7. MECHANISMS AVAILABLE TO GOVERNMENT TO SUPPORT PPP PROJECTS

This chapter explores linkages between finance, risk management, procurement, and project design. The chapter presents a menu of potential mechanisms available to governments in support of PPP projects. Since needs vary among countries and sectors, solutions must be tailored to individual conditions. Moreover, they should be considered after a PPP strategy is put in place as recommended in previous chapters. Each option is expected to address specific issues, so the selection of these instruments is country specific. Moreover, each of these instruments have financial and fiscal implications that must be weighted before adopting them.

Figure 7-1 provides the main solution clusters; this list is indicative but not exhaustive of the multiple options available to help PPP projects reach financial close and remain financially sustainable.

Figure 7-1: Summary of Supporting Mechanisms to PPP Program

- **Project Financing**
  - Specific Financial Support to Project, e.g., soft loans, tax, OBA
  - Lending or investing in project
  - Public Support
  - IFL support

- **Risk Management**
  - Implications of policy on availability and cost of funding
  - Risk implications of IFLs, bilateral and other agencies’ support
  - Specific risk protection instruments eg guarantees, etc

- **Procurement**
  - Flexible procurement process
  - Funding Strategies & funding Competitions
  - Provisions for refinancing
  - Use of forced refinancing ie soft and hard ‘mini-perms’

- **Project Design**
  - Implications of use of public funds
  - Consider Phasing or smaller scale
  - Underwriting specific projects risks
  - Funding ongoing Investment needs

Source: Authors.
Cluster A: Project Financing

Specific Financial Support to Projects

**Few PPI projects are viable without government support—technical or financial.** Government support improves financing efficiency of PPI projects: first, government assumes risks that it can manage better than private investors; second, it can supplement projects that are economically but not financially viable. Infrastructure projects with large public externalities may be appropriate for some direct financial support from government; also, local financial markets may be unable to provide financial products for private investment. Sometimes direct government involvement through long-term or fixed-interest debt is crucial to ensure private financial viability. Governments can opt for public loans but it is important to preserve appropriate risk transfer to the concession company.

**Public guarantees (sovereign, municipal, etc.) of private loans can help improve project bankability and reduce the cost of debt for private concessionaires.** In some cases, lenders may choose not to finance a project if guarantees are not provided, especially if grantor creditworthiness is deemed deficient. However, ‘wrapping’ project debt with the full faith and credit of public institutions requires a measure of caution regarding risk transfer and private incentives. Planners should ensure that public guarantees on senior debt benefit from adequate cushions of equity capital at risk. Contingent liabilities associated with guarantees should also be priced into ‘value-for-money’ analysis and should be transparent through public disclosure.

**Contributing public equity capital to PPP concessions may help align public and private interest in financial success.** Sharing common equity can introduce a mechanism for public influence on operating and investment activities.22 Public equity is often “in-kind” through public asset transfers for brownfield concessions, or through capitalization of capital grants. However, public equity ownership drawbacks often outweigh its benefits because this arrangement reduces risk transfer and increases the likelihood of political interference, which can damage PPP operations and undermine private sector performance incentives. Consequently, shareholder agreements must address these issues explicitly. Differences between public and private shareholders can produce conflicting strategies and incompatible objectives.

**Governments may cover revenue shortfalls to compensate for the risk of lower demand or higher finance costs.** Government can support project revenue streams, in particular if tariff increases are not politically feasible or affordable for users. Government funding can mitigate the impact of higher tariffs if there are affordability constraints. The mechanism for supporting revenue shortfalls may be specified subsidies payable under predefined conditions.

**Multilateral and bilateral financial organizations can be catalysts for PPP project financing.** If local public resources are lacking, support may be available through multilateral or bilateral development institutions. Historically the World Bank, IFC, ADB, EIB, MIGA and EBRD have been active project financiers. Most of these organizations

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22 Government equity contributions could also be considered a major risk of interference by the public sector. Equity contributions should be set within the contractual arrangements so that the private sector maintains full independence in managing daily business operations.
operate exclusively within developing countries. Multilateral and bilateral financial institutions may offer support through loans to projects and governments, grants, equity investments, guarantees on debt and equity and design support for PPP structures through specific advisory services. Multilateral and bilateral support can contribute to more financially viable investments and provide developers and lenders with additional comfort on political and regulatory project risks. However, working with these institutions may also lengthen the project development process, given specific requirements in terms of environmental and social safeguards requirements and stringent procurement procedures.

**Export credit agencies (ECAs) can facilitate foreign investment and support PPP financing strategy.** Although not specific to the crisis, export credit agencies (ECAs) can help develop PPP financing strategies, particularly when local credit markets are underdeveloped or when sovereign risks reduce the attractiveness of private finance. In PPP projects, ECAs have commonly supported financing of imported goods such as transport signaling and communication systems. Some ECAs can provide project financing through banks or directly to the buyer via guarantees to the buyer’s bankers. Some ECA financing can take the form of loan guarantees, political risk insurance, concessionary lending, or working capital guarantees. In some instances, ECAs require matching contributions from private lenders, which may need to be revised in the current context, since most ECAs from OECD countries abide by the “Arrangement on Officially Supported Export Credits,” which sets upper limits on the amount of assistance foreign governments can offer in support of their exports.

**Exemptions from taxes and selected import and customs tariffs can enhance PPP bankability.** Exemptions can enhance the PPP financial package but will typically require legislative acts or close coordination between public agencies. Early planning for exemptions and their associated legal requirements is essential to ensure timely project completion. In addition, public institutions should carefully consider the ‘value-for-money’ associated with long-term tax exemptions, especially on corporate income. During the early years, existing tax codes and accounting practices may already provide large tax shields through depreciation and interest expense deductions. During the later years, providing more tax breaks could reduce incentives for further capital investments and potential public revenues.

**Additional funding may become available from captured externalities.** Transport project benefits often accrue to those who do not directly pay for the services. In highway and other transport projects such as urban light rail systems, revenues and other financial benefits can be derived from sources outside of system operations. For example, property development is an external benefit of transport investments.23 However, real estate development is not a panacea for transport sector funding challenges and cannot substitute for well-structured projects and sound operations. New project planning should focus on providing high-quality and user-responsive public transportation services.

**Capital grants can provide significant incentives for achieving project bankability.** Typically, upfront capital costs required to construct new transport systems are in the hundreds of millions of dollars. However, subsequent tariff revenues from passenger

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23 From the same example of light rail metro projects is the effective use of so-called “air rights”, whereby a developer, through owning or renting land (or a building) gains the right to use and develop the empty space above the property. Building over tracks, platforms, depots or stations is potentially very profitable.

fares or road tolls are often too small to service the costs of project construction debt. Consequently, governments can incorporate an element of capital grant designed to offset initial private sector construction costs and associated ongoing debt repayments. Reducing debt service during operations enhances concession company stability. However, determining the appropriate level of capital grant and defining appropriate construction milestones is a challenge for project planners. If the capital grant element is too high, private partners assume too little risk, which reduces their incentives to provide the public with maximum value-for-money. Conversely, insufficient capital grants can destabilize concession companies and create large risk premiums that reduce project bankability.

Results-based or output-based subsidies can be effective instruments for public support. Structuring public support based on measurable outputs can help align public and private incentives to accomplish project goals.24 For transport PPP, output-based subsidies often take the form of ‘shadow’ fares or tolls paid by public authorities on top of each fare or toll collected directly from system users, which lowers user fares or tolls to socially acceptable levels but earns private partners reasonable returns. This is a good solution to transferring traffic or ridership risk to the developer while decoupling private compensation from fare or toll levels when public transport costs are politically sensitive.

Payments based on system availability are another output-based mechanism for structuring public support. Availability-based compensation schemes are also useful for insulating concessionaire revenues from demand risks. Governments need to consider the impact of explicit and contingent liabilities associated with output-based support mechanisms for PPP in highways, and factor these liabilities into initial affordability analyses and future budget provisions. A system of key performance indicators (KPIs) should be used to adjust availability payments linked to concessionaire performance.

Box 7-1:
Evolution in Contract Design: CREMA – Phases I and II

In 1997, Argentina introduced a new contract combining rehabilitation and maintenance based on positive experience with performance-based routine maintenance contracts. The CREMA (the Spanish acronym) requires the contractor to rehabilitate and then maintain a sub-network of roads for five years for a lump-sum.

Contracts are awarded to the lowest evaluated bidder, and each contract covers a network ranging in length from 100 to 300 kilometers. The contractor carries out a detailed engineering design and can propose any rehabilitation solution above the minimum threshold defined in the contract. Payments are linked to achieving a specified level of service and performance is assessed during monthly inspections jointly carried out by the engineer and the contractor. Rehabilitation works must comply with agreed maintenance levels throughout the contract period.

Problem with Phase I Contracts
The CREMA contracts between 1997 and 1999 specified rehabilitation works to be carried out in the first year of the contract. The contractor received 5-10 percent of the contract price as an advance payment, between 15-25 percent at the end of the first six months once specified activities have been executed and 25 percent at the end of the first year when rehabilitation works are completed. The contractor paid a 20 percent performance guarantee upfront. The remaining 50 percent was paid in 48 equal monthly installments spread over the remaining four-year contract period, for maintenance.

This front-loading of rehabilitation and delayed payment schedule resulted in contractors having to finance much of the rehabilitation themselves. The rehabilitation costs also often exceeded 50 percent of the contract value.

CREMA Phase II
In the new generation of CREMA contracts, the contractor receives full payment for rehabilitation works executed, proportionately to the outputs achieved during the first eighteen months of execution. This increased the attractiveness of the CREMA contracts to the private sector by reducing the amount of pre-financing, but also reduced the risk transfer to the private sector.

Although it may still be possible to have the private sector pre-finance some of the rehabilitation work, this example also illustrates how a concept may have to evolve over time after being tested by the market.

Source: Global Partnership on Output Based Aid (GPOBA) Review 2010.
Cluster B: Risk Management

As mentioned in Chapter 2 there are a variety of risks. Risk is defined as uncertainty, or the perception of uncertainty; under the current market liquidity crisis, the perception of uncertainty must be mitigated as much as possible. Broadly, grantors should maximize efforts to reduce investor risks to attract more private capital at a lower cost. Some of the methods of accomplishing this include the following:

- Improve information on potential risks
- Use continuous consultations with potential bidders and financiers to establish an appropriate level of risk sharing that incorporates the changed perceptions since the crisis.
- Establish mechanisms or instruments to mitigate or underwrite risks, such as the following.

Specific risk protection instruments

Sinking funds can mitigate the risk of funding ongoing investment needs. Expenditures required to maintain infrastructure condition and integrity can be substantial and periodic in nature; however, revenues in highway PPPs, for example from tolls, are continuous in nature and may fall short of covering full costs when large maintenance investments are required. Therefore, if private partners assume responsibility for funding maintenance investments, mismatches that arise between revenues and expenditures can jeopardize their financial strength. To mitigate risks associated with this mismatch, lenders or public authorities can require special reserve accounts for these expenses. These ‘sinking funds’ (e.g., maintenance reserves, rehabilitation reserves) accumulate continuous cash flows from project revenues for specific future expenditures; this increases up-front project costs. Typically, lenders require rights over sinking funds as additional security against project debt; if a borrower defaults, sinking fund assets will help offset any potential losses on project debt in the order of seniority. Public authorities would rarely specify sinking funds, unless a private partner has responsibility for maintenance investments and their value at risk is small relative to envisaged expenditures.25

Refinancing provisions within the PPP agreement can mitigate changing circumstances throughout project lifespan. Project capital and debt structure can significantly affect investor returns and concession financial risk profile. Striking the balance between stability and appropriate rates of return usually occurs towards financial close when lenders conduct extensive due diligence and specify restrictive covenants on project debt to minimize default risk. However, market conditions and project credit profile rarely remain constant throughout project lifespan. Favorable changes provide potential for additional value capture by opportunistically altering elements in project capital or debt structure. For example, a concession company could extend the maturity of project debt within the constraints of PPP contract term, or reduce interest rate margins, or replace the hedging instruments, or a combination of these options. This could reduce the debt repayment profile, freeing extra cash to pay dividends or invest in service improvements.

25See HM Treasury.
Anticipated refinancing requirements should be included in the PPP arrangement. The length of most PPP concessions allows ample time for potentially valuable refinancing during project lifespan as risk profiles or credit market conditions change. Post-construction refinancing is relatively common, typically planned, and now is often built into original financing as a margin ratchet. However, other refinancing opportunities could be less predictable, especially in rapidly developing countries where sovereign risk spreads decline as governance improves, macroeconomic conditions stabilize, and local capital markets develop. Similarly, financing terms may improve when systems deliver several years of sound operations and timely debt service, or when contracting authorities exhibit competence at managing privately financed infrastructure projects. In practice, opportunities for later-stage refinancing often arise from combined public and private efforts, therefore a skillfully crafted concession contract will include options for sharing opportunistic refinancing gains between public and private partners.26

Box 7-2: Refinancing Gain – HM Treasury Guidance

The United Kingdom HM Treasury Department provides detailed guidance on refinancing and arrangements for sharing in version 4 of its Standardization of PFI Contracts guide. Specifically, the Treasury in the October 2008 Amended Refinancing Provisions, states that the grantor (“Authority”) is entitled to 50-70 percent of such refinancing gains depending on the amount and kind of gains generated, and subject to Authority approval and value-for-money analysis. Transactions where sharing may be warranted include:

1. Reduction in interest margins;
2. Reduction or release of reserve accounts;
3. Release of contingent junior capital;
4. Extension of the maturity of debt;
5. Increase in the amount of debt; and
6. Refinancing undertaken without the direct involvement of the Contractor.

HM Treasury also mentions that certain transactions should not require Authority consent and would not require sharing. These include:

1. Disposal of junior capital, which in terms of rights is equity in all but name.
2. Refinancing agreed in the project’s base case financial plan;
3. Transactions originally taken on a corporate finance basis;
4. Gains on interest rate hedging;
5. Changes in taxation or accounting policies; and
6. Qualified banking transactions such as syndication or securitization of loans.

Considerable analysis should precede an agreement to refinance any portion of project capital structure. HM Treasury recommends that contracting authorities should diligently analyze refinancing potential to increase termination liabilities or otherwise impact the operational / policy flexibility of contracts.

Source: HM Treasury (HYPERLINK "file:///C:\Users\Local\%20Settings\Local\%20Settings\www.hm-treasury.gov.uk”www.hm-treasury.gov.uk).
Hedging instruments provide mechanisms that help public authorities and private developers manage financial risks associated with contingent and other liabilities. However, hedging instruments provide counterparties with future rights or obligations or both. Hedging is common in PPP projects, often to offset exposures to factors such as foreign currency movements (e.g., swap and forward contracts/options), large purchases of raw materials and other project inputs (e.g., forward contracts for steel and concrete), interest rate movements (e.g., swaps), counterparty risks (e.g., credit default) and so forth. Hedging mechanisms provide comfort against a range of exposures, which increases project bankability, but commercial lenders often earn as much from hedging instruments as from project loans. Consequently, to reduce costs, as circumstances permit, Governments should design natural hedges that eliminate risky exposures. For example, obtaining loans in local currency allows projects to match revenues with debt service payments, avoiding expensive currency swaps\(^\text{27}\) or public sector expense for foreign exchange currency risks.

Box 7-3: Hedging and Concessionaire’s Capital Grant

Constructing the Gautrain Rapid Rail Link in South Africa involved a substantial capital grant that private partners used to fund most upfront system costs, many of which were denominated in foreign currencies. Therefore, ensuring project financial viability required guarding against potentially destabilizing fluctuations in foreign exchange rates.

Originally, during project construction, Gautrain’s concessionaire assumed foreign exchange risks and passed along associated hedging costs to Gauteng Province as a component of capital grant payments made at project milestones. Since the concessionaire’s bankers were not forced to compete on their forward rates, this structure resulted in unfavorable forward currency pricing and the bankers took full advantage of the pass-through nature of project hedging costs. In response, Government intervened during the construction period, and retrieved capital grant-related foreign exchange risks from the concessionaire—effectively acting as a currency swap counter party to Gauteng Province. This eliminated additional cost associated with unfavorably priced currency hedges and insulated the province from foreign exchange exposure on its capital grant payments.

Contract variation mechanisms should be incorporated to minimize viability risk. Changes in the technical/financial environment of individual PPP projects over a 20-30-year project life are difficult to predict, so it is essential to adopt the best contract variation mechanism to maintain long-term contract viability, and avoid emergency interventions by government or other parties to prevent project collapse. This should lower investors risk, which should lower prices.

\(^{27}\) See Riscambe
Cluster C: Procurement

Procurement is crucial in developing bankable PPP’s. Procurement processes must be flexible enough to respond to current market constraints, transparent, and robust. This section details basic issues that may enhance bidding processes and discusses how funding competitions can be a strategy to obtain financing. Recommendations follow on transforming strategies into contractual terms to lock in desirable project sponsor actions to enhance overall project bankability.

Basic principles of open, transparent, and fair procurement systems will reduce perceived market risks. The grantor or government advisers must have realistic and practical knowledge of current financial markets, and ability to explain market needs to their clients. Dealing with market concerns usually creates viable financeable projects, and minimizes the need for a more expensive scheme to assuage higher perceived risks. In this regard, the contract must acknowledge and provide for dealing with the cost of potential, and likely, restructuring over the PPP project lifespan. Furthermore, it is recommended that banks or other commercial lenders should not commit exclusively to any bidder prior to preferred bidder selection.

Financial arrangements take many forms. Under a staple financing approach, government develops a financing package to be offered at the bidding stage. Bidders can opt for either the government financing strategy, or develop one of its own. Under staple financing, Government benefits from bidder competition, but protects its interests with the “staple” offer as a back-stop. Staple financing is designed primarily for refinancing existing projects rather financing new projects (see refinancing description below).

Funding competitions are a strategy for gathering commercial lenders after a bid has been awarded. Typically, a funding competition is organized to seek the best available terms from the market; each consortium contributes financial expertise and credibility to obtain the best terms for the grantor. Originally, funding competitions aimed to reduce costs by inducing competitive pressure on finance markets. Typically, competing groups of funders such as banks and capital market investors are asked for their best terms based on the selected bid. However, this process is complex so the Granting authority must have adequate expertise and resources. In its original form, the funding competition is not a good fit for the current market, which has insufficient liquidity for much competition. Therefore, other approaches may be more suitable; some examples follow.

28The recommendations made herein are not based on World Bank procurement procedures nor are they intend as guidance to substitute World Bank procedures, but rather are based on the review by the authors of some of the PPP bidding practices and any suggestions made are done with a view to ensure the most effective competition, transparency and fair treatment of bidders.
• “Competitive” book-building. Under this approach a preferred bidder is allowed to access the broader funding market, including funders previously associated with unsuccessful bidders. Funding is competitive as described above.

• A combination of the above. An alternative is to split financing from the rest of the project, and evaluate proposals based on technical aspects including design, build, maintain, and operate. Government could merge the two tenders at financial close under bidder responsibility, or could maintain control of financing during the contract period.

Funding competitions tend to reduce competitive tension and strategies need to be devised to mitigate this. Funding competitions tend to delink financial aspects of the bid from technical, legal, and commercial aspects, failing to differentiate among bidders’ risk appetites as reflected in equity returns and overall project profitability. The winning bidder’s “price” may leave the grantor without a firm number attached to the winning bidder selection. Potentially this could result in a ‘hostage’ situation when debt and equity financing is subsequently added to the technical solution, which would mean that the project capital expenditure is not locked in at the bid stage. Therefore, mechanisms should be formulated to create incentives to achieve the most suitable financing solution.

Refinancing strategies should be built into the PPP agreements through for example ‘soft or hard mini-perms’ that can bring value by reducing short-term financing costs and by increasing pressure on all parties to rapidly improve financial terms. The rationale is to increase the probability of an early exit for lenders and avoid locking the project into unfavorable long-term conditions. Banks used to lend long term on the expectation of a rapid take-out through refinancing. This was a reasonable assumption in the pre-crisis market. Mini-perms use a strategy whereby a margin step-up is built into the lending agreements 3-5 years after construction completion. Lenders can opt to force an aggressive margin step-up and cash sweep (“soft mini-perm”), or even compulsory refinancing, and the banks can call the project into default if it does not occur (“hard mini-perm”). Government must then decide whether to assume the refinancing risk, or assign it to the private sponsors. Care must be taken not to allow sponsors what amounts to a free exit option, which leaves Government with an unquantifiable bet on the future.

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Footnotes:
30This concept has been used successfully in the UK market around 2004-5. However, in the UK, this process was simplified as the funding obtained was under a competitive process for projects that used standard PPP contracts. Banks were already familiar with projects using these standard contracts and therefore comfortable with project risks. Specific examples include Bart’s and Royal London Hospitals.
31This approach implies that major changes will be needed to the bidding documentation for example, technical selection criteria, Bid Bond (linked to Financial Close but under best endeavours basis), and changes to the PPP Agreement will also mean a specific process for the period between Commercial Close and Financial Close.
32Mini-perms are extended refinancing clauses; after 7 to 15 years refinancing is “forced.”
33Typically, no principal repayment is envisaged during the period prior to this mini-perm.
Cluster D: Project Design

Many issues described here relate to improved project design; below are some major considerations.

**Hybrid contracts are a pragmatic approach under current market constraints.** Generally, PPP infrastructure contracts blend public and private funding and can include some fixed risk-sharing mechanisms. Considering current market conditions after the onset of the crisis, and future fluctuations in the project environment, it would be beneficial to adopt more flexible contract structures with the aim of (i) attracting suitable funding, where flexibility diminishes perceived risk; and (ii) adapting to potentially advantageous changes to project structure as future conditions change. Generic contract details are impossible to prescribe, but what follows are suggested improvements for developing hybrid contracts. Government may consider benefits from the following.

- Consider adopting a progressive risk transfer after about five years because early years’ risk allocation of the contract could change.
- Adapt the financial support mechanism, such as capital grant or indexation coverage, to be triggered only after a specified period.

Government can provide guarantees to support infrastructure investments and transfer some risks from the developer to government. During project construction, developers may be utilizing inputs with exchange-rate dependent costs causing input value to rise and fall with local currency rates. Government could provide an exchange rate guarantee to mitigate currency depreciation effects (e.g., toll dollarization). However, when government guarantees cover a risk better managed and controlled by the developer, developer incentives to improve performance levels decline. Furthermore, the contingent nature of these guarantees complicates their valuation, and therefore, how to account for them in Government financial and budget reports.

Indexations that reflect underlying cost exposures faced by developers can reduce cost risks and increase savings over contract duration. A primary risk for the developer is costs inflating over the PPP agreement lifespan, rendering payments insufficient to cover operating and financing costs. Governments can examine how indexation is being utilized within the contractual structure; clearly this depends on the nature of the PPP highway or transport project. Indices, proportions or certain pass through cost escalations should be determined by the grantor, not the bidding developers, to clarify comparison of rival bids. Developers are protected by benchmarking or market testing, but in developing a strategy to cover inflation risks, value-for-money should be achieved by indexing the proportion of Government payments (e.g., availability payments) that matches the proportion of total costs represented by any of the components of the Developer’s underlying costs which are not fixed.

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See HM Treasury, *Supra note*
This may also include special provisions for fare indexation to alter fares to reflect changes in an index of prices and does not necessarily reflect changes to developer costs. The indexation process aims to compensate the developer for the effect of exogenous cost increases on developer inputs. Importantly, indices reduce the risks faced by the developer without blunting performance incentives. The indexation formulas automatically adjust fares according to agreed rules. Specific indexation formulas can adjust fares according to changes in either the rate of inflation, consumer price indices or a consumer price index (related to changes in the system’s likely costs such as a basket of prices, exchange rates or specified inputs).

Box 7-4: Indexation and Compensation to Canada Line

The Canada Line rail rapid transit system is part of an integrated transport network for the entire Vancouver metropolitan region that includes commuter rail, light rail, bus, and marine transportation services under the supervision of regional transportation authority, TransLink. TransLink has full responsibility for setting and structuring fares, integrating service modes and other policy-related decisions across the network, including the Canada Line. When planners structured risk allocations for Canada Line’s concession agreement, they decided that TransLink would be best suited to endure most demand and revenue risks, given the impact that non-operating decisions had on system ridership. Nevertheless, planners wanted to align some portion of the concessionaire’s interests with TransLink’s ridership-related goals so the Canada Line contract ties 10 percent of concessionaire payments to customer volume. Calculating this volume payment involves:

1. A base forecasted credit ridership estimate (excluding ‘airport-only’ ridership)
2. An agreed base volume payment
3. An agreed shadow fare per paying customer

During the system’s operating phase, this information determines the following three payment scenarios:

1. If ridership equals forecasts, the concessionaire receives the base volume payment.
2. If ridership exceeds forecasts, the concessionaire receives the base volume payment plus the difference between actual and forecasted ridership, multiplied by agreed shadow fare.
3. If ridership falls below forecasts, the concessionaire receives the base volume payment minus the difference between forecasted and actual ridership multiplied by agreed shadow fare.

Independent consultants prepared the initial ridership study for the Canada Line, on which the system base credit ridership estimate is based. However, the Canada Line contract specified automatic revisions to the forecast when services commenced, two years later, and every five years thereafter. Also, either TransLink or concessionaire can trigger a forecast reassessment if any of the following changes occur:

- The system’s service plan changes
- Planners expand services by adding stations along the existing route
- Bus services change
- Regional Traffic Demand Management initiatives change (e.g., changes in road pricing or tolls)
- TransLink increases fares more than 5.0 percent in real terms over the average fare during the five previous years
- Changes in the system’s fare structure
- Average morning peak hour ridership during a three month period exceeds a specified level near the system’s maximum designed capacity.

The use of Cost Pass Through formulae to allow for cost changes should be carefully introduced to ensure overall bankability. PPP agreements should be designed to cover the cost of risks over which the developer has no control. As may be applicable depending on the type of PPP highway agreement, when input costs rise, the adjustment rules agreed upon between the developer and the grantor will need to allow for changes in the costs to be passed through—either to government, or in the case of tolls through the toll itself, subject to ceilings above which it may be necessary for the grantor to provide direct support.