Methodology

Rating Canadian Public-Private Partnerships

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Insight beyond the rating.

CONTACT INFORMATION

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All DBRS ratings and research are available in hard-copy format and electronically on Bloomberg and at DBRS.com, our lead delivery tool for organized, Web-based, up-to-the-minute information. We remain committed to continuously refining our expertise in the analysis of credit quality and are dedicated to maintaining objective and credible opinions within the global financial marketplace.

DBRS

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Introduction to DBRS Methodologies

In general terms, DBRS ratings are opinions that reflect the creditworthiness of an issuer, a security or an obligation. They are opinions based on forward-looking measurements that assess an issuer's ability and willingness to make timely payments on outstanding obligations (whether principal, interest, dividend or distributions) with respect to the terms of an obligation.

DBRS ratings are not based solely on statistical analysis but include a combination of both quantitative and qualitative considerations. The considerations outlined in DBRS methodologies are not intended to be exhaustive. In certain cases, a major strength can compensate for a weakness that would be more critical for a peer company and may also differ depending on the industry being considered. Conversely, there are cases where one weakness is so critical that it overrides the fact that the company may be strong in most other areas.

DBRS rating methodologies are underpinned by a stable rating philosophy, which means that in order to minimize the rating changes due primarily to economic changes, DBRS strives to factor the impact of a cyclical economic environment into its rating as applicable. Consequently, DBRS takes a longer-term "through the cycle" view and, as such, rating changes are not based solely on normal economic cycles. Rating revisions do occur, however, when it is clear that a structural change, either positive or negative, has transpired or appears likely to transpire in the near future. An equally important aspect of DBRS's analysis is our broad industry coverage, which allows us to understand the differences and subtle nuances within a particular industry and to form an appropriate rating of an issuer relative to its competitors.

Critical in the determination of a rating is the application of the analyst's experience and expertise in forming an initial rating opinion and recommendation for the DBRS rating committee and the role of the rating committee as the final decision maker. DBRS rating committees, which comprise experienced and knowledgeable DBRS personnel, strive to provide objective and independent rating decisions that are based on all relevant information and factors, incorporate both global and local considerations, apply DBRS-approved methodologies and constitute the opinion of DBRS.

Overview of Public-Private Partnerships

Since the 1990s, public-private partnerships (PPPs)[1] have been used in Canada as a means of delivering infrastructure and in recent years, the number of Canadian PPP projects has grown markedly. Three provinces — Ontario, British Columbia and Québec — have established dedicated PPP agencies, and the PPP market in Alberta has also been active. Although the majority of PPP activity has taken place in these four jurisdictions, the model has also been employed in other provinces, territories and municipalities. Even though Canada adopted the PPP model after it had been in use in the United Kingdom and Australia for some time, the Canadian PPP market has become one of the most vibrant globally, with more than 100 projects in planning, procurement, construction or operation.

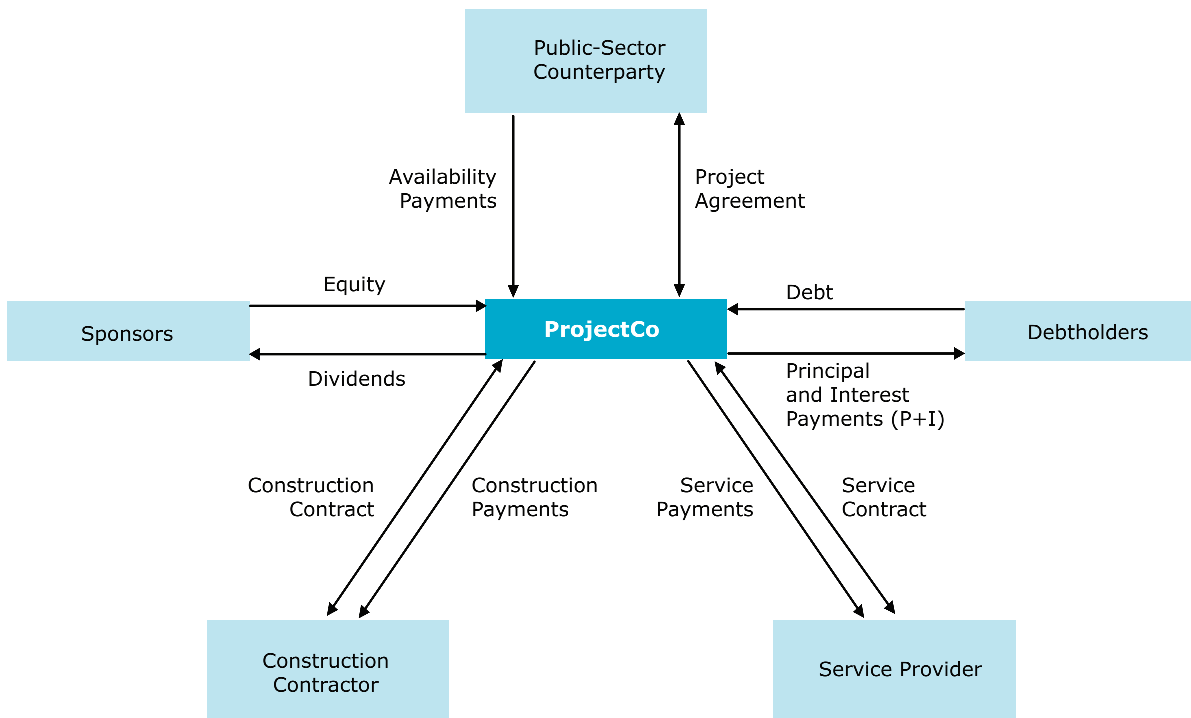
While PPP projects are most commonly employed in Canada in the construction of social projects such as hospitals, schools, courthouses and jails, the model has also been applied to civil projects, such as roads and bridges, as well as to other infrastructure elements. Looking forward, DBRS expects PPP activity in Canada to continue in response to the sizable infrastructure deficits that continue to beset all levels of government despite a period of fairly heavy investment.

This document gives investors an overview of the key factors considered when rating Canadian PPP transactions and provides insight on the level of various analytical quantitative indicators adequate for an A-range rating, based on DBRS's rating criteria and industry best practices. Unless otherwise specified, references to coverage levels, types and sizes of security packages and other supports in this methodology are framed in relation to low- to moderate-risk social and civil projects. Note that in developing a rating for a project where ownership of the asset is transferred to the private sector, which is generally the case in energy, mining or other resource sectors, DBRS would generally apply its methodology *Rating Project Finance,* which can be found at www.dbrs.com.

1. Public-private partnerships are also known as P3s or, in Ontario, Alternative Financing and Procurement (AFP).

STRUCTURE OF A PPP

Typical Public-Private Partnership Structure



In a PPP transaction, the issuer (ProjectCo) enters into a project agreement (PA) with a public-sector counterparty (typically a hospital or other government-related entity) to design, build, finance and, in general, maintain and rehabilitate an infrastructure asset over a predetermined period of time. ProjectCo is structured as a special-purpose vehicle, often possessing management expertise but little capability to perform any other tasks, and usually passes down virtually all of its responsibilities under the PA to other specialized parties. Specifically, it typically passes down obligations relating to the design, building and commissioning of the asset to a construction contractor via a back-to-back construction contract that mirrors ProjectCo's obligations under the PA. In much the same fashion, service obligations under the PA are generally transferred to an experienced service provider, leaving ProjectCo with project management and financial reporting responsibilities over the life of the project, which typically spans 20 to 40 years. While ProjectCo generally passes these risks down, it ultimately remains liable to the public-sector counterparty for construction of the asset and provision of all services. As such, projects where more risk is retained by the public-sector counterparty will tend to be viewed more favourably by DBRS, all else being equal.

Unlike conventional project finance or structured finance vehicles, ProjectCo does not own the asset. As a result, PPP lenders have no security over physical assets and may only look to cash flows from the project for debt repayment. This places greater emphasis on the strength of the various agreements and contracts and the degree to which they complement each other.

In determining the rating for an issuer in the PPP sector, DBRS breaks down its analysis to focus on the construction phase and the service phase in isolation, with the weaker of the two phases generally determining the ultimate rating assigned to the project.

DBRS

Construction Phase

The construction phase is generally the riskiest portion of the project as it entails considerable uncertainty (e.g., site conditions, weather and availability of labour and materials) and requires specialized project management skills, including quality control, schedule adherence and critical path management, as well as interfacing with key stakeholders and municipal permitting authorities. These factors place heavy reliance on the performance of the construction contractor, which undertakes to design and build the asset on behalf of ProjectCo for a fixed price within a predetermined time but whose credit profile is generally in the BB to BBB range. DBRS's assessment of the construction phase primarily entails examining the following:

- Risk allocation.
- Complexity of construction.
- Quality of the construction contractor.
- External enhancements.
- Other considerations.

RISK ALLOCATION

ProjectCo is structured as a special-purpose vehicle, with management expertise but little capability to self-perform any construction tasks. As a result, all risks and obligations under the PA pertaining to the design, construction and commissioning of the asset are generally expected to be passed down to a reputable construction contractor via the construction contract. Whenever there is an incomplete pass-down of risks, DBRS assesses the severity of potential outcomes against the likelihood of occurrence, as well as any potential mitigants available within the structure. DBRS cautions that even low-probability but high-severity events can have a material impact on the rating if left unaddressed.

COMPLEXITY OF CONSTRUCTION

The complexity of the construction project is an important consideration in the rating process and is assessed in relation to the various risk mitigants and financial enhancements supporting the structure. In order to gauge the complexity of construction, DBRS takes into account the extent to which the site is conducive to construction activity, the detail and quality of design plans, the interdependency of construction phase(s), the sophistication of the design and construction techniques required, any pertinent environmental or geotechnical considerations and the reasonableness of the cost and timing estimates put forth by the construction contractor. In conducting its assessment, DBRS attributes significant importance to the report of the Lenders' Technical Advisor (LTA), which reviews the key technical features and risks of the project and offers an opinion of the complexity of construction. DBRS classifies the project as one of the following risk types:

- **Low to Moderate Risk:** Projects are characterized by standard designs, construction techniques and technology, as well as by good site access and close proximity to a large supply of labour and materials. Social infrastructure projects such as hospitals, courthouses, prisons, schools, student residences and civil projects such as highways are typically classified as being of low to moderate risk.
- **Higher Risk:** Projects may contain challenging or unconventional construction techniques, remote and/or difficult site access or input costs that are abnormally volatile. Others may be situated on building sites where the soil and/or subsurface conditions give rise to specialized construction requirements or have complex and highly interdependent construction phases. Examples of higher-risk projects generally include tunnels, suspension or cable-stay bridges, water treatment plants and social infrastructure projects with relatively high degrees of technical complexity.

Most Canadian PPP projects are of low to moderate risk. In cases where the project is considered to be of higher risk, DBRS would normally discount the rating of the construction phase by one or more notches to account for the higher risk unless the additional complexity is mitigated with increased construction enhancements, as explained below.

DBRS

QUALITY OF THE CONSTRUCTION CONTRACTOR

Since virtually all of ProjectCo's design-build risks and obligations are generally assumed on a back-to-back basis by the construction contractor, the quality of the latter constitutes the pillar of DBRS's views on the construction phase. DBRS assesses a number of factors in determining the quality of the construction contractor. First and foremost, the creditworthiness of the construction contractor is considered to be one of the most important components of the construction phase rating as the success of the project primarily depends on the ability of the contractor to carry it to completion and make up for any unexpected adverse developments. In cases where the work is undertaken by a subsidiary guaranteed by a larger company, the creditworthiness will be determined by looking at the parent guarantor, provided that the guarantee meets DBRS's requirements. Where the contractor or its guarantor is not publicly rated, DBRS develops an internal assessment of its creditworthiness by applying the methodology *Rating the Engineering and Construction Industry.*

Also important is the fit of the construction contractor with respect to the type and size of the project being undertaken. DBRS evaluates the construction contractor's size, reputation and track record of completing similar projects on time and on budget, as well as the construction contractor's ability to self-perform some or all of the construction tasks. Where a contractor does not have an established track record in a specific sector or region, DBRS examines the strategies expected to be employed in order to fulfill all obligations, including the use of experienced subcontractors and the timing of their engagement, planning for labour and materials acquisition and securing permits necessary to complete the project.

Two or more construction contractors may partner together to form a Design-Build Joint Venture (DBJV). Provided the contractors are jointly and severally liable for their obligations and backed by adequate parent guarantees (in the case of subsidiaries), DBRS will generally view such an arrangement favourably, especially for large or complex projects, as it provides an additional layer of redundancy. DBRS will typically assign the rating of the most creditworthy contractor/guarantor to the DBJV. However, in cases where two of the DBJV members or their parent guarantors are of the same creditworthiness and of comparable size and experience and where either would have the financial resources and technical capabilities to complete the construction project on its own, DBRS may consider awarding a notch of uplift to the rating of the DBJV.

DBRS notes that the design-build contract stipulates a maximum amount beyond which the construction contractor (and its guarantor, if any) will not be liable, except in certain cases such as willful negligence or abandonment of the project by the builder. For low- to moderate-complexity social and civil infrastructure projects, DBRS views a liability cap of 50% of the construction price as adequate for an A-range rating as it provides ProjectCo with solid recourse against the construction contractor and allows for the flow-through of the builder's profile to the construction phase. However, a higher limit may be required at times, depending on the type and complexity of the construction task.

CONSTRUCTION ENHANCEMENTS

Financial contingencies in most PPPs often tend to be fairly modest, providing ProjectCo with limited protection from substantial cost overruns (e.g., when a non-performing contractor needs to be replaced). As a result, PPPs are typically supported by construction enhancements provided by the construction contractor to secure its performance. These provide a financial cushion against unexpected shocks and increase the likelihood of successfully replacing a defaulted contractor and achieving completion, thereby loosening the tie between the contractor and the project and allowing ProjectCo's rating to exceed that of its construction contractor. This approach also places significant emphasis on the construction contractor replacement mechanism embedded in the contractual framework, making it a key element of support of the construction phase rating. When assessing the quality and the degree of ratings uplift provided by construction enhancements, DBRS considers the size, timeliness and certainty of the package, which may include a parent guarantee; letters of credit (LCs) and/or cash reserves; performance bonds, labour and materials bonds or other type of insurance; and/or trapping mechanisms, as explained below.

DBRS

Parent Guarantee

When a subsidiary of a construction contractor is the counterparty to the construction contract, it is common to have the parent company provide a guarantee to back the subsidiary's obligations up to the liability cap set in the contract. DBRS examines the language of the guarantee to ensure, among other things, that it is irrevocable and unconditional and that it does not first require ProjectCo to exhaust recourse against the construction contractor before making a claim under the guarantee against the parent. Provided the guarantee meets DBRS's requirements and covers all of the subsidiary's obligations under the contract up to the liability cap, the contractor's credit profile is replaced by that of its guarantor for analytical purposes.

Cash and Letters of Credit (LCs)

DBRS affords the most value to highly liquid supports such as LCs and cash, which are typically sized in relation to the maximum amount of liquidated damages that can be incurred under the construction contract. LCs should be able to be drawn upon default of the contractor, if not renewed before maturity or if the provider is downgraded below a certain threshold and the LC is not replaced within a suitable time period. Furthermore, the LC should be issued by an institution of acceptable credit quality.

Sometimes provided as a substitute to LCs, cash reserves must be deposited with a suitable financial institution and remain liquid so that they may be drawn on the same day. For low- to moderate-complexity social and civil infrastructure projects, DBRS views an LC or cash reserve of 5% of the construction price as providing one notch of uplift to the rating during the construction phase and generally expects a component of liquidity in every PPP project.

Some construction contracts may also feature mechanisms that start trapping progress payments otherwise earmarked for the contractor to prefund expected liquidated damages if, at a certain point in time, the project falls behind schedule and is no longer likely to achieve substantial completion by the substantial completion target date. Triggers are typically linked to missed milestones or the accumulation of delays relative to the initial schedule exceeding a predetermined materiality threshold. A trapping mechanism may have the unintended consequence of placing greater stress on the construction contractor's liquidity at a vulnerable moment, particularly in cases where a significant portion of a monthly progress payment is withheld, but is still viewed as a positive element in a transaction. As opposed to the other types of enhancements, the trapping mechanism does not add resources at initiation of the project and, as a result, typically does not materially enhance its credit rating.

Performance Bonds, Labour and Materials Bonds and Insurance Products

- A performance bond is an agreement between a surety, the construction contractor and ProjectCo whereby the surety commits to completing the work upon a default of the contractor on its obligations. In doing so, the surety will typically have four options: cure the default; perform a defaulting contractor's obligations; re-tender the obligations to another contractor; or pay out the maximum amount specified under the performance bond to ProjectCo. For low- to moderate-complexity social and civil infrastructure projects, the presence of a performance bond for 50% of the contract price from a strong provider will typically result in a one-notch uplift to the construction phase, reflecting the financial backing, expertise and project management capabilities contributed by the surety company. Higher limits may be required for more complex projects. DBRS will typically give greater levels of support to surety products that have a more streamlined claims-paying process or access to liquidity in a timely, demand-like fashion. However, performance bonds are viewed by DBRS as not as liquid as LCs as amounts and timeliness of payment are less certain.
- A labour and materials bond is an agreement between a surety, the construction contractor and ProjectCo whereby the surety commits to making unpaid suppliers and subtrades current upon a default of the construction contractor. Labour and materials bonds serve as a complement to rather than a substitute for performance bonds, as claims under both instruments for the same event are typically not permitted. Labour and materials bonds are not present in all projects and DBRS will not usually make a rating distinction if they are absent from a well-structured project.

- Subcontractor default insurance is sometimes used in PPP projects where a significant portion of the work is subcontracted to local trades. These policies typically have large deductibles and may also have a co-pay provision whereby the construction contractor is required to cover the first portion of any award, both of which are prefunded by the construction contractor. Subcontractors are prequalified, which helps streamline the claims-payment process, and given that the first dollars received are from the construction contractor's prefunding, subcontractor default insurance is understood to be more liquid and timely than a surety product. To recognize the incremental value provided by subcontractor default insurance and performance bonds in tandem, DBRS usually accords 1.5 notches of uplift to the construction phase rating for low- to moderate-complexity social and civil infrastructure projects. The policy needs to contain the appropriate financial interest endorsements to ensure that it would survive insolvency of the construction contractor/guarantor.

Enhancements are analyzed in relation to the complexity of the project and the creditworthiness of the construction contractor. For a typical low- to moderate-complexity PPP project, DBRS will limit the maximum rating uplift achievable through construction supports for a contractor that has size and expertise appropriate for the project to five notches, provided that the contractor replacement mechanism embedded in the contractual framework allows for timely replacement of the construction contractor. As such, a project with a construction contractor rated BB could potentially be enhanced to an A (low) rating, whereas a construction contractor rated BB (low) would likely limit the rating on the same project to BBB (high).

OTHER CONSIDERATIONS

In addition to the above-mentioned factors, many other considerations may influence DBRS's assessment of the construction phase. Some of these factors may seem benign at the margin but may nonetheless signal a potential flaw in the project or poor preparation by the project team. While not meant to be exhaustive, the list below highlights some of the project features that generally warrant a careful review by DBRS.

Project Schedule

The scheduling should demonstrate a clear sequencing of tasks and a logical critical path, enabling the construction contractor to achieve completion by the target substantial completion date by way of standard construction techniques. In addition to adequate levels of contingency, the construction schedule should for the most part incorporate a standard work week, without the expectation of sustained overtime or multiple shifts during the course of a day. Otherwise, the project may have a limited ability to add more shifts or workdays, which could impede its ability to catch up should it fall behind schedule. DBRS notes that some projects spanning several years or that take place across different sites may employ phased substantial completion, with staggered delivery dates for particular facilities. Sections of the project may then be in use prior to full completion of the project. In such cases, DBRS scrutinizes the phases to ensure that the presence of several phases running simultaneously does not materially increase the complexity or the riskiness of the project. In particular, where the completion of the last phase(s) of a project is reliant on substantial completion payments for previous phases, DBRS verifies that alternative sources of liquidity to fund ongoing construction and debt servicing are available should a delay occur.

Construction Budget

DBRS benchmarks the construction budget against that of other similar projects recently undertaken in the province and incorporates the opinion of the LTA in its assessment. Construction contracts typically factor in contingencies of 10% to 20%, including profit margin, to account for cost overruns, materials inflation and wage escalation. Firm quotes from key subtrades, including the mechanical and electrical contractors (typically 50% of costs on an accommodation project) are expected to have been used to develop the budget, with appropriate strategies to address price volatility of inputs and lock in key subtrades by financial close.

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Site Conditions
DBRS expects site conditions to be subject to considerable due diligence by the public-sector counterparty and by the project team during the bid process and after having been named preferred proponent. This ensures geotechnical conditions are well understood and adequately incorporated into the excavation and foundation work plan and that a proper mitigation strategy has been developed for potential archaeological or environmental issues. Site access and the proximity of the site to other operating structures are also considered carefully as they have the potential to increase the complexity of a project.

Service Phase

As a PPP project transitions from the construction phase to the service phase, focus turns to service period obligations and, more particularly, the means by which operating, maintenance and lifecycle risks and responsibilities are addressed by ProjectCo. Although construction is generally viewed as the riskier of the two phases of a PPP, DBRS notes that the risks assumed by ProjectCo in agreeing to the performance of the maintenance and rehabilitation tasks at a predetermined price and for a term often spanning 30 years are not inconsequential. When analyzing the service phase, DBRS focuses on the following elements:
• Risk allocation.
• Service complexity and performance standards.
• Quality of the service provider.
• Payment mechanism and revenue sources.
• Expenditure profile.
• External enhancements and supports to the project.

RISK ALLOCATION
Under the PPP framework, ProjectCo is responsible for the provision of facilities management and lifecycle services in addition to various ancillary services. ProjectCo typically seeks to pass down virtually all of its obligations with respect to the facilities management, rehabilitation and lifecycle responsibilities on a back-to-back basis to a service provider via the service contract, although under the PA it ultimately remains accountable for the provision of all services.

To be effective, the risk transfer should involve a service provider of a decent size and significant relevant experience, that exhibits or whose parent guarantor exhibits credit characteristics consistent with an investment-grade rating. Levels of deductions and failure-point thresholds under the service contract should preferably be more restrictive than those under the PA, and any deductions incurred for performance failure should be passed to the service provider, unless contributed to by ProjectCo. At times, ProjectCo may choose to retain significant service responsibilities, such as lifecycle maintenance (more common in civil construction projects). In such cases, DBRS would expect ProjectCo to carry a higher level of operating resilience as measured by its break-even analysis relative to similar projects with the same rating but incorporating full risk transfer. Appropriate expertise to self-perform or manage the provision of such services and proper mitigation of expense volatility and resulting liquidity pressure should also be in place.

SERVICE COMPLEXITY AND PERFORMANCE STANDARDS
DBRS assesses the complexity and technology associated with the services to be provided under the PA, as well as the reasonableness of the service standards and other requirements imposed by the public-sector counterparty. Depending on the type of asset, the scope of services may include routine maintenance, provision of plant services (heating, ventilation and air conditioning), elevating device maintenance, security, waste management, groundskeeping, snow removal and pest control, which are referred to as operating and maintenance (O&M) services. These are generally straightforward and not technically complex. Services can also include more complex interventions, such as the lifecycle maintenance of equipment and/or structures, which is viewed by DBRS as the most complex aspect of the service phase given the

long-term assumptions required for the development of the related budget and intervention strategy. However, such risks are well understood for standard structures and generally adequately mitigated by ProjectCo and its service provider. Nonetheless, DBRS notes that unduly onerous performance standards pertaining to routine service obligations, unrealistic or ambitious response and/or rectification times or the inclusion of unusually complex, non-routine services could apply downward pressure on the rating.

QUALITY OF THE SERVICE PROVIDER

Intrinsic to the analysis of the service provider is the assessment of its creditworthiness. If the service provider is not publicly rated, DBRS generally seeks to develop an internal estimate of its credit profile. Where the service provider is investment grade, risk pass- down from ProjectCo is deemed to be effective, provided that the contractual framework is adequate. If the service provider is not considered to be investment grade, DBRS does not give credit to the risk transfer and approaches the project as if ProjectCo had opted to self-perform the tasks. In such situations, additional levels of protection are generally required, which may include higher amounts of liquid security and better financial metrics. In any case, tasks to be performed should fit appropriately with the service provider's skill set and experience, and the service provider should also have experience operating under a PPP framework or a track record of long-term, fixed-price work and/or government contracting.

REVENUE SOURCES

The origin of ProjectCo's revenues can strongly influence the predictability and stability of operating resources and financial metrics and, as a result, can have a significant impact on the project's rating. Revenues in PPPs can be grouped in two main categories, namely, availability-based and volume-based, with volume-based sources generally entailing greater risk.

Availability-Based Revenues

The most common revenue source in Canadian PPPs, the availability-based framework involves the public-sector counterparty providing ProjectCo with payments contingent on the availability of services and the satisfaction of performance standards. The payment mechanism typically incorporates indexation for a portion of the payments based on an established index or basket of indices and may also include benchmarking and market testing of certain elements at particular intervals. These features, along with the generally high quality of the public-sector counterparty, usually result in a reliable revenue base, even when the public-sector counterparty is not a provincial government. In cases where the counterparty is not rated, DBRS conducts an internal assessment of its creditworthiness.

DBRS's analysis of PPPs does not incorporate the assumption that the public-sector counterparty would grant any special consideration to ProjectCo, but rather that ProjectCo would be treated at arm's length and that the public-sector counterparty would act in a business-like fashion. As such, the rating is assigned to the project on the basis of the terms of the PA and DBRS assumes that neither the type of project nor its perceived necessity would lead the counterparty to waive any contractual right it may possess, increase the amount of service payment to ProjectCo or otherwise aid bondholders in any extraordinary fashion should the project run into difficulties. Given the highly structured nature of PPPs, the risks assumed on behalf of the counterparty and the limitations placed on ProjectCo's ability to perform other activities, DBRS typically views a level of two notches below that of the province in which the project is based as the ceiling for a project's rating. This also means that a project would likely be downgraded should the rating of the province fall within fewer than two notches of the rating of the project.

Volume-Based Revenues

Under such a mechanism, revenues are predominantly a function of service use, such as transit ridership or the traffic on a highway, and can be paid by the counterparty or directly collected from users. Where volume-based revenues are modest and stem from complementary services (e.g., a pharmacy in a hospital or a coffee shop or newsstand in a courthouse), DBRS does not normally make a rating distinction, provided the revenue stream is conservatively modeled and is not expected to contribute significantly to project revenues. Under such a scenario, DBRS would expect that even with no volume, a project could maintain

a debt service coverage ratio (DSCR) appropriate for the rating and still be able to comfortably withstand shocks. However, DBRS will typically discount the rating by at least one notch in projects where volume-based revenues are material and a reasonable downside scenario pertaining to volumes results in marked erosion of the DSCR; in cases where debt servicing is compromised, notching would be more severe.

For projects that generate most or all of their revenues from volumes, such as a toll highway, a thorough examination of the demand profile for the asset is conducted and corroborated by the results of an external forecast. Considerable emphasis is also put on the powers granted to ProjectCo under the PA to collect and increase user fees. Infrastructure assets that enjoy a natural monopoly or are highly essential in a region generally exhibit better credit fundamentals given that such attributes typically translate into a less volatile demand pattern and reduced price elasticity.

EXPENDITURE PROFILE

The composition of ProjectCo's cost structure is closely scrutinized to determine the stability and predictability of major expenditure items, their correlation to revenue and the ability of ProjectCo to contain, delay or even reduce spending in the event of an unanticipated expenditure or revenue shock. Because ProjectCo typically carries only modest reserves and limited amounts of working capital, proper timing and matching of expenses with revenues is critical to the creditworthiness of ProjectCo, along with the involvement of a competent service provider that will act as a cushion against unexpected expenses or payment deductions. In analyzing the expenditure profile, DBRS primarily focuses on lifecycle and O&M expenses.

Lifecycle Expenses

Lifecycle maintenance requirements are often challenging to assess and plan for given the wide range of materials, equipment and techniques used in construction as well as the long time frame associated with estimation. DBRS examines the project's lifecycle budget and strategy, with a particular focus put on the budget-development process, the timing and nature of major interventions, assumed cost escalation over the forecast horizon and the smoothness of the resulting expenditure profile. PPP projects typically feature large expenditures in year 20 and beyond to renew the asset's condition and prepare it for hand-back to the public-sector counterparty. However, large peaks in expenditures will usually lead to lower lifecycle break-even ratios and, all else being equal, lower creditworthiness, although the use of reserves and contingencies may help address some concerns, as explained below. DBRS also examines the underlying assumptions of the lifecycle plan and compares the budget with similar projects, while incorporating the views of the LTA on the suitability of the lifecycle budget.

In order to partially mitigate the complexity of providing for lifecycle requirements and the risk of surprises at the end of a project's term, PAs often contain the requirement for an independent inspection a few years before the asset is handed back. Where a shortfall is identified in the performance of the lifecycle work, the public-sector counterparty is usually permitted to withhold payments to ProjectCo to prefund remedial work, which has the potential to negatively impact debt servicing. To ensure that lifecycle works are being performed as planned, the service contract may contain the requirement to conduct additional inspections at particular times and/or intervals prior to the inspections conducted under the PA to assess the current condition of the asset and to determine whether the remaining lifecycle budget is adequate to deliver the project in a condition that meets hand-back requirements. Projects rated in the A-range typically have at least two inspections prior to the start of the hand-back inspections required under the PA. The number and timing of such inspections should be reflective of the timing of major lifecycle interventions and of the hand-back inspections, the complexity of the assets and its components and ProjectCo's resilience to unexpected shocks to the lifecycle budget as measured by DBRS's break-even analysis. The latter consideration is especially important as unusually high operating resilience in a project may help mitigate concerns regarding service provider replacement or reduce the need for additional facility inspections.

For projects in the A-range, some form of dynamic lifecycle reserving mechanism is also common, whereby the accumulation of a lifecycle deficiency above a particular threshold must be reserved for (typically in the range of $5 million to $10 million for social infrastructure, depending on the size of the budget, the complexity of the tasks and the credit quality of the service provider) either via the provision of an LC or cash or by trapping equity distributions or lifecycle payments to the service provider. The main objective of the reserving mechanism is to prevent the accumulation of excessive exposure by ProjectCo to its service provider and to encourage proactive and timely resolution of potential lifecycle issues. In this context, the amount of projected dividends in relation to the remaining lifecycle work in the outer years is also an important indicator, with more comfort obtained where the amount of dividends remaining to be paid is large in relation to the remaining lifecycle budget.

As noted in the Risk Allocation section above, DBRS requirements tend to increase when lifecycle risk is retained by ProjectCo. First, ProjectCo must demonstrate that it has the expertise to undertake or manage such work. Second, higher operating resilience would be required for a given rating in order to make up for the absence of the buffer provided by the service provider, which would otherwise absorb first losses. Finally, additional reserves may be necessary to ensure that funds are available to pay for planned lifecycle requirements and cover any unexpected needs. A three-year, look-forward lifecycle reserve (100%/67%/50% or 100%/50%/25%) is common, but can vary depending on the type of asset and complexity of the rehabilitation tasks.

O&M Expenses
Compared with lifecycle responsibilities, O&M services are more straightforward and predictable as the planning process does not involve precise estimates of the aging process of components, the timing of major interventions and the potential need for earlier-than-anticipated replacements. Notwithstanding, DBRS examines the complexity of the key services to be delivered relative to the expertise required and the pool of local labour available, and the assumed impact of such considerations on cost estimates when unusually technical tasks are involved. The approach by which the budget has been developed is also reviewed, including staffing and inflationary assumptions, as well as the presence of benchmarking or market testing, which help to alleviate cost escalation. The O&M budget is compared against those of similar projects, with the LTA's opinion of the suitability of the O&M budget incorporated into DBRS's assessment.

SERVICE PROVIDER'S LIABILITY CAP AND PERFORMANCE SUPPORT

While a source of protection and relief to ProjectCo, the security package provided by the service provider is generally much smaller than that provided by the construction contractor. Compared with the limit of liability of the construction contractor, the service provider is subject to a much lower limit of liability for its obligations, which prevents its credit profile or that of its parent guarantor from flowing through to the project. For low- to moderate-complexity social and civil infrastructure projects rated A (low) with relatively straightforward O&M and lifecycle requirements, the liability cap tends to be at least 200% of average annual O&M and lifecycle payments, whereas for projects rated "A" or better, DBRS expects that the limit of liability would be at least 300% of average annual payments. However, unusually complex service obligations or deficient operating resilience at ProjectCo's level may require greater backing from the service provider to support the same rating level.

In addition to the size of the liability cap, the security provided by the service provider to ProjectCo to secure its performance under the contract is analyzed by DBRS. Where the entity providing the services is a subsidiary of a larger, more creditworthy company, a performance guarantee from the parent company is generally provided, which adds value to the long-term contractual commitment and the above-mentioned liability cap. An LC of six months of average O&M and lifecycle payments is also part of the security for projects rated in the A-range to support any needs for immediate liquidity.

Financing Considerations

Although strongly linked to both the construction phase and the service phase, the financial profile is especially intrinsic to the analysis of the service phase, providing valuable insight in the financial flexibility of ProjectCo and its ability to weather unexpected shocks. Discussed below are the key financial considerations factored into the DBRS analysis of PPPs.

EQUITY CONTRIBUTIONS

While leverage tends to be quite high in most PPPs, equity is typically required in projects involving a service phase (i.e., design, build, finance, maintain (DBFM) or design, build, finance, operate, maintain (DBFOM)) to signal the commitment of the project sponsors to the initiative. However, the injection of funds adds little to the financial strength of a project given its small size relative to the construction budget and the fact that the funds are already completely earmarked for spending at financial close and do not represent an additional source of contingencies. In DBRS's view, to constitute adequate commitment to the project and to incentivize the project proponents, equity for a project of low to moderate complexity in the investment-grade range should account for at least 7% of the capital structure at financial close. Failure to meet this requirement would be expected to have an adverse effect on the rating. Equity may be in the form of a traditional equity contribution or deeply subordinated debt[2] and, if not contributed at financial close, is usually secured by an LC until fully drawn.

Since the equity contribution is usually the only firm financial obligation of the sponsors toward a DBFM or DBFOM project and since this contribution is fulfilled or fully secured by financial close, no added support from the sponsors is assumed in the rating. As a result, DBRS does not focus heavily on the creditworthiness of the equity provider. Nevertheless, DBRS acknowledges that seasoned equity sponsors can provide valuable experience and advice to ProjectCo staff.

For design-build-finance (DBF) projects, however, DBRS does not view traditional equity as essential to the capital structure. In such transactions, ProjectCo is generally owned by the construction contractor. Therefore, the only key party on which the project and bondholders rely for success in the project is the construction contractor, which already has the proper incentive given the extent of its financial involvement as reflected in the contract's liability cap and the parent guarantee, generally amounting to at least 50% of the contract price. Furthermore, the rated bonds generally mature shortly after substantial completion, making long-term performance considerations irrelevant for the rating. Nevertheless, the fact that ProjectCo is owned by the construction contractor may raise some concerns with respect to how objective and proactive ProjectCo will be in exercising its rights under the construction contract and dealing with delays. As a result, special attention will be given to the role of the LTA in the project. In DBRS's view, a clear and comprehensive mandate entrusted to the LTA, especially with respect to the approval and withholding of progress payments and/or certification of milestones, may be a valid way of mitigating such concerns.

DEBT SERVICE COVERAGE AND OPERATING RESILIENCE

The resilience of ProjectCo during the service phase and its ability to absorb unexpected shocks to its budget (e.g., the replacement of the service provider) has a significant influence over the rating assigned to the project. The DSCR is a popular financial metric tracked by investors and rating agencies and constitutes a good proxy for such assessment, but it is an incomplete measure of financial flexibility. As such, DBRS puts more emphasis on the O&M and lifecycle break-even ratios, which measure the maximum amount by which each of the O&M and lifecycle budgets can be inflated consistently throughout the service phase without having the DSCR fall below 1.0 times. For Canadian social infrastructure projects rated "A," DBRS typically expects lifecycle and O&M break-even ratios of 50% or greater, particularly for lifecycle. For the

2. See the appendix for DBRS criteria for debt to be considered as deeply subordinated.

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A (low) category, lifecycle and O&M break-even metrics between 40% and 50% would be acceptable. Below 40%, a project may be eligible for a BBB-range rating, although very low resilience could preclude the assignment of an investment-grade rating to the project. This may occur, for example, in projects where a substantial proportion of the construction costs are reimbursed by the public-sector counterparty through milestone or substantial completion payments. Such payments reduce the amount of debt in the permanent capital structure and may shrink the cash flow cushion embedded in a given DSCR relative to the O&M and lifecycle expense streams. This, in turn, makes the DSCR more sensitive to unexpected shocks in the O&M or lifecycle budget, undermining ProjectCo's operating resilience.

Lower lifecycle resilience is also found in projects with very peaked lifecycle profiles. This is as a result of heavy concentrations of lifecycle expenses during particular year(s), which leaves less ability to absorb potential lifecycle cost increases after replacement of the service provider.

For projects with availability-based payments, some form of inflation protection on non-capital components of the cost structure will typically be provided to ProjectCo through the payment mechanism, whereby the public-sector counterparty will adjust payments based on a predetermined inflation index. The portion of ProjectCo's revenues subject to indexation will often match closely the expenses subject to escalation. Nonetheless, DBRS will ensure that there is no material mismatch between costs and the payment stream by stress testing the inflation assumption in the final model. Canadian investment-grade projects can typically withstand inflation of roughly 10% throughout the life of the project without having the DSCR fall below 1.0 times. While this may seem to be an extraordinary threshold, DBRS fosters rating stability through the cycle and expects the project to be sufficiently insensitive to changes in inflation such that a marginal increase in inflation would not have a material impact on the DSCR and, ultimately, the rating of a project.

DEBT STRUCTURE

DBRS takes into consideration the characteristics of the debt instruments employed by ProjectCo, including deferred pay obligations, real return bonds, inflation-indexed bonds and subordinated debt, as well as the maturity profile of the debt structure. The less ability ProjectCo has to grow revenues in response to unexpected cost increases, the more stable the debt structure and servicing requirements are required to be, especially for A-range ratings. This is why the majority of Canadian PPP projects are funded with fixed-rate debt that fully amortizes over the life of the project, with payments sculpted to match anticipated cash flows and provide for a stable DSCR.

Refinancing

Some projects may incorporate refinancing requirements during the life of the concession. DBRS notes that refinancing adds material amounts of risk to the project as it introduces uncertainty in the debt service requirements of projects that usually have little flexibility to cope with higher financing rates given their relatively tight DSCRs and the fact that the capital portion of availability-based services payments is fixed at financial close. Volume-based projects may have more flexibility to grow revenues but may nonetheless be constrained by limited fee-setting autonomy. Poor performance during the service phase can contribute to refinancing risk, as lenders may demand higher spreads to compensate for risk levels that are greater than originally perceived. The financing structure may incorporate features to encourage refinancing well before the firm maturity date, including interest rate step-ups and dividend trapping. This may help mitigate refinancing risk but does not fully eliminate it. In assessing the impact of refinancing risk on a PPP project, DBRS looks at the portion of the debt structure subject to refinancing relative to interest rate expectations and ProjectCo's ability to weather higher debt servicing requirements. The refinancing strategy is also reviewed, particularly the timing and size of the refinancing window, with a broader window and properly escalating refinancing incentives generally viewed more favourably. Nonetheless, given the challenges and uncertainty introduced by refinancing risk, debt structures that incorporate a material element of refinancing are often viewed as less creditworthy than those with fully amortizing debt, resulting in a discount of at least one notch of the project's rating. Projects reliant upon overly optimistic refinancing assumptions such as short refinancing windows and/or aggressive refinancing rates may not be capable of achieving an investment-grade rating.

Hybrid Financings

Financing for certain projects may use a combination of bonds and a loan facility from a syndicate of banks, with the bank facility often used in Canadian PPPs to bridge milestone or substantial completion payments from the public-sector counterparty. For cost efficiency, bond proceeds will tend to be drawn first, followed by the loan facility. Such a structure may expose bondholders to greater risks than lenders if loan commitments are framed too loosely. In such a case, the two groups of creditors could have different motivations and divergent interests if the project were to experience serious difficulties during construction. With their funds being used first, bondholders may have greater incentive to waive a default if presented with a credible remediation plan. In contrast, lenders might be less supportive if the problem occurs when they have little or no funds invested and may instead choose to discontinue their commitment if permitted to do so by the loan documents.

Various approaches have been used or proposed in Canada to address potential hybrid-financing issues. The most obvious is the pro rata draw, which effectively aligns incentives among the lenders and bondholders by increasing their investments in the project at the same pace. The incorporation of a true-up mechanism in the financing platform – whereby upon an event of default, the lenders are required to advance funds to a collateral account for the benefit of the bondholders to increase their exposure in line with that of the bondholders – is also viewed as an effective means of aligning incentives. It should be noted, however, that the issue may be effectively addressed by other means as long as it provides sufficient time and flexibility to ProjectCo to develop a remedial plan and, if needed, enact the contractor replacement mechanism embedded in the PPP contractual framework without undermining financing availability. If left unaddressed, however, this issue can materially impact the rating of a project during construction.

RESERVES

ProjectCo usually maintains reserves in support of its debt servicing and operating obligations. A debt service reserve holding at all times short-term, high-quality funds equal to at least six months of interest and principal payments is seen as standard for an investment-grade project, as is a major maintenance reserve if ProjectCo retains lifecycle risk or if the asset is unusually complex. As explained in the Expenditure Profile section above, a dynamic reserving mechanism for potential lifecycle budget deficiencies is also common among social infrastructure projects rated in the A-range. In reviewing reserves, DBRS pays particular attention to the constraints surrounding the use of the funds and the type and tenor of investments (typically very low risk) permitted to be made with the funds. In order to prevent aggressive dividend payment practices, the financing structure also typically includes a cash trap provision whereby equity distributions are locked up if ProjectCo's DSCR falls below a certain threshold.

CREDIT QUALITY OF FINANCING PARTIES

The creditworthiness of financing parties, including swap providers, LC providers, account banks and lending syndicate members, warrants considerable attention. DBRS expects that the creditworthiness of these key players will be notably higher than the rating of the project in order to lend stability to the financing framework. In its analysis, DBRS also considers the country of domicile of the financing parties since the stability of the financial and legal systems can potentially introduce additional risk to ProjectCo, even in instances where the financing party is currently highly rated.

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Other Considerations

LEGAL AND CONTRACTUAL FRAMEWORK

Given the highly structured nature of PPP transactions, DBRS closely examines the contractual framework of each project. DBRS expects key project documents to be tightly structured to ensure clear risk allocation among project parties and prevent ambiguous clauses. Particular emphasis is placed on contractor replacement and rights of step-in, the dispute resolution process, legal opinions and the key terms of the financing agreement(s).

Contractor Replacement and Rights of Step-In

ProjectCo may be required to replace a poorly performing contractor. As a result, DBRS places considerable importance on the replacement mechanism embedded in the PPP contractual framework, which allows for the replacement of a defaulting project party without triggering a default under the PA. This helps prevent an automatic cross-default between ProjectCo and its contractors, which would otherwise limit the project's rating to the lowest of the contractors' ratings. DBRS views as favourable contracts that offer ProjectCo sufficient time to replace a poorly performing subcontractor. In a similar fashion, lenders may need to replace ProjectCo if it materially underperforms its obligations.

Dispute Resolution

Most PPPs have a process to settle disagreements between ProjectCo and the public-sector counterparty or between ProjectCo and its contractors. When evaluating a dispute resolution process, DBRS looks for an efficient, timely and transparent framework that limits the possibility of legal recourse and provides for the continuation of construction activities and services while the dispute is resolved.

Legal Opinions

DBRS reviews the opinions from external legal counsels to gain comfort on a wide range of issues, including the ability of project participants to enter into the various contractual agreements, the adequacy of ProjectCo's constituting documents and an opinion of non-consolidation.

Key Financing Terms of Financing Agreement(s)

While the financing terms do not constitute the drivers of a PPP rating, they can impact it when structured too loosely or inadequately. On the other hand, certain terms embedded in the financing structure may help provide stability to the credit profile. The standard features important to DBRS for an investment-grade PPP are listed below:

- A debt service reserve fund (DSRF), holding cash and/or highly liquid and creditworthy investments amounting to at least six months of principal, interest and fee payments, either funded at financial close or at substantial completion from a pre-identified source of funds.
- Security comprising at least a first-ranking interest in all property of ProjectCo, most project accounts and in all of ProjectCo's rights under major project agreements, related performance security and bank accounts of its general partners.
- No cross-defaults to the construction contractor(s), service provider or their respective parent guarantors without a suitable period of time within which to replace a defaulted party without causing a default under the financing documents.
- A distribution test preventing dividend payments when the DSCR falls below a certain level. DBRS considers that 1.15 times on a historical and look-forward basis is a suitable level for a relatively standard availability-based project in the A-range
- A permitted indebtedness test subjecting new senior debt to the approval of the bondholders, a ratings affirmation test and/or a financial test, which is generally a minimum DSCR threshold.
- Restrictions on activities of ProjectCo and related entities, detailing that ProjectCo and related entities may only engage in activities in support of the project and may not carry out any other business or investments.

Rating Drivers

DBRS methodologies consider a number of general and very specific rating drivers. By analyzing the key drivers, which vary on an industry-by-industry basis, we believe that we capture essential strengths and challenges of each industry in an accurate fashion, providing transparency for outside readers. Ultimately, the specific drivers and key financial considerations metrics capture the essence of the credit profile. Below are the key factors considered by DBRS when rating PPP projects and the ranges generally associated with each rating category for a typical Canadian availability-based project. DBRS notes that while the qualitative rating drivers are recognized as key factors, they should not be expected to be fully adequate to provide the exact rating for a project. In addition, given the highly structured nature of PPPs, projects can also have different or unique features and characteristics that may affect the rating and will warrant special attention.

Qualitative Rating Drivers for Public-Private Partnership Projects

Rating Range Business Strength	AA Exceptional	A Superior	BBB Adequate
Construction Risk	• The project is of low complexity and incorporates standard construction techniques and materials. • Risks are considered to be minimal and are thoroughly addressed where present. • It is considered extremely unlikely that construction difficulties would occur. • The schedule is viewed as very conservative, with meaningful float. • No site condition issues exist. • The budget is well developed and includes sizable contingencies.	• The project is of low to moderate complexity and incorporates standard construction techniques and/or materials. • There is a modest level of risk associated with construction, although these risks are well addressed. • It is considered highly unlikely that construction difficulties would occur. • The schedule may be less conservative, but it is deemed achievable and is expected to incorporate adequate float. • The project may be situated in a built-up area, but access is not expected to be affected. • The budget is well developed, with adequate contingencies.	• The project is of higher complexity (e.g., tunneling, suspension bridges and extremely specialized social projects) and may also incorporate new or non-standard construction techniques or materials. • Material risk items pertaining to the project are identified by the LTA but are generally believed to have been reasonably well addressed. • While delays are a clear possibility, it is considered unlikely that serious construction difficulties would occur. • The schedule may be aggressive or have weak protections against delays. • The project may be situated in a built-up area with challenging site access, which may affect the construction task. • The budget is more aggressive, with potentially weaker protections against cost overruns or ambitious assumptions with respect to how and when the major subtrades will be locked in.

Qualitative Rating Drivers for Public-Private Partnership Projects

Rating Range **Business Strength**	**AA** **Exceptional**	**A** **Superior**	**BBB** **Adequate**
Construction Contractor	• The construction contractor has considerable scale and experience with this type of project, with the local construction market and with the public-sector counterparty or procurement agency. • Major subtrades are top quality and expected to be locked in before financial close. • The construction contractor has superior risk management skills and an investment-grade credit profile.	• The construction contractor is large and experienced with this type of project but may be inexperienced working in the jurisdiction or with the public-sector counterparty or procurement agency. • Where the construction contractor lacks local experience, it will have a clear procurement strategy and solid local partners locked in. • The construction contractor has an investment-grade or near investment-grade credit profile.	• The construction contractor may lack experience with this type of project, may be small relative to the project and/or may be inexperienced working in the jurisdiction and with the public-sector counterparty or procurement agency. • The construction contractor may also lack a local network of subtrades and have a less-developed procurement strategy. • The construction contractor's creditworthiness is likely below investment grade.
Operating Risk	• Risks associated with the service period are considered to be minimal. • The scope of services is well defined and very straightforward, the asset to maintain over the project's term is simple and the service standards are considered to be very achievable, with significant rectification time and/or benign penalties. • Very conservative operating and lifecycle budgets have been developed, with clear contingencies and a comprehensive lifecycle strategy that addresses all risks associated with the handing back of the project. • There is a very low likelihood of material performance-related deductions. • It is extremely unlikely even consistently poor performance could lead to a default of ProjectCo.	• Risks associated with the service period are considered to be low and generally well mitigated. • The scope of services is comprehensive but well defined and relatively straightforward, although maintenance of the asset requires some expertise (e.g., standard hospital or highway). • Some service standards or rectification times may be more aggressive. • Deductions are expected to be low. • Operating and lifecycle budgets are conservative. • Lifecycle responsibilities are generally well addressed and the hand-back risks are well understood but material. • It is highly unlikely that poor performance could lead to a default of ProjectCo.	• Risks associated with the service period are moderate and due, for example, to complex or specialized services required to be provided or unclear scope of services or risk allocation. • Key service standards or rectification times may be unrealistic, with unduly onerous payment deductions. • Moderate levels of normal-course deductions may be encountered. • The operating and lifecycle budgets may be more aggressive. • Lifecycle planning may not address certain issues or leave stranded risks with ProjectCo. • It is unlikely that poor performance could lead to a default of ProjectCo.
Service Provider	• All service obligations are passed down to a service provider that has significant expertise and a sizable guarantee from a solid investment-grade parent.	• Most service obligations are passed down to a service provider that has expertise and a sizable guarantee from an investment-grade parent. • Where certain responsibilities are retained by ProjectCo, an adequate cushion is included in financial metrics to mitigate the risk.	• The service provider may lack expertise and/or the parent guarantor may be non-investment grade. • A significant portion of services may be retained by ProjectCo, although internal expertise is solid.

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Qualitative Rating Drivers for Public-Private Partnership Projects

Rating Range Business Strength	AA Exceptional	A Superior	BBB Adequate
Counterparty/ Revenue Risk	• Most revenues are availability based and originate from a counterparty at or near the top of the investment-grade spectrum that has a demonstrated history of honouring its contractual obligations and solid commitment to PPPs. • Where revenues are volume based, volumes show no material volatility and / or ProjectCo possesses essentially unfettered rate-setting autonomy and a virtual monopoly position over a critical asset, resulting in revenues with extremely little cyclicality.	• Most revenues are availability based and originate from a counterparty near the top of the investment-grade spectrum that has a demonstrated history of honouring its contractual obligations and solid commitment to PPPs. • Where revenues are volume based, ProjectCo possesses a degree of rate-setting autonomy over a strong asset.	• A significant portion of revenues may be volume based or linked to economically sensitive variables that have demonstrated material cyclicality in the past. • Rate-setting ability is typically constrained but adequate to address inflationary cost pressure. • The counterparty under the project agreement is in investment-grade territory, with a past history of honouring its contractual commitments and possibly a limited track record with PPPs.

Key Financial Metrics

Recognizing that any analysis of financial metrics may be prone to misplaced precision, DBRS limits key metrics to a small number of critical ratios. For each of these ratios, DBRS provides a range within which the financial strength of an availability-based PPP would be considered as supportive of the specific rating category. Accordingly, an issuer for which the financial metrics and qualitative considerations described earlier in the methodology fall within the BBB category would, all else being equal, be expected to have a rating in the BBB range. Note that a project with a significant portion of service obligations retained by ProjectCo or with a material component of volume risk would generally be expected to exhibit stronger metrics for a given rating, with the cushion required in volume-based PPPs influenced by the stability and predictability of the revenue stream. PPPs in other jurisdictions may also be subject to higher thresholds to account for other sources of risk.

Key Ratios for Public-Private Partnership Projects

Key Ratio by Rating Range	AA	A	BBB
Minimum debt service coverage ratio[1] (service phase)	≥ 2.0x	1.2x to 2.0x	1.15x to 1.20x
O&M break-even	≥ 100%	40% to 100%	30% to 40%
Lifecycle break-even	≥ 100%	40% to 100%	30% to 40%
Debt-to-capitalization (construction phase)	≤ 80%	80% to 92%	92% to 95%

1. The debt service coverage ratio (DSCR) will be considered on a cash versus an accrual basis and may be normalized by DBRS.

While the data in the above table are recognized as key factors, they should not be expected to be fully adequate to provide the exact rating for a project. By its nature, credit analysis incorporates a broad range of financial considerations that cannot be boiled down to a limited number of metrics, regardless of how critical these may be.

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Appendix: Deeply Subordinated Debt Requirements for Public-Private Partnerships

Although not a common occurrence, P3 capital structures may feature a layer of subordinate debt between the senior debt and the traditional equity tranche. If structured properly, subordinate debt in a P3 structure will be given “equity treatment” and not factored into the calculation of debt ratios by DBRS for the purpose of rating the project. DBRS will examine the terms of subordinate debt and will generally view such debt as deeply subordinated and treat it as equity if the following characteristics are present.

ACKNOWLEDGEMENT OF SENIOR DEBT AND SUBORDINATION

Subordinate debtholders must acknowledge the existence of senior debt and that the subordinated debt is subordinated to the terms of the senior debt. This may be accomplished in the subordinate debt documentation or by way of the execution of an intercreditor agreement between the senior debt and subordinate debt trustees.

SUBORDINATED IN RIGHT OF PAYMENT

Payments of principal and interest to be made on account of the subordinated debt are generally subject to the same permitted distribution test as equity distributions. DBRS will examine the permitted distribution test closely in order to be satisfied that any payments on account of the subordinate debt will not jeopardize the issuer’s ability to service the senior debt. Preferably, the permitted distribution test will state that no distribution or payment on subordinate debt can be made if, during the 12 months before or after making such payment, a minimum debt service coverage ratio is not maintained or if making such a payment would result in a senior debt event of default. Under no circumstances can payment be made on account of the subordinate debt at any time that payment is in arrears on the senior debt or if the senior debt is in default.

SUBORDINATED IN RIGHT TO PROCEEDS

The terms of the subordinated debt must specify that in the event of a bankruptcy, liquidation or winding up of the issuer, the senior debt will be paid in full before any proceeds are distributed to subordinated debtholders.

STANDSTILL ON REMEDIES

Upon a subordinated debt event of default, subordinate debtholders must be prohibited from taking any action to enforce their rights and remedies or to accelerate payment of the subordinate debt at any time that senior debt is outstanding.

VOTES AND APPROVALS

Subordinate debtholders should not be in a position by virtue of voting rights or required consents to influence the outcome of the project or the capital structure to the detriment of senior debtholders. For example, subordinate debtholders should not be required to consent to additional debt or changes in the debt structure other than those affecting subordinate debt exclusively nor should they participate in the decision to change the design-build contractor. Subordinate debtholders must not participate in any vote to reorganize the project company or enter into a voluntary bankruptcy proceeding, liquidation or restructuring.

AMOUNTS RECEIVED HELD IN TRUST

Subordinate debtholders must agree that any payments received on account of subordinate debt in violation of the terms of subordination are to be held in trust for and forwarded to senior creditors.

MATURITY

The maturity date of subordinate debt must be later than the issuer's longest-dated senior debt maturity, with no ability to call or redeem the subordinate securities while senior debt is outstanding.

NO SENIOR DEBT CROSS-DEFAULT

A default by the issuer on subordinate debt must not trigger a senior debt default. This will not be a feature of the subordinate debt per se, but will rather be a function of the events of default enumerated in the senior debt documentation. Therefore, DBRS will examine the senior debt documentation closely.

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