中証鵬元國際
CSPI Ratings

General Principles of Credit Ratings

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Summary

(***Editor's Note:*** *We originally published this criteria article on 21 November 2017. We republished it following our periodic review completed on 21 November 2023.)*

CSPI Ratings adopts a principles-based approach to assign and monitor ratings globally, which apply to all types of ratings in all markets where we practice. These principles apply to all issuer entities such as corporates and governments, and to all products, securitization structures and asset classes. In addition, CSPI Ratings develops specific rating criteria and models to complement these principles for certain types of issuers, issuances, asset classes, markets and regions.

CSPI Ratings assigns ratings in all asset classes and for all types of issuers, and aims to achieve the maximum consistency and comparability for all ratings across sectors, regions and over time. For each rating symbol and level, CSPI Ratings' ratings imply the same level of creditworthiness for issuers and issues in different sectors, regions and at different times. CSPI Ratings' ratings measure the creditworthiness associated with each rating level across sectors and over time, by applying common analytical approaches to risk factors and using a common set of macroeconomic scenarios associated with different rating levels. From time to time, CSPI Ratings will study the default behavior across all rating types over time to enhance and improve the rating criteria and models.

Even though the stress scenarios are not the sole or primary drivers for our rating criteria, they are important tools for us to calibrate our criteria and maintain maximum consistency and comparability across sectors and over time. The most stressed macroeconomic scenario associated with the 'AAA' rating is defined by CSPI Ratings as follows: GDP decline of 20% or more, unemployment peak level of 25% or higher, stock market decline of more than 80%, and the economy experiences either a serious deflationary or a severe hyperinflationary environment. Such scenarios have occurred and been observed many times throughout modern history like the Great Depression of the 1930s in the US, World War II in Europe and Asia, and the Chinese Civil War of 1945-1949. CSPI Ratings successively relaxes the stress level of the associated scenarios as the ratings fall. CSPI Ratings expects the credits rated in each category to have sufficient financial resources and operational capabilities to withstand the associated level of macroeconomic stress without defaulting on their financial obligations.

These principles apply to ratings of all issuers and issuances by CSPI Ratings and will be effective for all new and outstanding ratings upon publication.

The Principles of Corporate and Government Ratings

The analytical framework for corporate and government ratings includes three major components:

- Creditworthiness of the stand-alone entity;
- Analysis of external support;
- Assessment of specific instruments and their characteristics.

Creditworthiness of the Stand-Alone Entity

CSPI Ratings believes the creditworthiness of a corporate or government issuer first relies on the obligor's own capacity to generate sufficient financial resources to meet its obligations on a timely basis. The obligor's such capacity may be affected by the overall economic conditions, market and industry in which it operates, the regulatory and legal environment, its business and operational strengths, its financial burdens and other relevant factors. The consideration of these factors should not be only based on historical evidence, even though history often provides substantial information on an obligor's credit performance and behavior. A forward-looking view is emphasized in CSPI Ratings' rating exercises as our rating is an opinion on whether an obligor is able to fulfill its financial obligations. CSPI Ratings' rating analysis not only focuses on the expected income and cashflows that an issuer can generate from future operations, but also the volatility of the cashflows.

For all issuers, the assessment will include both quantitative and qualitative factors. Point-of-time descriptions of data may be important for some factors, whilst trends over time may reveal more information for other factors.

Our quantitative analysis primarily focuses on an obligor's accounting principles and financial statements. Sometimes additional quantitative analysis of non-obligor-related financial data may also be needed to supplement the analysis of the obligor's capacity to meet its obligations.

For business entities like industrial corporates and other related entities, key quantitative analyses usually include profitability, financial leverage and coverage, cashflow adequacy and volatility, liquidity, capital structure and other relevant credit risk factors if applicable. For financial institutions, insurers and other related entities, key financial analyses may focus on asset quality, capital quality and adequacy, reserves and provisions, asset-liability management, liquidity and funding, and other credit risk factors we see as relevant.

Depending on the level and circumstances of a government, key credit risk factors we consider include more or less the development stage, dynamism and structure of the relevant economy, budgetary performance, debt burden and contingent liabilities, liquidity position, external profile, inter-governmental relations and other aspects of institutions, as well as additional factors that may be relevant.

Qualitative analysis is also essential for our ratings. We often consider different qualitative factors for industrial corporates, financial institutions and governmental entities, but some common qualitative information may be used across all rating segments. Usually we separate our qualitative analysis into three main levels: macro operating environment, industry risk characteristics and obligor-specific risk factors.

Qualitative assessments for macro operating environment of corporates may involve a review of a particular regulatory and legal system, political environment, tax regime, monetary and fiscal policy and other aspects of an institutional framework. Even though we do not apply a concept of sovereign cap or environment rating ceiling to our rated entities, an operating environment with a lower score often weighs on the ratings of corporates exposed to it.

Industry risk assessment focuses on analyzing the cyclical and competitive nature of the aggregation of all companies in an industry. The industry risk score will apply to all companies that are classified in that industry. In general, the higher the inherent risk of an industry, the lower the potential credit ratings for the companies in that industry.

Entity-specific qualitative analysis often emphasizes an obligor's market position, operational effectiveness, strategy and governance, financial policies, risk management, sustainability, and other relevant factors that may be applicable for certain issuers. Our qualitative assessment may involve different rating factors for industrial corporates, financial institutions, governmental entities, and other related issuers.

In addition to the quantitative and qualitative factors mentioned above, CSPI Ratings' rating committees may consider some entity-specific or topic-specific factors when assigning a rating to an obligor. Peer comparison and analysis are also important to our rating exercises, given our ratings represent the relative ranking of entities in terms of creditworthiness.

External Support

CSPI Ratings also believes that any possible external support (influence) could meaningfully enhance (weaken) an obligor's creditworthiness if the possibility and amount of such support can be backed by sufficient evidence and analysis. The most common form of external support could be a contractual guarantee provided by a third party. If the guarantor is higher-rated and the guarantee satisfies our preset conditions, we may assign the guarantor's rating to the supported issuer and issuance.

Other than explicit contractual guarantees, the other forms of external support are often a vague concept that involves subjective judgement. In most cases, the external support could come from a parental group company or a relevant government body or organization. On rare occasions, external support can come from an associated third party like suppliers, clients, business partners or interest-related entities. No matter where we believe the external support comes from, our analysis differentiates the support levels based on the willingness and capacity to provide support. Each level of support assessment will correspond to a specific level of rating uplift accordingly.

Our support level assessment usually focuses on the strategic importance of and the linkage that a support receiver has with the potential supporting entity. The higher the importance of and the closer the ties the receiver has with the supporter, the stronger the willingness of a supporter to provide support. Similarly, the higher the capacity a supporter has, the more likely it will provide support to the receiver when needed. The stronger the willingness and capacity to support, the greater a rating uplift could be achieved on the receiver's standalone creditworthiness.

Our external support assessment emphasizes the extraordinary support that a receiver may secure in the event of financial distress. The ongoing benefits of being in a system or group structure is not part of our external support assessment, since such ongoing benefits should be reflected in our base-case projection scenario, which will form our view on the standalone creditworthiness of the obligor.

In some cases, external ties will have a negative impact on the obligor's creditworthiness. For instance, a weakening parent company may drain cash flows and assets from a controlled subsidiary in the form of dividends or other types of capital repatriation. Similarly, a cash-hungry sovereign or local government may intervene in a government-related entity's operation by taking out its profits and capital, which in turn limits this entity's financial flexibility and potential.

Issuance and Specific Instruments

In the event of a default, a specific instrument's ranking within an obligor's capital structure becomes very important and often implies the potential recovery rate that such instrument may achieve. The analysis of rating instruments will primarily focus on their relative rankings and priorities within the obligor's capital structure, and the analysis will apply notching to differentiate the rating levels for each specific instrument. In general, senior secured debt will be rated higher than senior unsecured debt, which in turn will be rated above subordinated debt.

Structural subordination is a crucial consideration when rating a parent or holding company's debt, which may be subordinated to the operating subsidiaries' liabilities. A lower rating may be assigned to a parent or holding company's debt if such structural subordination imposes a significant disadvantage to the parent or holding company's creditors, particularly when the group issuer's credit rating is determined based on the consolidated entity.

The Principles of Structured Finance Ratings

The analytical framework for structured finance securitization ratings includes five major components:

- Transaction's legal structure and documentation;
- Credit quality of the securitized assets;
- Financial structure and cashflow mechanics;
- Operational risks;
- Counterparty risks.

Transaction's Legal Structure and Documentation

CSPI Ratings analyzes the legal structure of securitization transactions by reviewing transaction documents and associated legal opinions. A primary consideration is whether a securitization structure isolates the collateral pool from the insolvency risk of the entities participating in the securitization. In structured finance, although there may exist other legal mechanisms, asset isolation is typically achieved by transferring the subject asset on a "true sale" basis from the originator or seller to a special purpose vehicle (SPV). To assess insolvency remoteness, CSPI Ratings generally evaluates whether, in the event of insolvency of the originator, the securitized assets transferred to the SPV would not be part of the originator's bankruptcy estate and would not be consolidated with the bankruptcy estate of the originator.

CSPI Ratings reviews legal opinions to ensure they adequately address any concerns regarding the bankruptcy remoteness of the SPV, the enforceability of the transaction documents or other jurisdiction-specific issues. As part of the legal structure analysis, CSPI Ratings also reviews the transaction documentation to ensure the representations and warranties are sufficient and the documentation reflects our modelling assumptions regarding asset quality and transaction structure.

Credit Quality of The Securitized Assets

CSPI Ratings analyzes the credit quality of the securitized assets to develop a base-case loss expectation, which generally corresponds to the amount of credit enhancement sufficient to support a 'B' rating. The base-case loss expectation is estimated as the expected losses under the economic scenario which is the most likely to occur. In the estimation of expected losses, CSPI Ratings evaluates the historical performance data provided by the originator and takes into account the factors that potentially affect asset performance.

CSPI Ratings' approach for deriving the base-case loss expectations depends on the type of asset class. For consumer asset-backed securities (ABS) backed by diversified asset pools, we typically evaluate historical default and loss data to derive an expected loss. For concentrated pools with several large obligors, our assessment utilizes more information on the creditworthiness of the obligors than from historical default data. In the analysis of residential mortgage-backed securities (RMBS), CSPI Ratings generally performs a loan level analysis and assigns a foreclosure frequency and loss severity to each individual loan. Default and loss severity models are usually employed to derive the loss rates of the underlying asset pools. For some asset classes, such as collateralized debt obligations (CDO), CSPI Ratings uses default probabilities and recovery rates on the basis of credit opinions, ratings, or bank internal rating system.

In addition to deriving a base-case loss expectation, CSPI Ratings estimates the amount of losses the assets would suffer under the stress scenarios commensurate with the rating levels above 'B'. A security rated higher than 'B' should have sufficient credit support to withstand the expected losses that are generated under more severe stress assumptions. For instance, a security rated 'AAA' should survive an extremely stressful environment similar to the Great Depression of the 1930s. We develop the stress assumptions based on historical studies of the asset class in the jurisdiction where the studies exist, or referenced to similar asset classes in other regions for which the studies are available.

Loss expectations at higher rating levels can be expressed as a multiple of the base-case expected losses. For some asset classes, we use deterministic multiples. For other asset classes, we apply a stochastic approach based on mathematical simulations to determine the multiples for higher rating scenarios.

Financial Structure and Cash Flow Mechanics

CSPI Ratings reviews the composition of the proposed credit enhancement in a transaction and assesses whether the credit support is sufficient to withstand losses in the underlying collateral pool under a stress scenario associated with the relevant bond

rating. In structured finance, typical credit support includes internal credit enhancement in the form of subordination, excess interest, reserve funds, overcollateralization, or external credit support by a third party, such as letters of credit, insurance policies, liquidity facilities or other third-party support agreements.

CSPI Ratings performs cashflow analysis to assess the transaction structure and adequacy of credit enhancement. The cashflow modelling replicates the transaction's structural features including the security waterfall and trigger mechanisms. CSPI Ratings applies various stress assumptions specific to different rating levels to determine whether the cash flow generated by the securitized asset pool would be sufficient to make timely interest and principal payment on the rated securities by the stated legal final maturity date. Other than the stressed default and recovery rates derived in the asset quality analysis, the stress assumptions we apply may include, but are not limited to, prepayments, time of recoveries, interest-rate stresses, basis risk stresses, foreign exchange stresses, and front-loading and back-loading the timing of defaults and losses. The extent and nature of the applied stresses depend on the asset class and transaction structure.

Counterparty Risks

Securitization transactions rely on the credit quality of third parties such as account banks, liquidity providers and swap counterparties. CSPI Ratings analyzes counterparty credit risks in a securitization transaction by reviewing the counterparty dependency and evaluating the creditworthiness of the counterparty. If a transaction is dependent on a counterparty without any structural mitigants, the rating of the transaction is usually credit-linked to the counterparty.

Operational Risks

As part of the rating process, CSPI Ratings reviews the operational risks of the transaction participants including the originator, servicer, and asset manager. The review process focuses on assessing the quality and capacity of the asset originator, servicer and management. Based on the assessment, CSPI Ratings may adjust the estimated loss expectations, apply a rating cap, or even decline to rate a transaction.

The purpose of the originator review is to understand the originator's products, programs, documentation process, underwriting guidelines, and the quality of origination practices and controls. The review of origination operations is particularly important for transactions with revolving periods, where cash flows from pool assets may be used to originate additional pool assets.

CSPI Ratings' servicer review typically evaluates the quality of a servicer's loan administration and default management processes, collection techniques, compliance with procedures, and operational and financial stability. For some asset classes, for instance non-performing loan securitization, where the servicer plays a dominant role in generating cashflow from defaulted borrowers, the experience and expertise of the servicer is of particular importance to CSPI Ratings' rating process. For rating collateralized loan obligations (CLOs), CSPI Ratings reviews the asset manager's capabilities to manage a CLO transaction.

Related Research, Publications and Criteria

Rating Symbols and Definitions, 07 May 2018

Appendix I

In this appendix, we describe the hypothetical stress scenarios used to promote ratings consistency and comparability across sectors and over time. Even though these stress scenarios are the benchmarks for calibrating our criteria and methodologies, they are not the sole and primary drivers for our criteria. Instead, they are just tools for us to achieve rating comparability and consistency across sectors and over time. Each scenario broadly corresponds to one of the rating categories from 'AAA' to 'B', which means we believe issuers with ratings in that category will be able to withstand the associated economic stress scenario without defaulting on their financial obligations. However, these scenarios do not represent a guarantee that rated entities will definitely not default in these or similar scenarios, and also do not mean that rated entities in each category will not be downgraded when conditions change.

We not only may consider the quantitative economic measures for each stress scenario, but we may also factor in the time period and patterns that these scenarios may follow. However, there may be numerous combinations of factors that could contribute to a stress scenario. As such, we limit our measures to a few key factors to define each stress scenario in order to achieve a balance between simplicity and practicality.

Even though the stress scenarios described below are the main benchmarks for us to enhance rating consistency and comparability across sectors and over time, they are not the only scenarios we may consider. In reality, stress scenarios may naturally be different across regions and markets. For instance, the unemployment rate will always be higher for certain countries due to their structural and socio-demographic conditions. Market participants should interpret these scenarios as the starting condition for us to assign ratings, but these scenarios are by no means our only consideration. These scenarios may also be adjusted accordingly to reflect local market realities when applicable.

'AAA' stress scenario. We expect an issuer or obligation with a 'AAA' rating to be able to withstand this stress scenario without defaulting, which is defined as: GDP decline of 20% or more, unemployment peak level of 25% or higher, stock market decline of more than 80%, and the economy experiences either a serious deflationary or a severe hyperinflationary environment.

'AA' stress scenario. We expect an issuer or obligation with a 'AA' rating to be able to withstand this stress scenario without defaulting, which is defined as: GDP decline of up to 15-20%, unemployment peak level of around 20%, stock market decline of up to 70%, and the economy experiences either a moderate deflationary or a high inflationary environment.

'A' stress scenario. We expect an issuer or obligation with an 'A' rating to be able to withstand this stress scenario without defaulting, which is defined as: GDP decline of up to 10%, unemployment peak level of around 15%, stock market decline of up to 60%.

'BBB' stress scenario. We expect an issuer or obligation with a 'BBB' rating to be able to withstand this stress scenario without defaulting, which is defined as: GDP decline of up to 4%, unemployment peak level of around 10%, stock market decline of up to 50%.

'BB' stress scenario. We expect an issuer or obligation with a 'BB' rating to be able to withstand this stress scenario without defaulting, which is defined as: GDP decline of up to 1-2%, unemployment peak level of around 7-8%, stock market decline of up to 30%.

'B' stress scenario. We expect an issuer or obligation with a 'B' rating to be able to withstand this stress scenario without defaulting, which is defined as: GDP of no change or decline of up to 0.5%, unemployment peak level of 6%, stock market decline of up to 15%.

Appendix II

Throughout history, many recessions and financial crises have occurred across different regions and over time, which have often shaped local credit cultures and affected people's credit behavior for decades. CSPI Ratings acknowledges that cultural differences could sometimes be an important factor affecting issuers' and obligors' behavior in a stressful environment. The following table gives a list of historical stress scenarios and CSPI Ratings' view of their stress levels.

Exhibit 1: Examples of Economic and Financial Crises in accordance with CSPI Ratings' Stress Scenarios

Name	Period	Real GDP Decline	Unemployment Peak	Stock Market Decline	Stress Scenario
Great Depression of USA	1929 - 1933	26.7%	24.9%	89%	AAA
World War II (France)	1939 - 1944	41.4%	n.a.	n.a.	>AAA
World War II (Japan)	1940 - 1944	50.3%	n.a.	n.a.	>AAA
Sino-Japan War (China)	1931 - 1945	n.a.	n.a.	n.a.	>AAA
Chinese Civil War	1945 - 1949	n.a.	n.a.	n.a.	>AAA
USA early 1980s Recession	1980 - 1982	2.6%	10.8%	29%	BBB
Japanese Bubble Burst	1989 - 2009	n.a. n.a.	n.a. n.a.	n.a. n.a.	BBB (Japan) BB (Global)
Asian Financial Crisis	1997 - 1998	12.5% 7.4% 7.0% n.a.	n.a. 7.4% 5.9% n.a.	70% 64% 60% n.a.	AA (Thailand) A / BBB (South Korea) BBB (Hong Kong) BB (Global)
Russian Financial Crisis	1998 - 1999	9.1% n.a.	12.2% n.a.	89% n.a.	AA / A (Russia) BB (Global)
Great Recession	2007 - 2009	4.1% 5.5% n.a.	10% 10.1% n.a.	52% 58% n.a.	BBB (USA) A / BBB (Euro Zone) BB (Global)
Greek Sovereign Debt Crisis	2008 - 2014	27.3%	27.9%	92%	AAA

Source: OECD, IMF, National Bureau of Economic Research, Stock Exchanges

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