longer time horizons for our analysis of issuers/issues at higher rating levels. Even so, this does not fully neutralize the effect of economic cycles. (See Appendix II for illustrations of how actual default rates vary over time.)

(2) Although, as set forth in our published criteria, recoveries can be a factor in some of our ratings, our credit ratings are not intended to be indicators of expected loss.

Appendix I

[This appendix has been deleted.]

Appendix II

Variability of default rates over time

Performance studies of credit ratings provide various statistics about the default rates of issuers (or issues) in different rating categories. Some readers of those studies focus intently on the

average one-year default rate for each rating category and largely ignore the annual variation around the average. Another misuse of these statistics is to assume that historical average default rates represent the "probability of default" of debt in a particular rating category. However, as shown in tables 1 and 2, default rates can vary significantly from one year to the next and the observed rate for any given year can vary significantly from the average. The highest observed default rates have sometimes been very high above the average levels. In short, historical default statistics should not be used to impute specific prospective default rates to specific issuers or obligations based on their ratings, particularly over short time periods or in relation to limited segments of the rated universe. Tables 1 and 2 are examples from our published default studies. Please refer to our periodic updates for more recent data.

Table 1

S&P Global Ratings' One-Year Global Corporate Default Rates By Refined Rating Category, 1981-2008

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC to C
1981	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3.28	–	–
1982	–	–	–	–	–	0.33	–	–	0.68	–	–	2.86	7.04	2.22	2.33	7.41	21.43
1983	–	–	–	–	–	–	–	–	–	1.33	2.17	–	1.59	1.22	9.80	4.76	6.67
1984	–	–	–	–	–	–	–	–	1.40	–	–	1.64	1.49	2.13	3.51	7.69	25.00
1985	–	–	–	–	–	–	–	–	–	–	1.64	1.49	1.33	2.59	13.11	8.00	15.38
1986	–	–	–	–	–	–	0.78	–	0.78	–	1.82	1.18	1.12	4.65	12.16	16.67	23.08
1987	–	–	–	–	–	–	–	–	–	–	–	–	0.83	1.31	5.95	6.82	12.28
1988	–	–	–	–	–	–	–	–	–	–	–	–	2.33	1.98	4.50	9.80	20.37
1989	–	–	–	–	–	–	–	0.90	0.78	–	–	–	1.98	0.43	7.80	4.88	31.58
1990	–	–	–	–	–	–	–	0.76	–	1.10	2.78	3.06	4.46	4.87	12.26	22.58	31.25
1991	–	–	–	–	–	–	–	0.83	0.74	–	3.70	1.11	1.05	8.72	16.25	32.43	33.87
1992	–	–	–	–	–	–	–	–	–	–	–	–	–	0.72	14.93	20.83	30.19
1993	–	–	–	–	–	–	–	–	–	–	–	1.92	–	1.30	5.88	4.17	13.33
1994	–	–	–	–	0.45	–	–	–	–	–	–	0.86	–	1.83	6.58	3.23	16.67
1995	–	–	–	–	–	–	–	–	–	0.63	–	1.55	1.11	2.76	8.00	7.69	28.00
1996	–	–	–	–	–	–	–	–	–	–	0.86	0.65	0.55	2.33	3.74	3.92	4.17
1997	–	–	–	–	–	–	–	0.36	0.34	–	–	–	0.41	0.72	5.19	14.58	12.00
1998	–	–	–	–	–	–	–	–	0.54	0.70	1.29	1.06	0.72	2.57	7.47	9.46	42.86
1999	–	–	–	0.36	–	0.24	0.27	–	0.28	0.30	0.54	1.33	0.90	4.20	10.55	15.45	32.35
2000	–	–	–	–	–	0.24	0.56	–	0.26	0.88	–	0.80	2.29	5.60	10.66	11.50	34.12
2001	–	–	–	–	0.57	0.49	–	0.24	0.48	0.27	0.49	1.19	6.27	5.94	15.74	23.31	44.55
2002	–	–	–	–	–	–	–	1.11	0.65	1.31	1.50	1.74	4.62	3.69	9.63	19.53	44.12
2003	–	–	–	–	–	–	–	–	0.19	0.52	0.48	0.94	0.27	1.70	5.16	9.23	33.13
2004	–	–	–	–	–	0.23	–	–	–	–	–	0.64	0.76	0.46	2.68	2.82	15.11
2005	–	–	–	–	–	–	–	–	0.17	–	0.36	–	0.25	0.78	2.59	2.98	8.87
2006	–	–	–	–	–	–	–	–	–	–	0.36	–	0.48	0.54	0.78	1.58	13.08
2007	–	–	–	–	–	–	–	–	–	–	–	0.30	0.23	0.19	–	0.88	14.81

Table 1

S&P Global Ratings' One-Year Global Corporate Default Rates By Refined Rating Category, 1981-2008 (cont.)

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC to C
2008	–	–	0.43	0.40	0.31	0.21	0.58	0.18	0.59	0.71	1.14	0.63	0.63	2.97	3.29	7.02	26.53
Mean	–	–	0.02	0.03	0.05	0.06	0.08	0.16	0.28	0.28	0.68	0.89	1.53	2.44	7.28	9.97	22.67
Median	–	–	–	–	–	–	–	–	0.08	–	0.18	0.83	0.86	2.06	6.27	7.69	22.25
Minimum	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Maximum	–	–	0.43	0.40	0.57	0.49	0.78	1.11	1.40	1.33	3.70	3.06	7.04	8.72	16.25	32.43	44.55
Standard Deviation	–	–	0.08	0.10	0.14	0.13	0.20	0.32	0.36	0.43	0.96	0.84	1.83	2.02	4.51	7.82	11.93

Includes ratings of financial and non-financial corporate issuers. "–" means zero.

Table 2

S&P Global Ratings' One-Year Global Structured Finance Default Rates By Refined Rating Category, 1978-2008

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC to C
1978	–	na	na	na	na	–	na	na	na	na	na	na	na	na	na	na	na
1979	–	na	–	na	na	–	na	na	na	na	na	na	na	na	na	na	na
1980	–	na	–	na	na	–	na	na	na	na	na	na	na	na	na	na	na
1981	–	na	–	na	na	–	na	na	na	na	na	na	na	na	na	na	na
1982	–	na	–	na	na	–	na	na	na	na	na	na	na	na	na	na	na
1983	–	–	–	na	na	–	na	na	na	na	na	na	na	na	na	na	na
1984	–	–	–	–	–	–	na	na	na	na	na	na	na	na	na	na	na
1985	–	–	–	–	–	–	–	–	na	na	na	na	na	na	na	na	na
1986	–	–	–	–	–	–	–	na	na	na	na	na	na	na	na	na	na
1987	–	–	–	–	–	–	–	na	–	na	na	na	na	na	na	na	–
1988	–	–	–	–	–	–	–	na	–		57.14	na	na	na	na	na	–
1989	–	–	–	–	–	–	–	na	–	–		na	na	na	na	–	–
1990	–	–	–	–	–	–	–	na	–	–	–	na	–	na	–	–	–
1991	–	–	–	–	–	–	–	–	–	–	–	na	–	na	–	–	–
1992	–	–	–	–	–	–	–	–	–	–	–	–	–	na	–	na	–
1993	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6.25	na	–
1994	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.85	–	–
1995	–	–	–	–	–	–	–	–	0.43	–	–	0.98	–	–	0.95	–	52.63
1996	–	–	–	–	–	0.15	–	–	–	–	–	0.61	12.50	na	–	–	31.03
1997	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20.69
1998	–	–	–	–	–	1.04	0.91	–	0.19	–	–	1.03	–	–	2.34	–	22.58

Table 2

S&P Global Ratings' One-Year Global Structured Finance Default Rates By Refined Rating Category, 1978-2008 (cont.)

	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC to C
1999	–	–	–	–	–	–	0.77	–	–	0.39	–	–	–	–	1.54	–	19.35
2000	–	–	–	–	–	–	–	–	0.11	–	–	0.61	–	–	2.19	–	5.26
2001	0.05	–	–	–	–	0.12	–	2.22	–	0.86	0.83	0.55	0.91	2.00	2.69	3.27	26.87
2002	–	–	0.06	–	0.27	0.14	–	1.77	0.19	0.70	1.26	2.03	1.12	2.50	3.60	23.24	27.03
2003	–	–	–	–	0.19	0.03	0.16	0.20	0.60	0.50	0.75	0.84	1.43	3.28	1.64	5.15	32.58
2004	–	–	–	–	–	–	–	–	0.16	0.17	0.50	0.81	0.29	0.79	2.23	3.56	13.79
2005	–	–	–	–	–	–	–	–	0.08	0.06	0.15	0.14	0.45	0.33	1.34	2.53	16.08
2006	–	–	–	–	–	–	–	–	0.06	0.20	–	0.33	0.36	0.26	0.36	1.42	19.18
2007	0.04	0.03	0.07	0.08	–	0.10	0.21	0.48	0.47	1.27	5.07	1.61	1.53	0.68	1.55	1.47	24.11
2008	0.53	0.35	0.57	1.15	1.15	0.87	1.42	2.27	1.26	3.45	5.60	4.21	5.07	8.53	12.84	10.28	56.92
Mean	0.02	0.01	0.02	0.05	0.06	0.08	0.14	0.37	0.16	0.38	3.56	0.81	1.24	1.22	2.18	2.83	16.73
Median	–	–	–	–	–	–	–	–	–	–	–	0.61	–	0.26	1.55	–	17.63
Minimum	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Maximum	0.53	0.35	0.57	1.15	1.15	1.04	1.42	2.27	1.26	3.45	57.14	4.21	12.50	8.53	12.84	23.24	56.92
Standard Deviation	0.09	0.07	0.10	0.23	0.23	0.24	0.35	0.76	0.29	0.78	12.39	1.02	2.90	2.20	2.93	5.59	16.60

AAA' ratings from the same transaction are treated as a single rating in the calculation of this table. "na" means no data available from which to calculate a default rate. "–" means zero.

Appendix III

[This appendix has been deleted.]

Appendix IV

Stress scenario examples for promoting ratings comparability

This appendix contains hypothetical stress scenarios that we use for promoting ratings comparability. We use the scenarios as benchmarks for calibrating our criteria across different sectors and over time. The scenarios are not part of the rating definitions. Nor are they the sole or primary drivers of our criteria. However, they are an important tool for calibrating our criteria to help maintain comparability across sectors and over time.

Each scenario broadly corresponds to one of the rating categories 'AAA' through 'B'. The scenario for a particular rating category reflects a level of stress that issuers or obligations rated in that category should, in our view, be able to withstand without defaulting. That does not mean that rated credits would not be expected to suffer downgrades. On the contrary, we believe that the occurrence of stress conditions that might be characterized as "substantial," "severe," or

"extreme" likely would produce large numbers of downgrades of rated issuers and obligations. The scenarios do not represent a guarantee that rated entities will not default in those or similar scenarios.

The scenarios presume a starting point of "benign conditions" and a fairly rapid path of deterioration in economic conditions. Starting conditions that are less favorable would require proportionally more adverse scenarios. Accordingly, the scenarios are not part of the rating definitions, which apply universally in all economic environments. For example, for an issuer to attain a rating of 'AAA' it must have "extremely strong" capacity to meet its financial commitments under the actual conditions at the time of consideration. If the starting conditions are adverse, then the credit must have the capacity to withstand further deterioration of "extreme" magnitude.

Moreover, each of the scenarios below reflects only a single example of stress at a given level. Naturally, a given measure of stress potentially could result from a nearly infinite combination of factors contributing to the intensity and duration of the episode. In fact, some real-world occurrences may include successive shocks (the Great Depression was an example).

The stress scenarios generally contemplate issuers or obligations from countries with highly developed economies (i.e., the U.S., Japan, Australia, etc.). Even among developed economies, however, the scenarios may require adjustments for structural differences in specific countries, such as above-average unemployment rates even during periods of economic expansion. For example, the average unemployment rate for EU countries tends to be about three percentage points higher than that of the U.S. Likewise, for developing economies even greater adjustments would be appropriate because such economies may experience pronounced swings in GDP and unemployment at fairly frequent intervals. Moreover, criteria for rating credits above sovereign rating levels in developing economies should reflect scenarios in which the sovereign itself defaults.

Therefore, although the scenarios below are the ones that we use as our main benchmarks for enhancing comparability of ratings across sectors, market participants should not interpret them as the only scenarios we may consider. On the contrary, market participants should understand that the scenarios may be adjusted depending on economic conditions (as described two paragraphs above) or depending on geographic and sector-specific factors, as applicable.

Apart from the notion of general economic stress, issuers and obligations, particularly those at the lower rating levels ('BB' and 'B'), may be vulnerable to default even during benign conditions because of sector-specific or issuer-specific characteristics and events. Accordingly, the inclusion of stress scenarios corresponding to the lower rating levels should not be interpreted as an indication that there should not be defaults of lower-rated issuers and obligations in the absence of stress conditions.

'AAA' stress scenario. An issuer or obligation rated 'AAA' should be able to withstand an extreme level of stress and still meet its financial obligations. A historical example of such a scenario is the Great Depression in the U.S. In that episode, real GDP for the U.S. declined by 26.5% from 1929 through 1933. U.S. unemployment peaked at 24.9% in 1933 and was above 20% from 1932 through 1935. U.S. industrial production declined by 47% and home building dropped by 80% from 1929 through 1932. The stock market dropped by 85% from September 1929 to July 1932 (as measured by the Dow Jones Industrial Average). The U.S. experienced deflation of roughly 25%. Real GDP did not recover to its 1929 level until 1935. Nominal GDP did not recover until 1940. We consider conditions such as these to reflect extreme stress. The 'AAA' stress scenario envisions a widespread collapse of consumer confidence. The financial system suffers major dislocations. Economic decline propagates around the globe.

'AA' stress scenario. An issuer or obligation rated 'AA' should be able to withstand a severe level of stress and still meet its financial obligations. Such a scenario could include GDP declines of up to 15%, unemployment levels of up to 20%, and stock market declines of up to 70%.

'A' stress scenario. An issuer or obligation rated 'A' should be able to withstand a substantial level of stress and still meet its financial obligations. In such a scenario, GDP could decline by as much as 6% and unemployment could reach up to 15%. The stock market could drop by up to 60%.

'BBB' stress scenario. An issuer or obligation rated 'BBB' should be able to withstand a moderate level of stress and still meet its financial obligations. A GDP decline of as much as 3% and unemployment at 10% would be reflective of a moderate stress scenario. A drop in the stock market by up to 50% would similarly indicate moderate stress.

'BB' stress scenario. An issuer or obligation rated 'BB' should be able to withstand a modest level of stress and still meet its financial obligations. For example, GDP might decline by as much as 1% and unemployment might reach 8%. The stock market could drop by up to 25%.

'B' stress scenario. An issuer or obligation rated 'B' should be able to withstand a mild level of stress and still meet its financial obligations. Scenarios in which GDP is flat or declines by as much as 0.5% and unemployment is in the area of 6% or less could be viewed as mild stress scenarios. A flat stock market or a drop by up to 10% would be another indicator of such a scenario.

Appendix V

Historical stress examples

Table 3

Selected Recessions And Financial Crises And S&P Global Ratings' View Of Corresponding Stress Levels

(U.S. unless otherwise noted)

Name	Duration (interval or months)	Real GDP decline (%)	Unemployment peak (%)	Stress Level	Notes
Panic of 1797	1797–1800	NA	NA	BB (U.S.)	Market disruptions caused by deflationary pressures from Britain.
Depression of 1807	1807–1814	NA	NA	BBB (U.S.)	The Embargo Act of 1807 suppressed shipping-related industries and led to increased smuggling in New England.
Panic of 1819	1819–1824	NA	NA	A (U.S.)	This was the first major financial crisis in the U.S. There was significant unemployment and declines in both manufacturing and agriculture.

Table 3

Selected Recessions And Financial Crises And S&P Global Ratings' View Of Corresponding Stress Levels (cont.)

(U.S. unless otherwise noted)

Name	Duration (interval or months)	Real GDP decline (%)	Unemployment peak (%)	Stress Level	Notes
Panic of 1837	1837–1843	NA	NA	AA (U.S.)	Bursting of a speculative bubble and loss of confidence in paper money led to a five-year depression. About 40% of U.S. banks closed. Banks stopped paying in gold and silver coinage. Some consider this to be a depression comparable in scope and severity to the Great Depression.
Panic of 1857	18 months	NA	NA	AAA (U.S.)	Every U.S. railroad bond defaulted. More than 5,000 businesses failed during the first year. Bank failures were widespread. The full impact of this recession did not dissipate until after the Civil War. Poor's Manual was first published in the immediate wake of this recession.
Panic of 1873	65 months	NA	NA	BBB (U.S.)	The start of the Long Depression in Europe caused the bursting of the post-Civil War speculative bubble in the U.S.
Long Depression	1873-1896	NA	NA	AA (Britain)	The collapse of the Vienna Stock Exchange caused a depression that spread around the globe.
Panic of 1893	17 months	(2.6)	18.4	AA (U.S.)	This event involved the failure of more than 15,000 companies and 500 banks. Overbuilding of railroads was one of the key causes. A major protest march by unemployed workers--known as Coxey's Army--occurred during this event.
Panic of 1907	13 months	(3)	8	A (U.S.)	A failed attempt to corner the copper market started a chain of bank failures, including the collapse of Knickerbocker Trust Co. Intervention by J.P. Morgan may have helped to dampen the intensity of the event.
Post-World War I recession (U.S.)	18 months	(6.6)	11.7	A (U.S.)	A brief post-war recession involving high unemployment because of returning troops.
Post-World War I recession (U.K.)	14 months	(19.2)	NA	AA (U.K.)	Severe post-war recession spanning three years of sharply declining GDP.
Spanish Civil War	16 months	(31.3)	NA	>AAA (Spain)	Civil war in which the Second Spanish Republic was overthrown and replaced by the fascist Franco regime.
Great Depression (First Leg) (1929)	43 months	(26.5)	24.9	AAA (U.S.)	Probably the worst depression in U.S. history, involving very high unemployment and sharp declines in GDP and industrial production. The event was accompanied by the "Dust Bowl" ecological disaster in the High Plains region.

Table 3

Selected Recessions And Financial Crises And S&P Global Ratings' View Of Corresponding Stress Levels (cont.)

(U.S. unless otherwise noted)

Name	Duration (interval or months)	Real GDP decline (%)	Unemployment peak (%)	Stress Level	Notes
Great Depression (Second Leg) (1937)	13 months	(3.4)	19	AAA (U.S.)	Second leg of Depression. Retightened monetary and fiscal policy after initial recovery.
World War II (France)	24 months	(41.4)	NA	>AAA (France)	Global military conflict that involved most of the world's nations, including Britain, Japan, France, Germany, Italy, the Soviet Union, and the U.S.
World War II (Germany)	16 months	(73.6)	NA	>AAA (Germany)	Global military conflict that involved most of the world's nations, including Britain, Japan, France, Germany, Italy, the Soviet Union, and the U.S.
1945	8 months	(12.8)	3.9	BB (U.S.)	Drop in military spending after WWII. Return of soldiers looking for work. A brief but sharp recession.
1948	11 months	(3.4)	7.9	BBB (U.S.)	Inventory correction after postwar recovery.
1953	10 months	(1.8)	6.1	BB (U.S.)	Post-Korean War military build-up accompanied by tighter Fed policy to fight inflation.
1957	8 months	(2.7)	7.5	BBB (U.S.)	This recession extended to many developed countries. U.S. auto sales dropped 31% in 1958 relative to 1957.
1960	10 months	(1.6)	7.1	BB (U.S.)	Monetary policy tightened to fight inflation and housing boom.
1970	11 months	(1.1)	6.1	BB (U.S.)	High interest rates were put in to fight inflation. A GM strike deepened the recession.
1973 Oil Crisis	16 months	(3.1)	9	BBB (U.S.)	OPEC countries initiated an oil embargo against the U.S. in reaction to U.S. support for Israel during the Yom Kippur War. The oil embargo combined with high government spending on the Vietnam War resulted in a sharp stock market decline and an extended period of stagflation (i.e., high unemployment and high inflation at the same time) in the U.S.
1979 Oil Crisis (U.K.)	11 months	(5.9)	11.9	BBB/A (U.K.)	Recession triggered by reduced public sector spending and monetary policies designed to reduce inflation.
Early 1980s recessions (1980)	6 months	(2.2)	7.8	BB (U.S.)	Oil prices rose sharply in the wake of the 1979 Iranian Revolution and the new Iranian regime's oil export policies. Credit controls imposed by the Carter Administration suppressed consumer spending.

Table 3

Selected Recessions And Financial Crises And S&P Global Ratings' View Of Corresponding Stress Levels (cont.)

(U.S. unless otherwise noted)

Name	Duration (interval or months)	Real GDP decline (%)	Unemployment peak (%)	Stress Level	Notes
Early 1980s recessions (1982)	16 months	(2.9)	10.8	BBB (U.S.)	Attempting to control inflation, the Fed's tight monetary policy produced another recession. The focus on inflation was a remnant of the previous decade's high inflation driven by oil prices.
Latin American Debt Crisis	1981#1982	NA	NA	A (Latin America); BB (global)	Latin American countries borrowed heavily in the 1960s and 1970s to finance industrialization and infrastructure. Large fiscal and external imbalances led to sharply weaker local currencies, raising the burden of servicing foreign currency debt.
Japanese Bubble (1989)	>200 months	NA	NA	BBB (Japan); BB (global)	Japanese real estate and stock prices rose sharply from 1986 through 1989 and then started a slow but lengthy process of decline that continues through 2009.
Early 1990s recession (U.S.)	8 months	(1.3)	6.9	BB (U.S.)	Although this recession was modest in overall terms, it had stronger effects on the West Coast of the U.S., where it coincided with the bursting of a regional real estate bubble.
Early 1990s recession (U.K.)	6 months	(2.6)	10.7	BBB (U.K.)	A short but somewhat severe recession. Britain faced both a fiscal deficit and a current account deficit. These amplified pressures on the European exchange rate mechanism through which the British pound was tied to the Deutsche Mark. The recession also was tied to banking sector problems in both the U.S. and Sweden.
Early 1990s Nordic Banking Crisis (Sweden)	13 months	(5.6)	8.3	BBB (Sweden)	Bursting of a real estate bubble caused a credit crunch and deleveraging in Nordic countries. The impact was most pronounced in Sweden.
1994 Mexican Economic Crisis	9 months	(15)	NA	AA (Mexico); BB (global)	Years of deficit spending, current account deficits, and unprecedented political uncertainty led to capital flight. This undermined the fixed exchange rate, produced devaluation of the peso, and led to high inflation, a banking crisis, and a recession. A $20 billion loan from the U.S. in early 1995 helped resolve the crisis. Mexico repaid the loan in 1997.
Thai Currency Crisis (1997-1998)	15 months	(12.5)	NA	AA (Thailand); BB (global)	Many years of rapid growth and expansion of bank lending resulted in inflated asset values and a growing current account deficit. Resulting devaluation of Thai Baht triggered a regional financial crisis across the emerging markets of East Asia. The worst macro effects were concentrated in Thailand, Indonesia, Malaysia, and South Korea.

Table 3

Selected Recessions And Financial Crises And S&P Global Ratings' View Of Corresponding Stress Levels (cont.)

(U.S. unless otherwise noted)

Name	Duration (interval or months)	Real GDP decline (%)	Unemployment peak (%)	Stress Level	Notes
1998 Russian Financial Crisis	12 months	(9.1)	12.2	A/AA (Russia); BB (global)	This event was triggered by falling commodity prices, in the wake of the 1997 Asian Financial Crisis, which exacerbated Russia's mushrooming fiscal pressures. The Russian stock market declined 75% from January to August. Yields on Rubble-denominated bonds reached 200%. Inflation reached 84%.
Argentine Economic Crisis (1998-2002)	~48 months	(25)	21	AAA (Argentina); BB (global)	The Argentine peso was pegged to the U.S. dollar. The strength of the U.S. dollar, low commodity prices for Argentine exports, and loose fiscal policy undermined the country's ability to grow, leading to a severe recession and capital flight. In late 2001, the government undertook a distressed debt exchange, devalued the currency, and subsequently imposed a broad moratorium on sovereign debt repayment.
2001 Recession	8 months	(0.3)	6.2	BB (U.S.)	Corporate accounting scandals and the bursting of the tech bubble contributed to a modest recession.

U.S. recessions are included from the National Bureau of Economic Research canon after 1945; before 1945 only a selective list. Based on annual GDP and unemployment data before 1948. NA--Not available. Sources: National Bureau of Economic Research; U.S. Dept. of Commerce, Bureau of Economic Analysis; U.S. Dept. of Labor, Bureau of Labor Statistics; Romer, C., "Remeasuring Business Cycles," Journal of Economic History, vol. 54 (Sept. 1994); Barro, J.R. et al., "Macroeconomic Crises Since 1870," Working Paper 13940, National Bureau of Economic Research, April 2008; Bloomberg.

International cycles

Business cycles have sometimes been coincident around the world, while others have affected only one country or region. Most cycles have affected both the U.S. and Europe, although there have been exceptions. Table 4 reveals how cycles have affected several major countries at the same time.

Table 4

Downturns in Real GDP, 1957-2001

	U.S.	Canada	U.K.	Germany	France	Italy
1957	X		X			
1974-1975	X		X	X	X	X
1980-1982	X	X	X	X		X
1990-1992	X	X	X	X	X	X
2001	X					

Sources: Cooper, R. "Beyond Shocks," Federal Reserve Bank of Boston (1998).

Revisions And Updates

This article was originally published on June 3, 2009, under the title "General Criteria: Understanding Standard & Poor's Rating Definitions." These criteria became effective on June 3, 2009.

Changes introduced after original publication:

- Following our periodic review completed on Feb. 23, 2017, we updated the contact information, changed references to criteria that had been superseded, and deleted commentary.
- Following our periodic review completed on Feb. 23, 2018, we updated the branding throughout the article to S&P Global Ratings. In Appendix I, we added three specialized ratings products. We deleted Appendix III. We also added the "Related Criteria And Research" section.
- On July 9, 2018, we made nonmaterial changes to the article, including (1) deleting a reference to Appendix III, which was deleted previously; (2) deleting Appendix I because the contents are fully explained in the article "S&P Global Ratings Definitions"; and (3) updating a reference to Appendix I.
- On Dec. 18, 2018, we republished this criteria article to make nonmaterial changes. We made editorial changes and revised outdated sections.

Related Criteria And Research

Related Criteria

- Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- Methodology: Credit Stability Criteria, May 3, 2010

Related Research

- S&P Global Ratings Definitions, updated from time to time