

**Contacts****Alfonso Sales**

Methodological Criteria Associate  
Director  
alfonso.sales@hrratings.com

**Roberto Soto**

Associate Director Public Finance /  
Infrastructure  
roberto.soto@hrratings.com

**Roberto Ballínez**

Senior Executive Director Public  
Finance / Infrastructure  
roberto.ballinez@hrratings.com

**Fernando Sandoval**

Executive Director Financial Institutions  
/ ABS  
fernando.sandoval@hrratings.com

**Felix Boni**

Chief Credit Officer  
felix.boni@hrratings.com

**Pedro Latapi**

Deputy Chief Credit Officer  
pedro.latapi@hrratings.com

This methodology is the exclusive  
property of HR Ratings.

**Methodology to incorporate Partial Guarantees into the credit analysis process for different types of assets.**

This methodology is applicable to all credits or issues of structured or unsecured debt rated by HR Ratings and which have a Partial Guarantee (PG). This document discusses the concepts and outlines the methods for incorporating these PGs into the different types of assets. The method of incorporation will be followed on any rating process conducted by the analysis team; starting, in most cases, with the assumption that the partial guarantee represents a credit enhancement.

In general terms, HR Ratings considers a partial guarantee a mechanism whose purpose is to improve the credit quality of a credit or issue, whether they are structured or unsecured products, through the commitment of a third party to unconditionally and irrevocably cover a portion of the debt placed. In practice, this portion is generally determined as a fixed percentage of the outstanding balance on the debt, which is backed by an agreement signed between the issuer/borrower and the guarantor (third parties may be included as necessary).

Therefore, HR Ratings does not consider as partial guarantee any pledge included in the flows to be securitized or which is explicitly pledged as part of the source of payment for the debt. This methodology addresses only the following: (i) partial guarantees determined as a fixed percentage of the outstanding balance, (ii) reserves set up through a trust, and (iii) guarantees that represent a percentage of the amount placed.

A legal opinion must be obtained from an independent law firm for HR Ratings to incorporate this credit enhancement into the evaluation of a credit or issue. This legal opinion is meant to determine if the relevant legal documentation will ensure in a satisfactory manner, among other things, that the partial guarantee is irrevocable and unconditional; as well as clearly stating that the funds will be used exclusively to service the debt on the credit or issue. However, for jurisdictions or legislations that do not require a legal opinion, by law, the Analysis Committee may assign a rating without the legal opinion.

It's important to note that effect of a guarantee is only considered when the credit quality of the guarantor is better than the credit quality of the issue or credit it is intended to back.

The different sections of this document offer, first, a general framework that defines the concepts necessary to understand how partial guarantees operate, considering the differences between each class of asset and their application according to the criteria of each methodology. The following three sections discuss the method for assessing partial guarantees applied on i) non-structured unsecured debt, ii) structured bank credits and notes of Mexican states and municipalities (revenue sharing obligations, RSO), iii) debt for infrastructure projects, and iv) debt for projects that are rated through future flows and financial asset debt.

## Characteristics of a partial guarantee and its legal analysis

This section discusses the general characteristics of partial guarantees as well as those that must be satisfied to be considered as such and to be assessed according to the methods outlined in this document. In addition, details are offered for the elements to be analyzed in a legal opinion, which should be satisfactory so that HR Ratings can incorporate the guarantee into the rating process for the credit or issue. In the case of issues or credits carried out according to legislations outside of Mexico, the Analysis Committee may proceed with the assessment without a legal opinion, provided the law does not expressly require a legal opinion from an independent law firm. The decision of the committee will be reflected in the minutes and/or corresponding report.

HR Ratings defines partial guarantee as any instrument granted by a third party (guarantor), by which they commit to partially covering the financial obligations of an issue or credit. This is based on a percentage determined on the outstanding balance on the debt or a guaranteed amount.

The debt may be structured or unsecured, and this will determine the method used to assess the guarantee. The guarantor, meanwhile, may be a financial or a non-financial entity, provided they have a credit rating higher than that for the debt the guarantee is intended to back.

The characteristics the independent legal opinion looks at, for the purposes of this methodology include:

- The legal documentation for the guarantee should clearly state that the resources from the guarantee will be used solely to service the debt;
- The guarantee agreement should specify the times and conditions necessary for the activation and execution of the payment in full of the guaranteed debt, considering the percentages and/or amounts specified;
- The guarantee must be irrevocable, meaning there are no clauses that would permit the guarantee to be cancelled before the total repayment of the rated debt, or if such clauses were to exist, they would only be effective in certain circumstances;
- The guarantee must be unconditional. The payment will not be subject to any additional condition, beyond the availability of funds from the debtor to cover its payment obligations and compliance with the process for notifying the guarantor, so that they may fund the payments in a timely manner;
- In the case of guarantees on structured debt, the repayment of the amounts drawn from the guarantee must be subordinate to the debt service in the debt's payment waterfall. This repayment may be made with the structure's remaining resources after debt service;
- In the case of guarantees on unsecured debt, the obligations for the repayment of the guarantee, within the analysis, should not jeopardize the capacity of the issuer to satisfy their payment obligations on the rated debt.

In addition to the characteristics that have been described, the HR Ratings analysis team will review the additional attributes of these types of contracts, to appropriately incorporate the benefits of the guarantee into the analysis. However, if because of its complexity, any characteristic cannot be incorporated into the HR Ratings financial model, the analysis committee may assign a qualitative adjustment, which will be detailed in the analysis report and/or the committee's minutes. Some of the most common characteristics include the following:

**A) Revolvency:** Guarantees may be revolving or not revolving. A revolving guarantee will consider in the available total any amount that has been drawn in previous periods and paid to the guarantor as established in the respective agreement. On the other hand, a non-revolving guarantee will not consider amounts drawn and repaid as available.

**B) Draw and Amortization (or repayment) Periods.** Guarantee agreements should clearly specify the draw and repayment periods. The draw date should cover the full term on the debt, while the amortization period will usually start after the draw period has ended. During this last period, the flows generated by the asset that backs the debt should be used to amortize the whole of the amount drawn on the guarantee, as well as the interests that may have been capitalized, as laid out in the agreement. However, both the guarantee agreement and the debt documents may permit early payments on the guarantee if there are remnant flows. When this is the case, it will be important that any payment of principal or interest on the guarantee is completely subordinated to the payment of the debt and, insofar as possible, incorporated into the financial model.

**C) Guaranteed Amount.** In general, the guaranteed amount will be defined in each period based on the outstanding balance and percentage guaranteed, and sometimes may correspond to a percentage of the amount placed. It may also be limited to a fixed amount determined in the guarantee agreement.

**D) Amount Available.** The amount available will, in addition to the amounts drawn in previous periods, depend on the characteristics established in the guarantee including its revolvency. HR Ratings defines a guarantee as frozen when the percentage it covers, and therefore the amount available, is fixed for a specific period. Meanwhile a non-frozen guarantee refers to that where the available amount is not fixed despite having been used.

**E) Amount Drawn.** Amounts that have been used from the guarantee to cover debt obligations.

**F) Consideration.** Defined as the payment the party contracting the guarantee makes to the guarantor from time to time, for the guarantee to remain effective.

**G) Conditions for default and early termination.** The analyst will determine whether the conditions stipulated represent a credit enhancement or risk to the structuring.

**H) Guarantor's Rating.** The analyst will consider the rating of the guarantor to assess the quality of the guarantee. When the guarantee is a liquid reserve fund, already set up and available through a trust, the equivalent rating will be considered as HR AAA.

It's important to note that the characteristics detailed here are only the most common that exist in guarantee agreements. Additionally, the potential impact of a partial guarantee will be assessed during the annual review of the instrument for which it was established.

## Partial guarantees on unsecured debt<sup>1</sup>

The different HR Ratings methodologies provide the process and the metrics considered to assign a rating to the unsecured debt (non-structured) of an entity, whether it be a state

---

<sup>1</sup> This section refers primarily to unsecured guarantees for corporations and financial institutions, although they may also apply to states and municipalities.

or municipality, a corporation, bank or a non-bank financial institution, etc. As the source of payment is not isolated in these cases, and it may also serve more than one debt instrument at a time, the rating for the non-structured debt is linked to the rating for the issuer or borrower. To improve this rating, the issuer or borrower may contract a third-party guarantee, or establish a reserve in a separate trust that would provide liquidity to the non-structured debt in stress situations.<sup>2</sup>

In general terms, HR Ratings will increase the debt rating one notch for every 15% that is guaranteed. This is subject to the guarantor having the maximum credit quality on the local Mexican scale. When the guarantor does not have an HR AAA or equivalent rating, the guaranteed amount will be reduced as noted in Table 1.

**Table 1: Guarantor's Rating Factor**

HR AAA	100%	HR A+	80%
HR AA+	95%	HR A	75%
HR AA-	85%	HR A-	70%

Source: HR Ratings.

This table shows that if the guarantee covers, for example, 20% of the outstanding balance on the guaranteed issue, but the guarantor has a rating of HR A-, only 14% of the outstanding balance will be taken as guaranteed. It's important to note that if the guarantor's rating is equal to or less than the issuer's rating, HR Ratings will not incorporate this instrument into the analysis.

Liquid funds offered as a credit enhancement for this type of debt, and which preferably are constituted through a management trust, will add one notch to the rating for secured debt for every 15% these resources represent in the current outstanding balance. This is because a liquid fund is considered to hold a credit rating equal to HR AAA. When the funds need to be generated, the analyst will assess the future capacity of the asset that will generate the cash to constitute the guarantee. Additionally, the HR Ratings analysis team will assess the liquidity of different assets for these to be included in this line. For example, debt paper with the highest credit quality. The analysis team may qualitatively assign one notch if they identify a credit enhancement that cannot be incorporated quantitatively, or only under specific conditions.

## Partial guarantees on structured bank credits and debt issues of public entities (Revenue Sharing Obligations)

### General Characteristics and Concepts

This section considers partial guarantees that are contracted to cover the structured debt obligations of both Mexican states, municipalities, and of decentralized government agencies that may contract debt whose source of payment is found in federal revenue or some type of self-generated revenue.

<sup>2</sup> The analysis team will identify the execution mechanism to ensure the liquidity the guarantee is intended to provide is immediate and unconditional. When the guarantee is offered through a third party, the credit rating will be monitored.

It's important to mention that although this type of guarantees may be offered by a public or private financial institution, domestic or international, only development banks have offered them for the states, municipalities and decentralized government agencies debt structures rated by HR Ratings.

The credit rating of the guarantor is a relevant factor that the analysis team will look at to determine the credit enhancement the guarantee gives to the bank credit or debt issue. If the characteristics of the guarantee agreement cannot be incorporated into the flow estimates, the analysis team may consider the guarantor's credit rating as an Extraordinary Adjustment Consideration.

If the guarantee can be incorporated into the financial model, the guarantee amount will be the result of multiplying the percentage guaranteed by the factor associated with the guarantor's rating, as shown in Table 1. The resulting amount will be that considered in the analysis process and in the calculation of the Target Stress Rate (TSR).

It's important to note that if the credit rating for the guarantor is equal to or lower than the rating given to the structure without guarantee, then HR Ratings will not consider that instrument in the analysis.

## General rating process for structured products for States and Municipalities

The HR Ratings "Methodology for Structured Products for Mexican States and Municipalities: Debt backed by Federal Transfers to States" (January 24, 2013) outlines the process for assessing state and municipal structures. This process is based on the calculation of the TSR, which is described in general terms following:

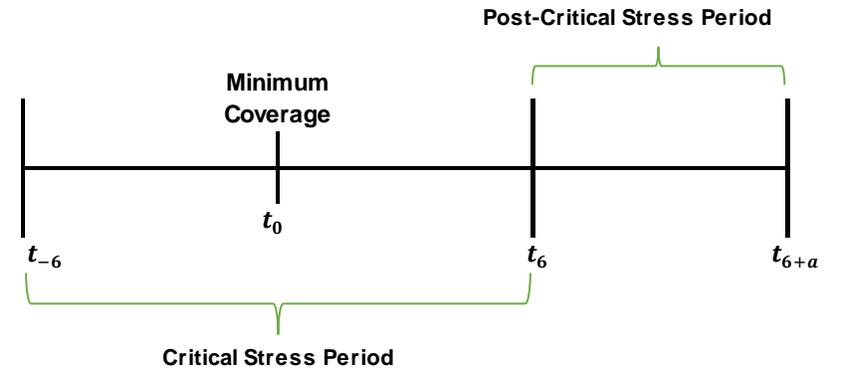
1. HR Ratings stresses the pledged revenues in its projections, cyclically. This revenue usually refers to *Ramo 28* Federal Transfers.<sup>3</sup> The methodology details the process for stressing *Ramo 28*.
2. The HR Ratings analysis team determines, according to the projection of the stressed revenue and the structured debt servicing, the point at which the structure will show the minimum coverage. The Critical Stress Period is built considering six periods before and six periods after.
3. The revenue will be stressed in the Critical Stress Period through the TSR, to the point where the secondary debt coverage drops to exactly one. This coverage considers the reserves, which these structures typically have.
4. The TSR has an important additional restriction, and this is that the stress on the revenue must be such that the structuring can replenish the reserve in a Post-Critical Stress Period, using its remnants.
5. The Post-Critical Stress Period starts when the Critical Stress Period ends, and its length is determined according to the target balance amount of the reserve. For example, if the reserve represents three debt servicing periods, the Post-Critical Stress Period will be three periods.

---

<sup>3</sup> According to the HR Ratings methodology, and corresponding addenda, the pledged revenue may also refer to self-generated revenue.

In summary, the critical stress period is  $t_{-6}$  to  $t_6$ , during which the TSR penalizes the stressed revenue until the secondary coverage reaches 1.0x, meaning the reserve is fully depleted, considering the restriction discussed in point 4. Diagram 1 shows the rating process.

**Diagram 1: Structured Products**



Source: HR Ratings.

The Post-Critical stress period starts at  $t_6$  and continues until  $t_{6+a}$ , with  $a$  being a whole number defined according to the following:

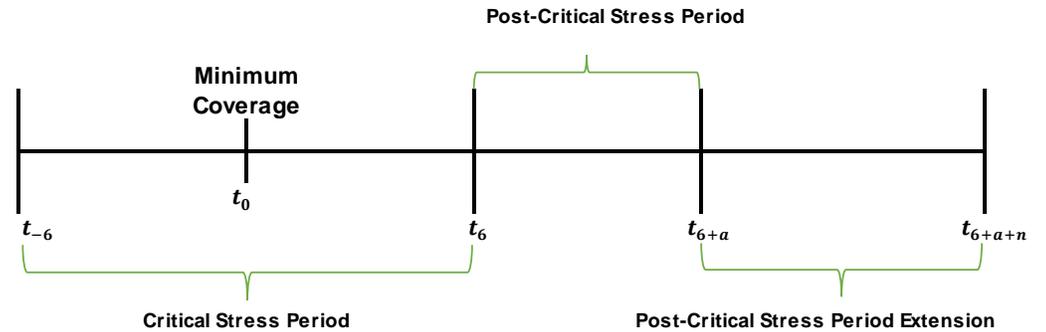
$$a = \begin{cases} 1 & \text{if the reserve is equal to one debt servicing} \\ \vdots & \\ i & \text{if the reserve is equal to } i \text{ debt servicings} \end{cases}$$

Where  $i$ , and therefore  $a$ , is a whole number and could be zero if the structuring does not have a reserve to cover the debt servicing.

## Process for modeling the partial guarantee

When there is a guarantee, the model allows for the resources available under the guarantee to be used during the Critical Stress Period, in addition to the reserve. The Post-Critical Stress Period will need to be modified to also replenish the partial guarantee, considering the payment of the interest accrued. Diagram 2 shows the rating process incorporating a partial guarantee.

**Diagram 2: Partial Guarantee for a Structured Product**



Source: HR Ratings.

When there is a guarantee and its resources are used, the Post-Critical stress is extended  $n$  additional periods starting  $t_{6+a}$ , where  $n$  is the maximum whole resulting from dividing the percentage guaranteed by 5. This means that one additional period is added for every five percent (5%) guaranteed. For example, a guarantee that covers 25% of the outstanding balance will imply an extension of five periods, during which the amount used will be paid along with the corresponding interest. This process is summarized as:

$$n = \left\lfloor \frac{\text{Percentage Guaranteed}}{5} \right\rfloor$$

The balance TSR should be such that the whole of the reserve can be used and only the amount that can be repaid at the end of the extended Post-Critical stress period is drawn from the guarantee, considering the interests this draw would accrue, when this is the case.

## Development of the Model

As a rule, the guarantee is incorporated into the rating process through the projection of future payments the guarantor would make, according to the terms and conditions of the corresponding agreement and the payment waterfall of the structure.

By consequence, the analysis would assume that, under certain conditions and according to that stipulated in the guarantee agreement, the source of payment for the debt will be complemented with the additional resources from the guarantee. This could aid the borrower to cover the debt servicing payments. Regardless, the effect of this additional source of resources on the credit rating for the structure will be reflected in the calculation of the TSR and, by consequence, in the credit rating given.

It's important to mention that the support the guarantee provides, in terms of resources, will be considered an additional flow to the source of payment and to all the other resources available within the structuring.<sup>4</sup> Therefore, this will not have a direct impact on the calculation of the primary or secondary debt service coverage ratio.

<sup>4</sup> The existing resources in a reserve consider available resources within the structuring to pay the debt servicing.

Technically there are two possible cases where the guarantee would be involved, which will depend on the average primary debt service coverage during the Post-Critical Stress Period. These cases are described following:

## Case 1

- When the average primary debt service coverage is equal to or greater than 2.0 times (x) in the Post-Critical Stress Period, without extending the period for the repayment of the guarantee. The remnants accumulated during the Post-Critical Stress Period, without extending, generally exceed what is needed to replenish the reserve to its target amount.

Since the average primary coverage in this case is equal to or greater than 2.0x during the Post-Critical Stress Period, the reserve fund would be fully depleted during the Critical Stress Period, the target amount could be replenished with the remnants, and the TSR would benefit from the use of the guarantee.

Conceptually, this is the simplest case. The structure may use the guarantee on the condition that the projected remnants, during the extension on the Post-Critical Stress Period, can replenish the resources used from the guarantee, including the interests accrued and, as applicable, capitalized.

When the average primary coverage is strictly greater than 2.0x during the Post-Critical Stress Period, there is an additional restriction as the structure will use its remnants to cover the servicing of the guarantee prior to the end of the Post-Critical Stress Period. This means that for a guarantee that covers 25% of the outstanding balance, the structure will have more than five periods to cover the amount borrowed from the guarantee and the accrued interest. Therefore, HR Ratings will only consider the remnants available for the repayment of the servicing on the guarantee at an amount equal to the sum of those accumulated during the Post-Critical Stress Period.

## Case 2

- When the average primary coverage is strictly below 2.0x in the Post-Critical Stress Period, without extending to the guarantee repayment period. The remnants are not enough in the Post-Critical Stress Period, without extending, to fully replenish the target balance of the reserve.

As the average primary coverage in this case is strictly less than 2.0x during the Post-Critical Stress Period, the reserve cannot be replenished with the remnants and the TSR will not permit the use of the guarantee.

To resolve this problem and incorporate the effect of the guarantee on the structuring, an adjustment to the Post-Critical Stress Period is needed. Therefore, HR Ratings will allow the reserve to be replenished in the Post-Critical Stress Period considering both the periods for the reserve to be replenished and those corresponding to the payment of capital and interest for the use of the guarantee. This would allow the whole of the reserve to be used and the credit benefits of the guarantee to be partially applied.

## Partial guarantees on debt for infrastructure projects

The guarantees contracted to support the debt servicing on infrastructure projects will be incorporated into the model so that their effect on the flow of resources is considered in the base and stressed scenarios.<sup>5</sup> Generally speaking, the credit rating assigned to the debt structure will depend on its financial strength, which is measured through the difference between the real cumulative revenue in both scenarios. This will also consider the characteristics of each debt structure and the asset whose flows will back the debt payment.

However, as guarantees are the last resort the structure has for covering the debt servicing, their potential benefit may be underestimated in the quantitative analysis. Hence, in addition to the scenario analysis, the coverage the guarantee would give the structure is independently assessed from the debt's payment waterfall and the project's capacity to generate flows. This manner of conducting the analysis allows HR Ratings to compare guarantees with different characteristics on an issue or credit, as well as credits or issues with different characteristics on the same guarantee.<sup>6</sup>

The Guaranteed Debt Service Ratio (GDSCR) or "guaranteed coverage" is defined as the number of times ( $x$ ) the amount available on a guarantee would cover the debt servicing (interest and principal) in a given period. Considering that the debt servicing in each period will rarely remain constant and that in most cases, the amount available on the guarantee, even when this has not been used, will decrease over time, the GDSCR will show a downward trend throughout the life of the debt. Therefore, the average of the guaranteed coverage is calculated to determine the benefit of the guarantee, considering the remaining term on the structure, and based on this, the adjustment is determined in number of notches applied to the credit rating for the structuring.

$$GDSCR_t = \frac{\text{Amount Available}_t}{\text{Debt Servicing}_t}$$

$$GDSCR_{av}_t = \frac{\sum_{n=t}^T RCGSD_n}{T - t}$$

Where " $T$ " refers to the periods that constitute the structure and " $t$ " the period analyzed.

Considering the frequency of payment on the principal and interest may vary between debt structures, the average guaranteed coverage is standardized to reflect the number of months of debt servicing that the guarantee could cover if needed. This takes into consideration that, as the guarantee represents the last liquid resource for a structure, the fact that it is used would reflect a weakness in the asset or project to generate flows, the recovery of which will depend on external variables and would be beyond the scope of this analysis.

<sup>5</sup> To date, the guarantees HR Ratings has evaluated for infrastructure projects have been for debt backed by revenue from highways, although the analysis could be applied for other projects. For more information on the rating process for debt backed by toll revenue, see "Methodology for Infrastructures: Debt backed by revenue from the operation of highways, tunnels and bridges" (November 6, 2015).

<sup>6</sup> Although this analysis does not consider the project flows, if the debt is denominated in UDIs or has a variable interest rate, the projections for the stressed scenario will be used to assess the guarantee as discussed in this section.

Based on the above, we consider that the guarantee provides enough of a credit enhancement in terms of notches, provided it can cover nine or more months of debt servicing, regardless of the payment frequency. In this regard:

- 1) If the average guaranteed coverage represents between 9 and 18 months of debt servicing, the guarantee could represent an additional level in the credit rating for the structure without analyzing this benefit.
- 2) If the average guaranteed coverage represents 18 or more months of debt servicing, the rating may be improved by two or more levels.

Lastly, considering the guarantor's rating, the concept shown in Table 1 also applies to the partial guarantees on infrastructure projects.

## Partial Guarantees for other Structures or Debt Structures Backed by Financial Assets

In the case of partial guarantees on debt structures backed by financial assets, the effect of the guarantee is incorporated directly into the transaction flow depending on the activation clauses (triggers). Guarantees that do not have these triggers cannot be considered. These triggers will depend on each contract and each guarantee analyzed, therefore the assessment and evaluation of the triggers is conducted on a case-by-case basis. In the HR Ratings model, the amount of the guarantee directly influences the flow available for the debt servicing and, therefore, the estimation of the Maximum Default the structuring supports. This process has a direct impact on the calculation of the Times Default Rate (TDR) that HR Ratings uses to assign the credit rating.

$$TDR_t = \frac{MDR_t}{HDR}$$

Where "MDR" refers to the Maximum Default, "HDR" the historic default rate calculated through the vintage analysis of the asset, and "t" the current period.

The HR Ratings methodology for the evaluation of financial assets details the necessary TDR values to assign the rating for the structure.

Under this scheme, in general, any partial guarantee will represent a credit enhancement and the amount HR Ratings will consider in its analysis will be dependent on the rating of the guarantor, as shown in Table 1. In the case of liquid guarantees, constituted through a trust, it is assumed the guarantee has a credit quality equal to HR AAA.

For other structures not mentioned in this document, HR Ratings will include the partial guarantee in the flow projection to assess the scope of the credit enhancement.

---

## Glossary

- 1. Partial Guarantee:** This guarantee, which is typically considered a credit enhancement, refers to a contract by which a third party commits to servicing a part of a certain debt issue in the event the issuer is unable to cover the servicing.
- 2. Structured Debt:** Refers to a debt mechanism that isolates, through a trust, the cash flow earmarked to service a debt issue.
- 3. Unsecured Debt:** Refers to debt issues where the servicing depends on the capacity of the entity to generate enough cash flow. In this case, consideration is given to whether the issuer needs to cover various costs and expenses in addition to debt servicing.
- 4. Outstanding Balance:** Refers to the amount of debt placed and pending amortization.
- 5. Issuer / Borrower:** The entity that has issued the structured or unsecured debt.
- 6. Guarantor:** The entity that offers cash to service a percentage of the debt issued by the issuer / borrower.
- 7. Reserve:** In terms of this methodology, refers to an asset, constituted of cash that is earmarked for debt servicing in the event the free cash flow is insufficient.
- 8. Debt Servicing:** Refers to the payment of interest and the amortization set by contract for each period.
- 9. Remnants:** In terms of this methodology, refers to the amount of free cash flow remaining after servicing the debt.
- 10. Target Stress Rate (TSR):** HR Ratings applies this rate to assess the credit quality of Sub-Sovereign debt structures. The rate penalizes the revenue the Sub-Sovereign may receive from *Ramo 28* transfers, and in specific cases, *Ramo 33* or self-generated revenue.
- 11. Critical Stress Period:** Refers to a timeframe where HR Ratings stresses the income, through the TSR, for *Ramo 28* debt structures issued by Sub-Sovereigns.
- 12. Post-Critical Stress Period:** Refers to the timeframe, following the Critical Stress Period, when the structuring should replenish the reserve to its target balance, and as applicable, pay the interest and the amount used from the Partial Guarantee.
- 13. Coverage:** The ratio that measures the capacity of the free cash flow to service the debt, typically considering amortization and interest.
- 14. Primary Coverage:** The available flows include the income generated by the assets; in the case of Sub-Sovereign debt structures, this refers to the *Ramo 28* transfers; in the case of highways, it refers to the income generated by tolls. The expenses that may be considered include, among others, administrative and operating expenses, etc.
- 15. Secondary Coverage:** In addition to the income generated by an asset, sources of cash include reserves that may, or must, be used to service the debt.

- 
16. **Guaranteed Debt Service Coverage Ratio (GDSCR) or “guaranteed coverage”:** The number of times (x) the amount available on a guarantee covers the debt servicing (interest and principal) in a given period.
  17. **Times Default Rate (TDR):** The number of times the pledged assets can be stressed in terms of the most common default rate for the type of asset rated, taking into consideration timely and full payment of obligations.
  18. **Maximum Default Rate (MDR):** Refers to the maximum default rate the assets supporting a structuring can withstand while still satisfying the debt servicing.
  19. **Historic Default Rate (HDR):** Refers to the most common default rate presented by similar assets to those pledged to the issuer trust.

## References

The following HR Ratings methodologies accompany this document:

- 1) Methodology for Structured Products for Mexican States and Municipalities: Debt backed by Federal Transfers to States (January 24, 2013).
- 2) Methodology for Structured Products for Mexican States and Municipalities: Debt backed by Federal Transfers to Municipalities (February 14, 2013).
- 3) Methodology for Structured Products for Mexican States and Municipalities: Debt backed by the Self-Generated Revenue of Subnational Entities (March 22, 2013).
- 4) Methodology for Infrastructures: Debt backed by revenue from the operation of highways, tunnels and bridges. (November 6, 2015).
- 5) Methodology for Financial Assets, Debt backed by a set of financial assets. (March 22, 2019).

These methodologies can be found at: <https://www.hrratings.com/es/methodology>



Credit  
Rating  
Agency

# Partial Guarantees for Structured and Unsecured Debt Issues

March 2019

---

**México: Avenida Prolongación Paseo de la Reforma #1015 torre A, piso 3, Col. Santa Fe, México, D.F., CP 01210, Tel 52 (55) 1500 3130.  
Estados Unidos: One World Trade Center, Suite 8500, New York, New York, ZIP Code 10007, Tel +1 (212) 220 5735.**

HR Ratings, LLC (HR Ratings), is a Credit Rating Agency registered by the Securities and Exchange Commission (SEC) as a Nationally Recognized Statistical Rating Organization (NRSRO) for the assets of public finance, corporates and financial institutions as described in section 3 (a) (62) (A) and (B) subsection (i), (iii) and (v) of the US Securities Exchange Act of 1934.

HR Ratings ratings and/or opinions are opinions of credit quality and/or regarding the ability of management to administer assets; or opinions regarding the efficacy of activities to meet the nature or purpose of the business on the part of issuers, other entities or sectors, and are based exclusively on the characteristics of the entity, issuer or operation, independent of any activity or business that exists between HR Ratings and the entity or issuer. The ratings and/or opinions assigned are issued on behalf of HR Ratings, not of its management or technical staff, and do not constitute an investment recommendation to buy, sell, or hold any instrument nor to perform any business, investment or other operation. The assigned ratings and/or opinions issued may be subject to updates at any time, in accordance with HR Ratings' methodologies.

HR Ratings bases its ratings and/or opinions on information obtained from sources that are believed to be accurate and reliable. HR Ratings, however, does not validate, guarantee or certify the accuracy, correctness or completeness of any information and is not responsible for any errors or omissions or for results obtained from the use of such information. Most issuers of debt securities rated by HR Ratings have paid a fee for the credit rating based on the amount and type of debt issued. The degree of creditworthiness of an issue or issuer, opinions regarding asset manager quality or ratings related to an entity's performance of its business purpose are subject to change, which can produce a rating upgrade or downgrade, without implying any responsibility for HR Ratings. The ratings issued by HR Ratings are assigned in an ethical manner, in accordance with healthy market practices and in compliance with applicable regulations found on the [www.hrratings.com](http://www.hrratings.com) rating agency webpage. There Code of Conduct, HR Ratings' rating methodologies, rating criteria and current ratings can also be found on the website.