

Disclosure of Service Descriptions

S&P Global Ratings

Disclosure of Ancillary and Other Services

S&P Global Ratings' business operations in Canada are currently conducted through S&P Global Ratings Canada, a business unit of S&P Global Canada Corp. ("S&P Canada").

In accordance with the provisions of the Canadian National Instrument 25-101, Appendix A, paragraph 3.5, this document lists the "Ancillary Services" and "Other Services" offered by S&P Canada. Also listed are the "Credit Rating Activities" offered by S&P Canada.

"Ancillary Service" means a product or service that S&P Global Ratings provides or sells that is not a Credit Rating or Credit Rating Activity and is either a market forecast, an estimate of economic trends, a pricing analysis, other general data analysis, or distribution services related to a Credit Rating, a market forecast, an estimate of economic trends, a pricing analysis, or general data analysis.

"Other Service" means a product or service that S&P Global Ratings provides or sells that is neither an Ancillary Service nor part of its Credit Rating Activities.

"Credit Rating Activities" means an activity engaged in by S&P Global Ratings that leads to or directly supports the issuance or surveillance of a Credit Rating including: the evaluation, approval, issuance, or review of Credit Ratings; analysis of data and information related to Credit Ratings; a Credit Rating Action or Rating Decision; and the development or approval of Criteria, including the development or approval of qualitative and quantitative models, or of Guidance Documents.

Disclosure of Service Descriptions

Type of Service	Service Name	Description
Ancillary Services	None	N/A
Other Services	Cash Flow Evaluator	<p>Cash Flow Evaluator is a cash flow model designed to analyse whether the rated security of a structured deal may receive timely or ultimate interest and principal payments at different liability ratings levels, after the application of collateral defaults and other stresses incurred by the collateral pool. The model is used to assign initial ratings for structured transactions, as well as for surveillance and for generating scenario analysis. Cash Flow Evaluator applies various combinations of stresses to the collateral portfolio of a structured transaction and examines whether the rated securities receive timely or ultimate interest and principal payments in those scenarios. The stresses applied may include collateral default levels and timing, collateral recovery levels and timing, interest rate movements, and prepayment stresses when applicable. Cash Flow Evaluator creates scenarios composed of different combinations of these stress factors (e.g. rising interest rate environment combined with low prepayments and back-ended defaults), and determines the maximum default rate that can be applied to the collateral in each scenario such that the rated liabilities always receive timely or ultimate interest and principal payments. This maximum default rate is referred to as the Break-even Default Rate (BDR). A full description of the model is available on the S&P Global Ratings website.</p>
Other Services	CDO Evaluator: 7.2	<p>CDO Evaluator 7.2 is a model that S&P Global Ratings uses as a tool to assess the credit risk of a portfolio of rated (or credit assessed) corporate assets, structured finance assets, sovereign assets, municipal assets, project finance assets, international public finance assets, and other assets with ratings or credit assessments, and combinations of such assets. In addition, we use CDO Evaluator 7.2 as a tool to assess the credit risk of commodity collateralized obligations (CCOs) and foreign exchange collateralized debt obligations (FX CDOs). CDO Evaluator is also used for restructurings of asset-backed securities (ABS), commercial mortgage-backed securities (CMBS), residential-mortgage-backed securities (RMBS), and other structured finance securities.</p>
Other Services	Commercial Mortgage Evaluator	<p>Commercial Mortgage Evaluator™ (CME) is a proprietary model and used as a tool to help perform credit risk analysis associated with U.S. and Canadian commercial mortgage-backed securities (CMBS) collateral both on individual and portfolio levels, if applicable. This model's purpose is to establish credit enhancement levels for pools of commercial real estate loans of varying counts. The model utilizes loan-level credit metrics to calculate loan-level credit enhancement levels. The model aggregates these figures, calculates weighted averages, and produces pool-level credit enhancement levels.</p>

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Type of Service	Service Name	Description
Other Services	Conferences and Training	Conferences are provided covering topical developments in credit markets, credit ratings, and credit analysis in key industry and government sectors. Training sessions are occasionally provided covering S&P Global Ratings analytical methodology.
Other Services	Covered Bond Monitor	Covered Bond Monitor quantitatively assesses whether the reported cash flows of a particular covered bond pool are potentially eligible to support the achievable collateral-based uplift, according to our criteria. It performs these calculations based on the user's input of relevant data into an Excel template, which is specifically designed by S&P Global Ratings to be read by Covered Bond Monitor. The model uses the provided data and applies various combinations of S&P Global Ratings stress scenarios including stresses for cash flow as well as market risk to calculate the level of overcollateralization commensurate to support timely and ultimate payment of interest and principal. A full description of the model can be found on S&P Global Ratings' web site.
Other Services	Credit Assessment	A credit assessment is an indicator of S&P Global Ratings' opinion of creditworthiness reflecting our view of the general credit strengths and weaknesses of an issuer, obligor, a proposed financing structure, or elements of such structures. It may also pertain to limited credit matters or carve out certain elements of a credit that would ordinarily be taken into account in a credit rating. A credit assessment usually represents a point-in-time evaluation, and S&P Global Ratings generally does not maintain ongoing surveillance of credit assessments. A credit assessment is generally confidential. Credit assessments are expressed in descriptive terms or using S&P Global Ratings' traditional credit rating symbols, but in lowercase (e.g., 'bbb'), either in a broad category or with the addition of a plus (+) or minus (-) sign to indicate relative standing within the category.

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Other Services	Credit Estimate	<p>A credit estimate is a confidential indication of a likely credit rating on an unrated entity or instrument. Credit estimates are primarily performed for the purpose of including the debt of unrated issuers in a collateralized debt obligation (CDO) or another structured finance obligation that is rated by S&P Global Ratings. Credit estimates are formulated using an abbreviated analysis that draws on the analytical experience of credit estimate analysts and do not include all of the aspects of a credit rating. For these reasons, among others, a credit estimate is not a substitute for a credit rating and does not constitute a credit rating. Credit estimates generally do not involve direct contact with the issuer/obligor's management or in-depth insight into operating, financial, or strategic issues that such contact allows. They are typically based on information provided from the requesting party, together with information from third-party sources that we consider reliable. In all circumstances, credit estimates must satisfy our established credit estimate information guidelines. S&P Global Ratings does not maintain ongoing surveillance of credit estimates, but periodic updates may be provided. Credit estimates are expressed using S&P Global Ratings' traditional credit rating symbols, but in lowercase (e.g., 'bbb'). A credit estimate may be provided as private credit analysis, which is a credit estimate accompanied by a written report on the rationale for the credit estimate.</p>
Other Services	ESG Evaluation	<p>The Product is not a credit rating, and is not indicative of, nor related to, any credit rating or future credit rating of an entity. The Product provides a cross-sector, relative analysis of an entity's capacity to operate successfully in the future and is grounded in how ESG factors could affect stakeholders and potentially lead to a material direct or indirect financial impact on the entity. ESG factors typically assess the impact of the entity on the natural and social environment and the quality of its governance. The Product is not a research report and is not intended as such.</p>
Other Services	Extended Financial Management	<p>Extended Financial Management Assessment (FMA) is an in-depth interactive assessment of financial management practices, tools, and policies of a local or regional government (LRG), provided to that LRG, or confidentially to a third party that requests it. S&P Global Ratings typically conducts an assessment of an LRG's financial management as part of its credit rating process, and this component of the analysis is covered in our public finance criteria and routinely covered as a section in our credit rating reports. Extended FMA service provides a largely similar analysis but on a standalone basis either to interested LRGs or to third parties. Methodology for assigning extended FMAs is published on S&P Global Ratings' website (since July-1-2010).</p>

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Type of Service	Service Name	Description
Other Services	Fund Volatility Ratings	<p>A Fund Volatility Rating is a forward-looking opinion about a fixed-income investment fund's volatility of returns relative to that of a "reference index" denominated in the base currency of the fund. A reference index is composed of government securities associated with the fund's base currency. Fund volatility ratings are not globally comparable. Fund volatility ratings reflect our expectation of the fund's future volatility of returns to remain consistent with its historical volatility of returns. Fund volatility ratings reflect S&P Global Ratings' view of the fund's sensitivity to interest rate risk, credit risk, and liquidity risk, as well as other factors that may affect returns such as use of derivatives, use of leverage, exposure to foreign currency risk, and investment concentration, and fund management. Different symbology is used to distinguish fund volatility ratings from S&P Global Ratings' traditional issue or issuer credit ratings. We do so because fund volatility ratings do not reflect creditworthiness but rather our view of a fund's volatility of returns.</p>
Other Services	Green Evaluations	<p>S&P Global Ratings' Green Evaluation provides a relative green impact score on instruments targeted at financing environmentally beneficial projects. It also provides a second opinion, which is aligned with the published "Green Bond Principles". The Green Evaluation is not a credit rating, and it does not consider credit quality or factor into our credit ratings. The evaluation provides a relative ranking of financings globally. We first consider the governance and transparency of a financing from a green perspective. We then combine this assessment with an estimate of the asset's expected lifetime environmental impact in its region, relative to maintaining the status quo. The analytical approach can evaluate both mitigation and adaptation projects. It is a point in time evaluation and is not surveilled."</p>
Other Services	Insurance Risk-Based Capital (RBC) Model	<p>The Insurance RBC model takes inputs in the form of the dollar amount of various asset classes and sub-classes, along with insurance premiums, reserves, and other exposures. We apply factors to each input to derive a capital requirement arising from that risk. We use several correlation matrices to group these individual capital requirements and to reflect differing degrees of dependence between different risk pairings.</p> <p>The model calculates total available capital (TAC) from various balance-sheet and off-balance-sheet items. This represents S&P Global Ratings' view of the capital available to cover losses. We compare the "sum" of capital requirements above to TAC in order to estimate the level of capital adequacy for the insurer being assessed.</p>

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Type of Service	Service Name	Description
Other Services	Principal Stability Fund Ratings	An S&P Global Ratings principal stability fund rating, also known as a "money market fund rating," is a forward-looking opinion about a fixed income fund's capacity to maintain stable principal (net asset value) and to limit exposure to principal losses due to credit risk. When assigning a principal stability rating to a fund, S&P Global Ratings analysis focuses primarily on the creditworthiness of the fund's investments and counterparties, and also its investments' maturity structure and management's ability and policies to maintain the fund's stable net asset value. Principal stability fund ratings, or money market fund ratings, are identified by the 'm' suffix (e.g., 'AAAm') to distinguish the principal stability rating from an S&P Global Ratings traditional issue or issuer credit rating. Principal stability fund ratings are neither commentaries on yield levels paid by the fund, nor are they commentaries on loss of principal due to negative yields.
Other Services	Private Credit Analysis	Private Credit Analysis is a Credit Estimate accompanied by a written report on the rationale for the Credit Estimate. A Private Credit Analysis may also be provided on the Mid-Market Evaluation Scale.
Other Services	Servicer Evaluations	A Servicer Evaluation is an opinion of a servicer's relative ability, efficiency and competence in servicing loan or asset portfolios, some of which may be included in structured finance transactions. The opinion is expressed on a 5-point descriptive scale from strong to weak, and is supported by a report based on the application of S&P Global Ratings published methodology for assessing servicers.
Credit Rating Activities	Advanced Analytics, including Financial Product Company Assessments	These are enhanced analytics that apply to an explicit part of an insurance company's operations.
Credit Rating Activities	Corporate Mapping	Mapping is a correspondence table that can be used to statistically map the unrated assets within a diversified CDO asset portfolio to the S&P Global Ratings global rating scale. It may only be used as part of the rating analysis of CDOs under certain circumstances.
Credit Rating Activities	Rating Agency Confirmations (RAC)	Rating Agency Confirmations are confirmations provided to relevant parties (e.g., a bond trustee) that a proposed event or change to a rated transaction will not, in and of itself, cause us to lower, withdraw, or qualify our current ratings on that transaction.

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Type of Service	Service Name	Description
Credit Rating Activities	Rating Evaluation Services (RES)	<p>Rating Evaluation Service is an analytical service for rated or unrated entities that are considering strategic or financial initiatives that could impact their creditworthiness. At the request of an Issuer, S&P Global Ratings will provide a confidential assessment of the potential credit rating implications of hypothetical scenarios presented by the Issuer. It is typically used to help evaluate the impact of restructurings, acquisitions, divestitures, or material changes in debt or capital structure.</p>
Credit Rating Activities	Recovery Ratings	<p>A Recovery Rating is an opinion of expected recovery in the event of a payment default of a specific Issue. It is assigned on a numerical scale that runs from 1+ to 6 denoting a range from an expectation of full (1) to negligible (6) recovery.</p> <p>Recovery Rating analysis generally compares the nominal value expected to be received at the end of the troubled debt restructuring or bankruptcy to exposure at default, the latter defined as principal plus accrued and unpaid interest at the point of default.</p> <p>Recovery Ratings are not Credit Ratings but assessments used to determine specific issue ratings.</p> <p>Recovery ratings generally apply to speculative grade issuers in countries where we have the appropriate Jurisdiction Ranking Assessment.</p>