

**OPERATORS' ROUNDTABLE INITIATIVE
IMPROVING CONCESSION BIDDING AND DESIGN
IN WATER SUPPLY AND SANITATION
SUB-PROJECT NO. 3**

FINAL REPORT

PROCEDURES FOR THE SELECTION OF THE CONCESSIONAIRE

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ABBREVIATIONS AND ACRONYMS

Bank	World Bank
BDB	bilateral development bank or agency
BOT	build-operate-transfer
capex	capital expenditures
municipality	sometimes used in a general sense to refer to the public authority or authorities responsible for selecting the concessionaire
ICB	international competitive bidding
O&M	operation and maintenance
opex	operating expenditures (including maintenance and ordinary repairs)
OBA	output-based aid
ORT	Operators' Roundtable (working group consisting of a number of international operators and World Bank staff who discussed issues relating to the design of concession arrangements and bidding procedures and met periodically; and by extension, the study projects that arose out of this initiative)
MDB	multilateral development bank or agency
PFI	Private Finance Initiative (a British program)
PPP	public private partnership
PSP	private sector participation

The outputs of the other four ORT sub-projects are referred to using the following abbreviations:

ORT#1	Key contract provisions (and OBA models)
ORT#2	Impact of imperfect data
ORT#4	Risk mitigation instruments at the sub-sovereign level (and “trust” models)
ORT#5	Performance reporting

“Concession” and “concessionaire,” as used in this report, refer to a full concession, lease/affermage arrangement, or any other type of O&M contract in which the operator pays all relevant costs out of its own cash flow and is the residual claimant (i.e. not a management contract).

“Water system,” “water tariffs,” “water company,” and similar terms refer also to *wastewater*, unless the context indicates otherwise.

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EXECUTIVE SUMMARY

The procedures commonly used for the selection of concessionaires in the urban water and sanitation sector should be improved. They introduce unnecessary risks, encourage gaming, and create barriers for competent newcomers. The procedures used are largely based on procurement procedures appropriate for construction projects and build-operate-transfer (BOT) schemes. But these are contracts in which all major specifications and performance requirements can be precisely defined in advance for the entire duration of the contract, subject to well-defined contingencies. It is virtually impossible to achieve this for a long-term concession covering an entire water utility system. This kind of contract is highly incomplete, and its terms will need to be periodically adjusted over time.

An important consequence is that the price bid may have no relevance at all after the first few years. It is common practice now for there to be a comprehensive price review after the first few years of a concession and often at periodic intervals for the entire duration. It makes little sense to select a concessionaire largely on the basis of tariffs proposed for the sixth year and thereafter if there will be a comprehensive resetting of tariffs in the fifth year.

The quandary is that we want to select a concessionaire who will perform well over the long term; and yet it is difficult to design precise specifications beyond the first few years. In effect, this is less a procurement problem and more like a search for a competent and reliable long-term business partner. A new paradigm requires a new approach.

Based on these considerations, we propose the following approach for the selection of long-term concessionaires:

- The *prequalification* procedure would be enhanced. We need a better way to assess the capability and disposition of the company to perform well in the context of a long-term incomplete contract. This would be accomplished by the use of detailed *reference cases* and a *business qualification statement*. The information would need to be assessed by the use of *judgmental* criteria, applied in a rigorous manner. Using purely objective criteria and bright-line tests, as in a conventional procurement procedure for a works contract, misses the mark.
- The *evaluation of bids* would be based only on price (subject to a technical assessment of achievability); selection would not be based on multi-criteria scoring. We consider that the prequalification procedure will have dealt with non-price factors sufficiently. Trying to introduce these aspects into bid evaluation in a more precise way would be to

ignore the large error factor inherent in our judgments about whether one company is more likely than another to perform well over the long term. It would be a case of *specious* precision.

- The price bid (tariffs or up-front transfer payment) would be based on parameters covering only an *initial period of 3–5 years*. This is the time when information about the system is being gathered and analyzed and the parties are getting used to working with each other. There would be a break point after the initial period when either party would be able to exit from the relationship without cause and in exchange for a payment that would be somewhat costly but not onerous. In effect (though not in terms of formal procurement procedures), the initial period would be a continuation of the selection process for the concessionaire – a trial period. There would be a full price review at the end of the initial period, carried out by a national regulator or a specially constituted expert panel with the power to issue a binding decision.
- During the initial period, *capital expenditures* would be financed by the public authority, not the concessionaire, but the concessionaire would play a large role in planning, designing, procuring, and supervising the works. This has several advantages. First, it reduces risk for the concessionaire and its investors during this critical initial period. Second, it makes bidding and the break point at the end of the initial period easier to handle since there is no overhang of unrecovered investments beyond the initial period. Third, it eliminates much of the contention over investments that can arise during the initial period between the public authority and the concessionaire in an output-driven concession regime.

The aspects outlined above are the core of the proposal contained in this report. In developing these ideas, it was found useful to add several other elements. These are not essential to the core proposal, but they fit well with it, enhance certain aspects, and deserve further consideration. The two main additional elements are as follows:

- It is suggested that the price bid should be an *up-front transfer payment* made by the concessionaire to the municipality (where the bidder proposing the highest payment wins), based on a tariff profile fixed in the bidding documents. This has the advantage of avoiding the risk of low-balling when the price criterion is the tariff level (where the bidder proposing the lowest tariffs wins). If the tariff level has been fixed at a suitable level by the municipality, the concessionaire will not credibly be able to come back later and press for renegotiations on the grounds that it cannot cover its costs.

- There are a number of advantages in *delinking tariff revenue* from the remuneration paid to the concessionaire during the initial period. In this scheme, all tariff revenue would be transferred to an accounts bank or trustee and then that entity would pay the concessionaire a contractual remuneration consisting of fixed periodic payments, volumetric payments, and incentive payments. (Note that this would not make the arrangement a management contract, as the term is generally used, because the concessionaire would pay all operating and maintenance costs from the remuneration it receives.) One of the advantages of this scheme is that it would enable output-based aid (OBA) to be smoothly incorporated into the remuneration received by the concessionaire. In fact, it would delink the objective of *subsidies* from the objective of *output-based remuneration*. A second advantage is that it would delink increases in tariffs in response to improvements in *service quality* from increases in the concessionaire's remuneration in response to better *company performance* – two concepts that are related but not identical.

Proposals developed in this way are not yet ripe for implementation. First, they require intensive debate, especially involving operators and financiers, as well as development organizations and other stakeholders. But most important, they need to be hammered out and refined in the context of preparing an actual transaction. Only in that way can all the gaps and weaknesses be flushed out and remedied.

1. INTRODUCTION

1.1 Objectives of the study

This report responds to concerns expressed by a group of international operators and the World Bank about the selection process for concessionaires. Two kinds of concerns were expressed. First, it was felt that there was too great of an unevenness in the procedures being used. It would therefore be useful if task managers and others preparing concession projects were better informed about best practices for the procurement of concessionaires. A detailed guidance manual might be a logical output related to this objective. Second, there was a belief that many of the existing procurement approaches discouraged participation by good companies, were not conducive to sound PSP arrangements, and could certainly be improved. This objective would require a rethinking of assumptions and an effort to propose new ideas – or to pick from the best of existing practice and package this in a coherent way.

These objectives involve two very different kinds of activities. The present report addresses the second concern: examining present practices and suggesting improvements. We believe that it is important to confront this set of issues before writing a how-to-do-it manual for task managers and others. There is no point in entering into details until the broad lines have been agreed. Our approach has therefore been as follows. We go into only as much detail as is needed to convey a good understanding of the points we are making. The presentation of ideas in the report is highly condensed in places; the intended audience consists of people who already have a high degree of familiarity with contract design and the selection process for concessionaires. Another kind of document would have to be written to summarize the major ideas for non-specialists, but this is something that should be done only after the ideas have been thoroughly vetted by the specialists.

As part of the present assignment, an Interim Report was submitted on May 14, 2004. The Interim Report surveyed a broad range of issues that could possibly be addressed within the scope of the terms of reference and included 15 questions intended to get specific feedback from readers. The comments received, although revealing a large divergence of opinions, were helpful in narrowing the scope of the Final Report.

1.2 Typical selection methods for water system concessionaires

When concessions, BOTs and similar types of long-term PSP arrangements began to increase in popularity, procurement specialists – in the Bank and elsewhere – turned their attention to how the operators should be selected. It seemed that the procurement methods that had been developed for construction works could be adapted to these PSP arrangements. The major change needed would be to change the performance requirements of the operator: what was desired was a *service* and not infrastructure per se, and so it made sense to consider a set of service and other *output* specifications as the performance required of the operator. If these were specified in the bidding documents, then companies could bid on a price just as they would do in a construction contract. In fact, bidding for a concession or a BOT would be similar in many

ways to bidding for an output-based turnkey construction contract. A Bank guidance paper, labeled a “discussion paper” (Araujo 1998), reflects this view: prequalification should preferably be based on objective, quantitative criteria alone; the bidder’s technical proposal would be assessed for compliance on a pass/fail basis; and then the bidder with the best price proposal would be the winner.¹

An examination of the selection procedures used for a number of water system concessions in the past few years reveals considerable differences among transactions.

- Prequalification is sometimes done on the basis of bright-line quantitative criteria but sometimes done on a more judgmental basis, especially when the aim is to restrict the number in the shortlist.
- Technical proposals are sometimes scrutinized for minimal compliance on a direct pass/fail basis, sometimes scored, and sometimes dispensed with entirely.
- The most common price bids involve tariff level (in concessions) or transfer payment (in privatizations), but other criteria or variations on these can be used. In one case (Guayaquil), tariffs were held fixed and the deciding criterion was instead the number of new connections that would be installed.
- Sometimes a two-envelope system is used; sometimes a single envelope.
- In at least one case (Sofia), the final criterion for ranking involved a weighted average of price and non-price scores, but the general tendency appears to be to use the price score alone.

Key features of several transactions are presented in a table in **Annex 1**.

1.3 Selection of water system concessionaires: the fundamental problem

Even at the time when guidance was being prepared for selecting concessionaires, there was a recognition that bidding on outputs over the long term in a concession was not quite like doing this in a short-term turnkey contract. The Bank guidance paper (Araujo 1998: Annex 4, p. 1), for example, citing the conclusions of a workshop in 1996, stated that “some degree of contract modification is almost inevitable during implementation of long-term concessions, as a result of changing circumstances and market dynamics.” But it was not well understood at that time by many people how fundamental the issue could be to the selection process.

The core problem relates to the incomplete nature of the long-term contract that is being awarded. Few people would claim that for the typical water system concession (unlike, say, a BOT contract for a treatment plant), a long-term contract can be prepared that sets out in precise, sharp, concrete terms all the obligations and rights of the parties for the whole 20–30 years of the concession. There are too many uncertainties. The bid price therefore has less meaning because

¹ The Bank paper used the term “commercial proposal,” not “price proposal,” but the list of examples shows that this refers to any suitable kind of monetary payment: up-front payment, tariff level, service fee amount, income to the government.

of the high probability of later renegotiations between the parties or third-party price reviews involving substantial discretion of a technical or policy nature on the part of the regulator or other adjudicator. In fact, it is becoming more common to require periodic comprehensive price reviews in concession contracts. If tariff adjustments are likely to take place and these price adjustments will not be closely related to the initial bid price (e.g. tariffs are reset based on actual costs or benchmarking against other companies), then the relevance of the initial bid price after the first comprehensive price review is thrown into doubt. Nevertheless, one is selecting a company for a long-term arrangement. So what can be the basis of the selection?²

This leads to two issues, broadly related to the two major topics of this study as they are set out in the study's terms of reference:

- How should the question of a price bid beyond the time of the first major price review be dealt with? (*Issue of multi-period price evaluation.*)
- Non-price factors signaling the company's *capability* and *disposition* for good future performance, under as-yet undefined conditions, are arguably more important in this kind of selection since the contract is so incomplete. But how can they be taken into consideration in the selection process? (*Issue of multi-criteria evaluation.*)

1.4 Preview of proposed solution

There are three main aspects to the solution that we propose in this report. First, it is presumed that there will be a comprehensive price review after 3–5 years (which we refer to as the “initial concession period” or a similar term), conducted or adjudicated by a regulatory agency or an independent expert body of some kind. The cleanest solution will therefore be to state categorically that the price bid applies only to the initial period. Any notion that the bidder should bid on the tariff level after the initial concession period, or make an equivalent bid of some kind relating to that period (e.g. with tariffs fixed, bidding on the number of new connections to be implemented each year) is dismissed. This removes one potential source of gaming in the selection process – i.e. including values for distant time periods in the bid, values that are likely to be irrelevant once the time comes.³

At first glance, this seems unsatisfactory. Are we selecting a concessionaire for perhaps 25 years based on prices bid for only the first 3–5 years? We want some way to get a better idea about how the company will perform over the long term. Essentially, we want to be able to assess the company's long-term capability and disposition to perform well. This may seem to be a fuzzy way of deciding, but since the initial contract is so incomplete, this is simply the best we can do:

² Michael Klein (1998: 2) grasped what the problem was. The process of selecting a concessionaire in these circumstances could come to resemble more how a company goes about choosing an important employee. Taking an extreme position to make his point, he wrote: “Competence, character and chemistry would be crucial. ‘Interviews’ would be the method of choice for awarding the contract rather than an auction.”

³ It is possible to devise methods that attempt to penalize the concessionaire for bidding in a way this is more favorable than what the values turn out to be after a later adjustment, but if the adjustment takes place as part of a comprehensive price review, these methods prove shaky or susceptible to gaming.

we cannot expect to hold the company to a complete set of precise requirements, determined at the start, for a 25-year period.

When it is put this way, we begin to see that this is not a conventional procurement at all. Instead, it is more like searching for a suitable long-term business partner. Part of the problem in trying to come up with improvements to the selection process for concessionaires is that these have often been conceived of in terms of making marginal adjustments to the conventional model for the procurement of works – as modified to suit BOTs and other types of typical PPP projects. Instead, we have to shift to a distinctly new way of looking at the question.

In the light of this, the second main aspect of our solution involves the prequalification process. This is reoriented to reflect the fundamental objective: selecting a long-term business partner. It is not simply a question of selecting a company that is qualified to carry out a set of well-specified tasks – e.g. design, build, and operate a wastewater treatment plant. The qualities of the potential partner need to be examined in more depth, and the enhanced qualification process proposed in this report may help achieve this.

Third, the best way to understand the capabilities and dispositions of a potential business partner is to see what happens during a trial period of working together. This may seem obvious, but it has been difficult to build a trial period into a full concession because of the messy problems involved in premature termination, when the concessionaire has to be compensated for the investments it has made. Also, allowing an easy termination at will by either party can lead to a fragile concession: if the advantages of the arrangement shift back and forth between the parties over time, whenever one party thinks the other side is getting too much from the deal that party may have an incentive to terminate for convenience.

Nevertheless, this kind of solution has so many advantages that it is worth pursuing. What makes the proposed arrangement more conducive to this solution is the fact that the price bid covers only the initial period. So there is a natural break point. We develop this idea further and envisage a shift in regime at the end of the initial period, all the while remaining with one contract.⁴ There is no rebidding. In a very real sense, the selection process for the concessionaire continues during the initial concession period. The initial period provides a test that is more telling than any qualification statement or technical proposal that a bidder could submit before it signs the contract.

The idea of a break point and a distinct shift in regime leads to number of other features of our proposal. The most important to signal here is that the concessionaire would not be responsible for financing capital investments during the initial concession period: the public authority would fund these. This has a number of advantages and lowers the risks for both parties: first, it makes it easier to have the price bid apply only over the initial period; second, it makes the break point at the end of the initial period more feasible; and finally, if managed well, it can reduce one large

⁴ Ideas about transition points and a distinct initial period of about five years were discussed during the first phase of ORT meetings. Some of the notes written by Bill Kingdom, in particular, influenced the proposals in the present report.

source of disagreements and disputes during the initial period – it makes open-book costing natural – and allows the parties to focus on other important matters.

Before going into the details, let us step back for a moment and take stock of the problems and what we are trying to accomplish by our proposal. Water service concessions have recently faced difficult times, especially in the early years of the contract. Many (most?) concessions have been designed with most of the same risk allocation mechanisms in place throughout the entire concession term. Instead, there should be a clear shift in regime. The acute problems during the initial period of poor initial information and poor understanding of how the system will respond to various interventions by the concessionaire has to be faced head on. In addition, the relationship between the parties is just getting off the ground and there may well be many rough moments and a tendency towards mutual suspicion. Risk allocation mechanisms and institutional features should be designed to suit this early period so that the risks given to the concessionaire are manageable. Once sufficient information has been obtained and analyzed and the parties have developed a good working relationship, the regime can shift to one that places more risk on the concessionaire and takes a more trusting, hands-off attitude – the long-term concession regime.

After pondering over the various mechanisms that could handle this transition in a more continuous way (see, e.g., the extensive work of ORT#1 and ORT#2), for example, by changing various risk-allocation mechanisms at different times or by altering them gradually – we concluded that a clean regime shift is likely to work best.

Finally, an important caveat. Countries and cities have different characteristics and needs, and we would not expect the model proposed in this report to be best suited for all of them. If much of the uncertainty concerning information about the system has already been resolved, then a municipality might move directly to a more classic concession.⁵ But we think the proposal is worth putting on the table for discussion.

2. ASSUMPTIONS ABOUT CONTRACT DESIGN

2.1 Introduction

Contract design and terms are the subject matter primarily of ORT sub-project no. 1 and to some extent of other sub-projects, especially no. 2. Nevertheless, it is impossible to propose a concessionaire selection process and criteria without making some assumptions about the nature of the envisaged PSP arrangement and some of the main contract design features. We therefore set out below the key assumptions we are making, sketched out just enough for the purposes of this report. Although these assumptions follow the spirit of the new models that are being explored and developed in the other ORT subprojects, we did not feel that it would be worthwhile to try to adhere to every detail – especially since the new models are still in the

⁵ And, if service coverage is already high, demographics are stable, and plant capacity is sufficient for the foreseeable future, it might even be possible to forgo regulatory-type periodic reviews. Cf. the general discussion in Littlechild (2002).

process of being fleshed out and will be subject to a great deal of discussion in the months ahead. The new models are a moving target.

As will be seen, our key assumptions about the envisaged PSP arrangement concern only a few critical aspects. The selection procedures proposed in this report could therefore be adapted to many different variants of the skeletal PSP idea. The assumptions below are not intended to be a straightjacket that forces the PSP arrangement into one particular configuration. They are just a point of reference for this report. Moreover, expect for a few special features, there is nothing particularly innovative in much of what follows – just good practice.

2.2 Key aspects of the envisaged PSP arrangement

- (1) The concession would be broken into two distinct phases: an initial period of 3–5 years (“initial phase” or “initial period”) and the rest of the concession contract (“long-term regime”). The length of the initial phase would depend to a large extent on how complete and accurate the information about the system is at the start of operations and how rapidly good information can be obtained. The duration of the first phase would be fixed before bidding takes place.

Comment. Although one can come up with various mechanisms for dealing in a more continuous way with the great initial uncertainty in information, the simplest method is to have a clean break after an initial period. An important consideration is that there should not be too much complexity during the initial period because this opens the door to disputes; and a special effort should be made to minimize the potential for disputes during the initial period. Note that the “break” does not mean a break in the contract: there is one concession contract. Moreover, there is a break in only a few aspects of the contractual arrangement, not all of them; there are continuities between the two phases. The initial period should be designed and managed to ensure a smooth transition to the long-term regime.

Note also that this is *not* a management contract that turns into a concession. A key characteristic of a management contract, as the term is generally used in international practice, is that the management contractor does not pay the operating and maintenance costs for the system out of its own revenue. These are paid by the “employer.” The management contractor receives a management fee, which may include an incentive component, and this may be related to the employer’s profit. Another typical characteristic is that the management contractor is merely the *agent* of the utility company and not the utility company itself. (For example, usually the utility personnel are not legally the employees of the management contractor; the management contractor just has the right to direct them.)

As a point of terminology, it is appropriate – and in the interest of simplicity – to call this arrangement a “concession” and the private sector company the “concessionaire” over the full term. There is no need to complicate matters by speaking of “hybrid” contract types or a “transition from a lease/affermage contract to a concession contract.” It is very much a concession – but a concession in which the concessionaire’s obligations undergo a shift in regime after the initial period.⁶ One could speak of this as an arrangement in which an *O&M concession* shifts into a *full concession*, provided that it is understood that there is not necessarily a sharp break between these two types of concession.

⁶ Note that a number of French legal experts consider the affermage contract to be a type of concession. “Concession” is a good generic term.

- (2) During the initial period, the concessionaire would be responsible for operation and maintenance and working capital, at its own cost, but not for the financing of any capital expenditures (or at least not capital expenditures whose cost recovery would need to extend beyond the initial period). This would be like an *enhanced lease/affermage* arrangement – i.e. with substantial responsibilities being given to the concessionaire (and clearly set out in detail) to *manage* the capital expenditures (design, procurement, supervision).

Comment. This serves a number of purposes, all of which aim to reduce risk during this initial period: (a) less of the concessionaire's money at stake; (b) the relation between the initial period and the long-term regime is simplified – as is the setup for bidding – if there are no unrecovered capital expenditures that need to be carried over into the long-term regime; (c) disagreements and disputes about capex during this crucial period (in which the parties are learning whether they can trust one another) are likely to be reduced if all aspects are carried out in a completely open-book manner, and this is easiest to do if the capex program is publicly funded. A counterargument would be that splitting ultimate responsibilities for capex and opex in fact increases the risk of disputes – the classic affermage problem. We believe this risk can be reduced considerably if the responsibilities and procedures are structured properly (see section 2.3).

- (3) Capital expenditures during the first phase would consist of urgent and priority investments, to be financed by the public authority – probably in large part using funds from a multilateral or bilateral development bank or agency. The budget envelope would be known by bidders and the content of the capital expenditure program would be specified to some degree. For example, it might be that the overall budget is allocated by major investment categories. Or, in addition, some specific investments might be set out. Within the constraints of overall budget, categories, and possibly specific investments, the concessionaire would have considerable discretion to plan how the funds will be used – but with ultimate ex ante approval retained by the public authority. (See section 2.3 for further discussion of these points.)
- (4) During the first phase, the concessionaire's conduct would be driven by a coherent set of performance standards and other requirements of different kinds. The major types are as follows (although any one contract might not contain all of these types). They would be backed by positive or negative sanctions.
- (a) A *limited* number of service standards – the most important ones in the context of the particular PSP arrangement – where the relevant variables are substantially under the concessionaire's control and where there is a good enough idea of the baseline (e.g., number of hours of water supplied per day).
 - (b) Achievement of milestones related to the management of the investment program.
 - (c) Other outputs delivered on schedule – e.g. network model, underground asset condition assessment, computerized billing and collection system. Since the gathering and analysis of information will be critical during the initial period, many of these outputs would be related to obtaining improved information and to setting up systems to ensure that good information will be obtained on a continuing basis.
 - (d) The concessionaire would have an internal incentive to control O&M costs since it is the residual cash flow claimant.

Comment. A special emphasis will be placed on data collection, compilation, and analysis in the design of the first phase. This is essential for the comprehensive price review that will take place at the end and for the long-term regime. Even though it should be in the concessionaire's own

interest to carry out many of these activities, they should be specifically required to do so as part of the obligations of the initial period.

- (5) Although the starting position conceptually would be that the concessionaire bears the commercial risks relating to operation and maintenance during the initial phase (this is not a management contract), a number of methods would be built into the contract to share some of these risks with the public authority or customers. The types of sharing mechanisms used and their strength would depend on the perceived risks involved in the particular PSP arrangement, especially the risk of uncertain information about the system. Some examples follow.
- (a) There would certainly be ordinary indexation and tariff adjustments for specified events – e.g. qualifying changes in law.
 - (b) There might be some pass-through cost items or pass-through price items.⁷
 - (c) If there is a great deal of uncertainty about just a few clearly separable cost components (no more than two or three) but a continuing pass-through is not desirable because the components are under the concessionaire's control to a large degree, then there could be a true-up procedure, to reset those components only once at the level of actual costs, based on data gathered during the first part of the initial period (say, after the first 1½ years).⁸
 - (d) In cases where there is great uncertainty about *many* components of present or future O&M costs (e.g. extremely poor recording of historical accounting data), one could envisage a certain period of time during which the concessionaire's remuneration is determined so that the concessionaire receives a weighted average of (i) what it has bid and (ii) its actual O&M costs (i.e. one variant of a "sliding scale" mechanism).

Comment. By trying out a number of different risk allocation mechanisms and different calibrations, using a simple financial model and sensitivity analysis or risk simulation, the desired risk allocation should be able to be achieved. It is surprising that this kind of modeling appears not to have been done more often in designing remuneration and risk-allocation mechanisms for concession arrangements. One reason may be that the designers have often been looking at the long term, since it is a long-term contract, instead of putting an intense focus just on the initial period. Another reason may be that risk analysis in concession design has often been thought to be the domain of the lawyers, who produce detailed risk matrices. These are useful for some purposes, but they do not make any attempt to quantify the risks and aggregate them. Also, some advisors and public authorities have had the short-sighted attitude that the public authority can throw any kind of risk onto the concessionaire and they will simply factor it in to their bid price, an attitude typical of early PFI projects. But the most important reason may simply be the limited budgets of the transaction advisors.

What is important for purposes of the bidding method is that the bid prices will continue to have an influence on the concessionaire's net remuneration during the entire initial period: i.e.

⁷ In a pass-through *price* item, the concessionaire takes quantity risk.

⁸ On the need for true-up procedures, etc., see ORT#2. In a true-up procedure, a reference cost is specified by the municipality in the contract and the price bid is made on that basis. When the cost is reset (trued-up), the remuneration of the concessionaire is adjusted to cover the difference (either positive or negative). Alternatively, to reduce risk for the concessionaire even more, one could structure this as a cost pass-through until the value is fixed.

whatever the set of risk allocation mechanisms selected, this is not a pure cost-of-service arrangement, even if certain cost-based features are introduced to reduce risk for the concessionaire.

- (6) At the end of the initial phase (more precisely, some time before the end), a regulator or specially constituted expert panel would carry out (or review and adjudicate) a comprehensive periodic tariff review (“periodic review”), based on a multi-year business plan submitted by the concessionaire, including investment needs.

Comment. The concession contract would need to contain detailed provisions for the methodology and procedures involved in this review. Although some concession contracts do this to some extent (e.g. Manila), they generally do not go into enough detail. There will inevitably be a large amount of discretion to be exercised by the regulator or expert panel in such a review, but the parties should attempt to reduce that discretion as much as possible in the contract, while preserving needed flexibility.

There are many different ways to set up expert panels and different procedures that they can follow, some involving a preliminary facilitating and mediating role before a decision is issued. It would not be appropriate in this report to explore this important topic in any more detail. It is important to emphasize, however, that the regulator or expert panel would issue a *binding* decision (though possibly appealable to arbitration in certain limited circumstances).⁹ Note that since this is not a renegotiation, but a third-party *determination*, there is no reason under good procurement practice why rebidding would need to take place.

- (7) The methodology for resetting tariffs during the periodic review could be based on any of, or most likely some combination of, the following:
- (a) actual costs of the concessionaire over the past year or so (this might be especially appropriate for some kinds of O&M costs), adjusted for reasonably certain future changes in specific parameters (especially the investment program);
 - (b) projected costs, based in a more discretionary way on the concessionaire’s historical costs adjusted for expected future changes in parameters and for any efficiency improvements that one might reasonably expect from a good company;
 - (c) the costs expected to be incurred by a hypothetically efficient company, based e.g. on industry benchmarking.

Comment. The essential point relevant to the initial bidding process is this. In resetting of tariffs in the periodic review, no consideration would be given to the prices or costs bid by the concessionaire or contained in the bidder’s proposal. A useful way to think of this is to say that the reset tariffs would have no *memory* of the initial bid price (but they would almost certainly have a memory of the concessionaire’s actual costs during the initial period). This therefore represents a regime shift with respect to the initial phase of the contract, which was governed in certain ways by the concessionaire’s bid.

- (8) The PSP contract would contain principles and rules that would govern risk allocation, tariff setting, and the procedures for any periodic reviews after the initial phase.

⁹ It would be unusual to see the tariff decisions of a conventional national (statutory) regulator appealable to international arbitration. Many countries would consider this to be an infringement on their sovereignty in matters of important public interest.

Comment. These principles and rules, which might be somewhat different from those applying to the initial comprehensive review, have to be developed in sufficient detail to give bidders enough confidence to want to become involved in the concession. Clear procedures and milestones for how the additional detail about these provisions will be developed during the initial phase also need to be set out in the contract. The risk is mitigated, however, since the concessionaire will not have an overhang of capital investment that will need to be recovered after the initial phase. If worse comes to worst, the concessionaire can exit without onerous consequences after the initial phase (see point (10) below).

- (9) One possibility is that two options would be outlined at the start, written into the contract, as to how capital expenditures would be financed during the long-term regime:
- (a) financed by the concessionaire, as in a full concession or regulated investor-owned utility company;
 - (b) financed by the public sector, as in an enhanced lease/affermage contract (i.e. with considerable responsibilities concerning planning and managing investments given to the concessionaire – and sufficient assurances that public sector financing will be forthcoming).

The choice of (a) or (b), to be made near the end of the initial period, would be at the discretion of the public authority. Provisions concerning each of these options would therefore have to be developed in sufficient detail for bidders to have confidence in how both of them would work.

Comment. The advantage of including the two alternatives is that there are discussions going on at present in a number of places about the possible benefits of *unbundling* the financing from the other responsibilities in a concession in some circumstances (e.g. the work of ORT#4). By the time the initial period of a new wave of concessions has ended, it is likely that we will have a much better idea of the advantages and disadvantages of models such as these, and the best design features.

- (10) At the end of the initial period, but before the comprehensive tariff review, either party would have the possibility of exiting from the relationship without cause (i.e. a mutual convenience termination).¹⁰ The payments required upon any such termination (precisely set out in the contract) would make it somewhat costly – but not excessively onerous – for either party to terminate at that point. The right to terminate in this manner could be exercised by either party only at a specified time at the end of the initial period, not at any time during the initial period. (See section 2.4 for further discussion of mutual convenience termination.)

Comment. This is a trial period. In a very real sense (though not as a matter of formal procurement procedures), it is a continuation of the concessionaire selection process. If recent experience in the market is any guide to the future, in a considerable number of these new-wave concessions the parties will want to exit after the initial period. We would hope, however, that with better design of the initial concession period, the success rate will be higher than it is now. The payments required for this kind of termination should give the parties an incentive to try to stick with it and work things out, and continue with the relationship into the long-term regime, but they should not be so onerous that the parties consider the risk to be too high when they enter the

¹⁰ See ORT#1 for a discussion of termination at will and termination payments.

arrangement in the first place. This is easier to accomplish because there is no issue of concessionaire investments to deal with.

The sequence of steps is important. A critical issue is whether the option of a relatively easy exit for either party must be exercised *before* the tariff review takes place. The argument in favor of allowing the option to be exercised after the tariff review takes place is that the operator might otherwise be locked in to the outcome of a very bad tariff review. The argument against this is that, if the decision to exit were based on the results of the tariff review, this would put too much pressure on the regulator or expert panel to act as if they were a mediator between two parties bargaining with each other. The regulator or expert panel is likely to feel that their intervention has failed if it causes a rupture in the parties' relationship. They may therefore pay too much attention to the specific bargaining forces and posturing of the parties during the review, rather than to the fundamentals of good tariff regulation. In effect, we would have all the problems that can arise when concession agreements are renegotiated. For this reason, the report takes the position that the option of a relatively easy exit for either party must be exercised *before* the tariff review takes place. The parties will have to take a risk based on their assessment of the set-up of the agreed mechanism, procedures, and criteria for the tariff review. This issue, however, requires more thought and discussion.

2.3 Responsibilities for capital investments during the initial concession period

As mentioned in section 1.4, one of the reasons for proposing that capital expenditures should be publicly funded during the initial concession period is to reduce the risk that often arises when (i) the concessionaire finances capex and therefore, in an output-driven contract, would be expected to have strong control rights over planning and managing the capex program, but (ii) the public authority has strong feelings about the investments that should be undertaken, as they often do. We would expect the potential for conflict to be especially great if it is relatively easy for the concessionaire to exit after just the initial period because in that case the concessionaire may be thought not to have the right internal incentives to optimize capex – even if adjustments are built into the contract to try to counteract any perverse incentives.

But the contention that the proposed PSP arrangement will reduce risks depends on being able to adequately control any additional risks that might arise by splitting off the responsibility for funding capex. Therefore, even though the purpose of this ORT sub-project is not to propose contract provisions (that is the task of ORT#1), it is important, in this one area, to go into more detail than in the rest of the report, especially since ORT#1 does not focus on affermage-type arrangements.

What follows is a simple example presented to convey the basic ideas. The scheme would need to be modified and developed much further to be suitable for use during the initial period in an actual concession. There is nothing particularly innovative here, but since the issue of responsibilities for capex plagues lease/affermage-type contracts and practice varies a great deal from contract to contract, it is good to set out our own assumptions.

- (1) The concession agreement will set out clear and unambiguous responsibilities for the planning and design of all aspects of capital investments during the initial period. One could conceptualize this into three categories:

- (a) aspects where the concessionaire has discretion, possibly subject to clearly specified constraints;
- (b) aspects where the municipality has discretion, possibly subject to clearly specified constraints;
- (c) aspects where the municipality has discretion, subject to clearly specified constraints, but the concessionaire starts the process by making a proposal to the municipality, which the municipality must consider.

Comment. The process of contract design should start out by allocating full discretion to the concessionaire (except of course to the extent that some parts of the investment program have already been designed and it is decided that this should not be changed). Then, in developing the provisions, constraints can be added, one by one, to achieve various legitimate goals of the municipality, or where it is thought that there might be strong perverse incentives if discretion were left with the concessionaire (given the limited duration of the initial period), or where it is clear that the concessionaire does not need discretion with respect to these aspects to be able to perform well *and* the municipality has strong preferences about them.

It is important that the constraints should be in the form of clear rules (e.g. certain categories of capex allocated to one party or the other) or objective principles (e.g. good industry practice or a specified purpose to be achieved). What should be avoided are provisions that state simply that both parties are to *agree* on some aspect or that the design of the capex that one party is responsible for must be “coordinated” with the design of the capex that the other party is responsible for. Provisions such as these provoke disputes and hinder effective dispute resolution.

What is most important is that the concessionaire should be given broad discretion over the variables that are critical for it to be able to achieve the performance standards or earn incentive payments (e.g. the specific tertiary water mains to be replaced, funded by the capex budget allocated for that purpose).

In some legal systems (civil law systems more than common law systems), however, there may be strict constraints on giving discretion to the concessionaire with respect to capital expenditures financed by public funds.¹¹ This question would have to be explored with legal advisors to see whether suitable ways can be devised to get around any obstacles.

- (2) The concession agreement will also set out clear and detailed rules for distinguishing between maintenance and repairs that are to be paid from the concessionaire’s own budget and items that can be put into the capex program.
- (3) Each year, the parties will submit information to each other concerning those aspects within the scope of their respective capex responsibilities, and they will then sit down and agree a detailed capital investment program for the forthcoming year and a conceptual program for the following two years.

Comment. Note that because of the way the responsibilities will be carefully set out in the contract, this is not a process of unconstrained negotiation. It is a more a process of reaching agreement based on objective criteria. One would expect that most of the questions will be of the form: Does this aspect of capex fall within a category over which a particular party has discretion?

¹¹ E.g. in France, by law an affermage operator can assist the municipality in the design and management of publicly funded works (as *maître d’oeuvre*) but cannot take on direct responsibilities (as *maître de l’ouvrage*).

- (4) If the parties do not agree on all aspects, there will be a structured process of discussion between them to facilitate their reaching agreement. If agreement still cannot be reached after a certain time, then either party can submit the matter to the Adjudicator (see point (12) below) whose decision will be binding.

Comment. Stating that the decision will be binding does not mean that the municipality can be forced to allow public funds to be spent in a way that it does not want; i.e. the Adjudicator cannot order specific performance. But if the municipality does not comply with the Adjudicator's decision, it will be liable to the concessionaire for damages, based on the expected losses the concessionaire would incur due to the municipality's decision (e.g. prevention of expected reductions in O&M costs; forgone incentive payments). The Adjudicator would determine those damages based on a claim submitted by the concessionaire. Because determining expected losses of this type is not an easy matter, rules and principles would be set out in the contract for the Adjudicator to follow in determining damages. It would be made clear that the Adjudicator's task is to hand out quick and rough justice, not carry out the kind of time-consuming investigation that a court of law or arbitral tribunal might carry out.

Complementing the right of the concessionaire to claim damages would be a requirement that the municipality must post a performance bond to cover such damages. To call the bond, the concessionaire would have to present a certificate from the arbitral tribunal (or possibly just from the Adjudicator) stating that the damages are due.

- (5) The parties will agree the first three-year rolling investment plan before signing the concession agreement, as part of final discussions after selection of the winning bidder.

Comment. It is understood that this may well be a very sketchy plan, if enough information has not been collected and analyzed before the concessionaire comes on board (except for those components that have already been fixed by studies carried out and decisions taken before the preferred bidder was selected). We believe nevertheless that the process of going through this exercise will be a useful one for both parties. First, it is likely to lead to a significant tightening up of the contract provisions dealing with capex planning, as the parties discover gaps and ambiguities. Second, agreement will remove one possible cause of disputes during the first year. Third, if the parties find that they simply cannot work together on this task, then they might well consider not going any further.

- (6) Following annual agreement on the capex program or acceptance by both parties of a decision made by the Adjudicator (or to the extent that agreement has been reached or the parties have accepted the Adjudicator's decision), the concessionaire will manage the procurement and implementation of the capex program, including:

- (a) procuring consultants who will be responsible for preparing designs and tender documentation and supervising their work;
- (b) managing all aspects of the procurement process for goods, services, and works;
- (c) supervising the construction works (with the possibility of contracting this function out);
- (d) managing changes and variations to the contracts for goods, services, and works.

- (7) Other detailed matters that will be set out clearly in the contract include the following (there is no general rule that can be given; the particular arrangements will depend on the particular context, the donor's practices, local law, etc.):

- (a) Who is the signatory of the goods and works contracts?

- (b) Who decides variations, cost overruns, etc.?
 - (c) Does the concessionaire pay the contractor or only authorize payment to the contractor? (If the concessionaire pays the contractor, funds could be transferred in advance to an account of the concessionaire and subsequently replenished to cover the next six months of scheduled payments.)
 - (d) What rights does the municipality have to comment, observe, inspect, take part in meetings, etc., during the construction period?
 - (e) Does the concessionaire actually accept the works on behalf of the municipality or only certify that they can be accepted?
- (8) The concessionaire will comply with the procurement procedures required by the entities providing the funding for the various projects. In any event (and including procurement using funds from the municipality or from tariff revenue), procurement will be carried out by competitive procedures to ensure fair market prices. Procurement from certain sources of funding might be subject to national procurement regulations.
- (9) The concessionaire will not award any contracts under the capex program to an affiliated entity (to be suitably defined).
- (10) The concessionaire will keep auditable documentation for all procurement and contracts under the capex program and, during the initial concession period, annual audits will be carried out of all such contracts.
- (11) The concessionaire will not be paid any additional remuneration for the role it plays in the capex program;¹² this must be taken into account in its price bid. But the contract will detail specific circumstances that would warrant claims for additional payments because of changes in the implementation effort of the capex program, changes in contracting arrangements, or serious contracting problems that are not the fault of the concessionaire (e.g. termination of a major contract under the capex program).
- (12) The Adjudicator (who might also be given other roles to play in the concession agreement) will be one person, will be appointed at the beginning of the concession, and will be retained for the entire duration of the initial concession period.¹³ The Adjudicator's decision will be binding on the parties unless and until the dispute is decided in arbitration.

Comment. There has been a enormous amount of experience in the U.K. – successful experience – in using adjudicators of this kind in construction disputes since a similar mechanism became mandatory by law in 1998 for a large class of construction contracts. This experience should be drawn on in designing a mechanism for the initial period of the concession contract.

The fact that the decision can in effect be appealed to arbitration allows the Adjudicator to be somewhat rougher – and certainly quicker and less expensive – in dispensing justice.

¹² Except for the cost of supervising the works, which would normally be considered an extra item to be included in the capital budget.

¹³ The question of whether the Adjudicator should be selected at the beginning and retained for the entire duration of the initial period depends on the expected intensity of use, and this depends on how extensive the envisaged role is in the context of the concession agreement.

2.4 Mutual convenience termination

Careful consideration should be given to the payments that must be made, and to the procedures to be followed, in connection with a convenience termination at the end of the initial period (see paragraph (10) in section 2.2). It is unusual in a concession contract that both parties have a right to a convenience termination (termination without cause); normally this right is given only to the public authority, if it exists at all. Typically, in a convenience termination, the initiating party pays the same amount that it would pay if it had breached the contract and the other party had terminated the contract for default. The problem when *both* parties have that right is that this can lead to a game of chicken: both parties might want to get out of the relationship (and this could be common knowledge), but each knows that it stands to gain (or not to lose) if the other party is the one who initiates the convenience termination; so each party has an incentive to wait until the very last minute.

One way to handle this would be to require no payment for a convenience termination at the end of the initial period – let the losses (if any) lie where they fall. But we want to create a greater disincentive in order to encourage the parties to try to make the relationship work. It is especially important not to allow the concession to be subject to short-term ups and downs in local political sentiment; a significant monetary disincentive would make a city council pause and think carefully before acting on a quick impulse to throw the concessionaire out.

One solution would be for either party to be able to bring about a convenience termination at a specified date at the end of the initial period by paying a specified, relatively modest, sum of money to the other – perhaps somewhere in the order of \$200,000–\$400,000 – to defray the costs of demobilization, etc. (for the concessionaire) or transition and rebidding (for the public authority). Payment would have to be made in full in order for the termination to take place. The payment required by each party might be different from the other so long as the two payment amounts seem fair. For example, the payment for each side could be $X\%$ of the estimate of the expected net costs to the other side arising from termination, where X is the same for both parties. (Actual monetary figures would be put in the contract.)

A number of different procedures could be used to get around the game of chicken. One proposal is as follows:

- Each party must deliver a sealed statement to a third party (perhaps the contract Adjudicator) by a certain date stating whether or not it wishes to exercise its right to a convenience termination.
- If both statements are affirmative, then neither party pays anything and convenience termination takes place.¹⁴ The losses, if any, lie where they fall.
- If only one statement is affirmative, then the party who submitted that statement must pay the specified fee to the other to terminate the contract.

¹⁴ More precisely, neither party pays anything if the pre-specified convenience-termination payments are the same for both parties. If they are different, the party with the greater pre-specified payment pays the net amount.

- If a party did not deliver any statement (either affirmative or negative) to the third party and the other party delivers a statement requesting a convenience termination, then the requesting party pays nothing.

In other words, by submitting a negative statement, one party can create a modest disincentive to a convenience termination initiated by the other party.

This method eliminates the last-minute pressure, and possible irrationality, in the game of chicken that would result if a party had to give notice *to the other party* by a certain date and time stating that it wished to exercise its right to a convenience termination. It gives the parties time to reflect on their strategies. The method does not entirely eliminate the possibility that each party might deliver a negative statement in the mistaken belief that the other party would deliver a positive statement, but the more importance a party attaches to getting out of the relationship, the less likely it is that it will make this move. And that is the outcome we want.

3. OUTLINE OF PROPOSED SELECTION PROCEDURE

The overall goals of the selection process are to select the bid that is most advantageous to the municipality, to ensure that the bidding process lays a sound foundation for the implementation of the contract – especially during the initial period – to select a capable company for the long term, and to accomplish this through an open, fair, and transparent process.

For purposes of orientation, it may be helpful to set out the entire envisaged selection process, presented below in outline form. This report will not discuss all of the steps. The purpose is rather to focus on the areas where new ideas are being proposed.

For simplicity, the involvement of financiers, important as they are, has not been included in the outline.

- Carry out preparatory studies, as needed
 - Legal review
 - Technical review
 - Tariff study (willingness-to-pay, etc.)
The tariff study is very important because it forms the basis for how tariffs will be set and possibly adjusted in tandem with improvements in service levels.
 - Financial projections, need for subsidies, etc.
 - Other, as appropriate
- Develop key parameters, etc., for the initial concession period (3–5 years)
 - Service level targets or expectations (in the light of existing conditions and planned capex, etc.)
 - Time-related targets and milestones for deliverables and other outputs
 - Specified investments (for a certain part of the capex budget), indicative budget line amounts (i.e. by broad category of capex), and fixed overall capex budget

- Base remuneration and incentive payments
- Amount of external funding needed, including contingency amounts
- Develop principles and rules to govern the transition to the long-term concession regime and governance of the concession during that regime
- Develop desired profile of the concessionaire (**see section 4**)
Initial generation of ideas in a relatively unstructured manner, focusing on what characteristics are desired; the ideas are then developed into structured categories and attributes.
 - Experience
 - Business strength
This term is being used to encompass financial, business, management, and related aspects.
- Prepare invitation to prequalify (**see section 4**)
 - Information to be submitted by candidates for bright-line tests
 - Information to be submitted by candidates for judgmental analysis
 - Reference case
 - Statement of business qualification
- Invite prequalification submissions
- Receive and evaluate prequalification submissions and determine shortlist (**see section 4**)
 - Apply bright-line tests and eliminate candidates that fail
 - Apply judgmental criteria and: (i) eliminate those that fail and (ii) if remaining number is above the pre-specified maximum, then rank and include this number of candidates in shortlist
- Prepare invitation to bid
 - Bidding procedures
 - Required submissions
 - technical & management proposal
 - price proposal
 - Evaluation criteria
 - Factors that will be considered in the implementation assessment
 - Draft contract (including key parameters for initial concession period and principles and rules for long-term concession regime)
- Issue invitation to bid
- Activities during bidding period – especially:
 - Conduct pre-bid conference
 - Receive comments on draft contract and, if appropriate, issue revised draft contract

It should be made clear in the bidding documents that comments on the draft contract are encouraged. Companies often feel that public authorities and their advisors are riveted to their own thinking and do not give serious attention to the comments made by bidders about, e.g., risk allocation

- Examine and evaluate bids
 - Examine all bids; reject all that are not substantially responsive
 - Comparative evaluation of retained bids based on price criterion; determine the best evaluated bid (**see section 5**)
 - Implementation assessment of best evaluated bid (**see section 6.3**)
 - Verify the feasibility (doability) of the technical and management proposal taking into account the key parameters for the initial concession period and the price bid
 - Scrutinize the assumptions and reasoning behind the bidder's O&M budget
 - Identify and assess implementation risks
 - Overall assessment (affirmative or negative)
- Prepare evaluation report; preferred bidder approved
- Invite the bidder with the best evaluated bid for discussions and clarifications leading to contract signing
 - Clarifications
 - Discussion of major risk factors identified in the implementation assessment
 - Non-material adjustments to contract
 - Agreement on first capex program
 - Other issues
- Sign concession agreement

4. PREQUALIFICATION AND SHORTLISTING

4.1 Proposed approach

The prequalification procedure proposed in this report differs considerably from that used for works or consultancy contracts. This reflects the public authority's concern with finding a suitable long-term concessionaire in an incomplete-contract context. The qualifying criteria and shortlisting procedures commonly used today for water system concessions have been unduly influenced by the prequalification procedures and criteria for works contractors and consultants. But a concession is more akin to a long-term *business relationship* than a works or consultancy contract, although there are significant differences.

The proposed procedure is broken into two steps. First, there is the conventional step of applying a number of mainly bright-line tests and then accepting only those candidates who pass the thresholds. These initial criteria would consist of the usual ones – e.g. number of similar projects (objectively defined) in qualifying countries, specific experience in certain areas (possibly), minimum annual sales revenue, basic soundness of financial position, etc. This is a good way to eliminate those candidates who are highly unlikely to be able to perform in the

desired way. This aim should be the touchstone for calibrating the criterion values for this step: in general, the initial screening should not be used to try to obtain the right number for the shortlist but only to eliminate those candidates that are *clearly* unacceptable. (We will return to this point later.)

The next stage of the proposed prequalification procedure diverges somewhat from typical procurement practice. We envisage a much more in-depth examination and assessment of the candidates. The process would be closer to what a company does in examining a potential joint venture partner, an auto manufacturer in searching for a long-term supplier of made-to-measure parts, an equity investor before investing in a company for the long haul, or a bank before giving a long-term loan to a company – closer to these assessments than to the prequalification procedure used in conventional procurement.

There would be two aspects to this assessment. First, there are the actual experiences of the candidate in running other water businesses. The candidate would be asked to fill in a brief form giving basic information about all or many of the water systems that it has managed in the past five years. This is not unusual. What is more unusual is that the candidate would also be asked to present one or two cases in much greater detail. We suggest that the initial requirement should be for one case, with the municipality reserving the right to call for another once it has begun the prequalification review.

The evaluation committee, actively assisted by the advisors, would study the reference case carefully, would examine other material about the case that is in the public domain, would interview people directly involved in the project on the public-sector side, and could seek clarification from the candidate. We give an example in **Annex 2** of the instructions that might be given to candidates for the preparation of such a reference case.

It would be naïve to think that candidates will not try to put a positive spin on the description of their case, and they will surely present the case that they believe will show them in the best light. All the same, we believe that the exercise will be useful, especially if significant problems and troubling signs emerge from even the best case the candidate can put forward. It is in these circumstances that the evaluation committee could call for the second case. If this case also shows disturbing signs, the evaluation committee should begin to worry.

The second submission to be made by the candidate for this part of the prequalification procedure would be the business qualification statement. This statement would present the kinds of information about the candidate that a person would want to know if they were contemplating a long-term business relationship with the candidate. **Annex 3** gives a suggested outline for this statement. This is not unlike the kind of review that a credit rating agency would carry out.

The information asked for is more detailed than what is normally required in a prequalification exercise. We believe, however, that it is the kind of information that any municipality should want to know before attaching themselves for 25 years to a company – a company that will not simply sit in the background, say, operating a wastewater treatment plant, but one that will have direct contact with city residents and play a highly visible role in the city.

In the case of a joint venture candidate, each joint venture partner would need to submit a statement. The candidate would also be required to explain why a joint venture is being proposed and how the risks that it might entail will be mitigated. We do not believe that the reasons that might be advanced in favor of joint ventures in construction or BOT contracts are necessarily applicable to water system concessions. What is normally needed is one strong company that has experience and high competence in all the major aspects of running a water company. Specialized aspects can be contracted out.

With some ingenuity and further thought, a statement of this kind could be made to yield more reliable information about some of the items that are usually covered in other places in a prequalification statement or technical proposal, where they are phrased in terms of the candidate or bidder's *intentions* with respect to the proposed contract. Take, for example, the question of the personnel that the candidate expects to place in the top management positions in the concessionaire. A typical approach would be to ask the candidates for indicative CVs at the prequalification stage and then ask the bidders for "committed" CVs at the proposal stage. But wouldn't it be even better to find out what kind of top staff the bidder has been placing in similar ventures around the world, whether they come from inside the company or have been picked up on an ad hoc basis for the specific jobs, what the turnover in top management personnel has been in these other concession companies, etc? Surely, past conduct is a better guide to the future than what the company says it will do – or at the very least, it is valuable supplementary information.¹⁵

The information gained from this process will be used in one of two ways. If the number of candidates passing the bright-line tests is no greater than the pre-specified maximum desired for the shortlist, the assessments will be used to determine if any of these candidates should be eliminated. Candidates would be eliminated in this way only if the evidence is compelling. The second way that the assessments would come into play would be if the number of candidates passing the bright-line tests is greater than the pre-specified maximum desired for the shortlist. In that case, it would be necessary to take only the best *X* candidates, based on a ranking process, where *X* is the pre-specified maximum number.

Describing the methodology that should be used to eliminate candidates or rank them using these assessments would involve more detail than is warranted in this report (see section 4.2 for further discussion). It is worth stating, however, that we do not recommend the usual type of "merit point" scoring method in this context. To be sure, breaking down the decision process into manageable pieces is essential – and is a hallmark of rational decision-making – but the method used should be one that retains a clear sense of the whole picture. For example, the candidates could be ranked on each of a relatively small number of attribute categories using just a few notches on the scale (e.g. very poor, poor, neutral, good, very good), and then one would proceed

¹⁵ Referring to U.S. Federal procurement practice, Kelman (1990: 40) writes: "Information based on experience, which might be useful – indeed crucial – in making good contractor decisions, is generally ruled out by the system.... The government becomes far more dependent than it should be on the words and assurances contained in the written proposals made just before contract award."

to make an overall ranking using a suitable method that respects the judgmental trade-offs, a method that may not involve merely adding up scores.¹⁶

In any event, what is most important is that the decisions should be set out in writing, supported by coherent, well-reasoned arguments that explain convincingly why, all things considered, certain candidates were chosen or why certain were eliminated. The decisions have to make sense from a logical, reasoned point of view and should not merely be the outcome of an obscure process of plugging numbers into a weighted average formula.

Two major criticisms could be raised against the approach taken in this section. The first is that the process of reviewing and assessing the material submitted by the candidates may be well beyond the capabilities of many evaluation committees. Based on experience, we do not believe that this is a problem if the advisors are competent and can work well and intensively with the committee, educating them as they go along. This report does not describe the process of interaction between the advisors and the evaluation committee. Suffice it to say that too little systematic attention has been given to this important aspect.

A second possible criticism is that the assessment process is too subjective. This is the reason why approaches of this kind tend to be discouraged in conventional procurement. It is true that the criteria are judgmental (we prefer this to the more loaded word “subjective”). But this is not conventional procurement, and using good judgment is certainly what is called for here. Selection decisions of this type always involve a trade-off: basing the decision entirely on bright-line rules may reduce the room for abuse, but eschewing flexibility and discretion can reduce the likelihood of achieving the most beneficial result. This trade-off is well known and discussed in writings on public procurement.¹⁷ We believe that in the selection of a long-term concessionaire, judgmental factors are of too great an importance to ignore. The issue of judgmental criteria is addressed further in section 4.2.

Using a method along the lines suggested in this section is more likely to allow newcomers who can make a good case for themselves to enter the competition than one in which the number of prequalified candidates is limited by tightening the bright-line tests. One could, for example, as in the Tallinn privatization, arrive at a shortlist by requiring relevant experience in four different countries (see Annex 1). There may have been good reasons for using this approach in Tallinn, but adopted as a general rule, it would not be of much help in expanding the market and might not serve the best interests of a particular municipality.

One could of course open the door wider for newcomers by loosening the bright-line tests. But when candidates do not have sufficient *direct* experience, as measured by clear quantitative criteria as in Tallinn, it is difficult to see how one could evaluate other kinds of experience that

¹⁶ There are a number of methods that do not ignore the judgmental nature of the decision process but instead try to assure greater rationality – e.g. the method of “even swaps” and “practical dominance” developed by Hammond, Keeney, and Raiffa (1998), who argue that their method “forces you to think through the value of every trade-off in a rational, measured way ...”, not a notable strength of the merit point system as it is commonly practiced.

¹⁷ For example, Arrowsmith (1998: 24) speaks of “the optimum balance between transparency and flexibility in obtaining value for money ...”

might have a bearing on their ability to perform well in a water system concession on the basis of quantitative thresholds and other bright-line tests. If it is impossible to use judgmental criteria and educated discretion based on a good business sense, the risk becomes too great that clearly unqualified candidates will be allowed in.

Because of the judgmental nature of the process we propose, the shortlists generated for different transactions will surely vary from case to case, with dark horses sometimes entering the arena. Yes, there will also surely be cases in which poor companies manage to jump the hurdle, but, overall, we believe that the benefits will outweigh the costs.

4.2 The use of judgmental criteria

As noted above, it would go beyond the scope of this report to describe the entire proposed shortlisting procedure in detail. There is one issue, however, that may be contentious and should be addressed: the question of whether and how *judgmental criteria* should be used. By “judgmental,” we mean that a significant amount of discretion is required on the part of the evaluators; i.e. the result does not emerge from the mechanical application of sharp rules, involving, say, precise quantitative thresholds.

The first part of the shortlisting procedure would consist of a typical prequalification exercise involving the application of bright-line tests to eliminate from consideration those candidates that are *clearly* not suitable – e.g. based on minimal experience in similar projects, size of company, objective measures of financial strength, etc. The rest of this section picks up after the minimal prequalification has been carried out and the clearly unqualified firms have been eliminated.

It is useful to set out the remaining part of the shortlisting procedure as consisting of four steps:

- (a) Identify the assessment criteria
- (b) Determine weights for the criteria (if relevant given the method)
- (c) Determine the scoring (or ranking) of the candidates with respect to each criterion
- (d) Based on all the scores (or rankings), determine which candidates are shortlisted

The focus of this section will be on step (c). Several words should be said first about the overall method, however. It could be a method based only on scoring of criteria and then aggregation of scores using a weighted average. Modifying this slightly, one could require minimum scores for some or all of the criteria. Diverging further, the decision process could involve looking at the rank order of the candidates on various criteria and using various methods to include or exclude candidates based on dominance relations (e.g. does one candidate rank no lower than another on all criteria and rank higher on at least one criterion?).¹⁸ These variations involve steps (b) and (d). How to select the best overall method will not be discussed here. Whatever the method, it will be necessary either to score or rank the candidates with respect to each criterion – step (c).

¹⁸ These divergences from a method (at one extreme) that involves only scoring and weighting are used when strong performance on one criterion will not necessarily compensate for weak performance on other criteria. Plain-vanilla weighted average scoring cannot adequately deal with this. Another reason for using such methods is to begin the process by excluding dominated candidates in order to simplify the rest of the process.

The central question to be considered in this section is how this can be done if discretionary assessment is required.

In our opinion, the assessment would be based on a small number of broad criteria; 4–8 should be sufficient. Ideally, recommendations about the criteria should be developed through a *general* study (i.e. not carried out just for one particular transaction, though perhaps done in the context of one) that involves, through a group process, first identifying a long list of desired *attributes* of the candidate and then grouping these attributes into several higher-level *criteria* (perhaps using cluster analysis of some kind).^{19,20} The detailed list of attributes would be retained as a way to give guidance to evaluators about the elements encompassed within each criterion. It might be good to go even further and list typical *indicators* under each attribute.

Examples of the criteria for candidates for water concessions might be the following: past performance of a relevant kind; technical competence, depth and breadth of resources available to the company; demonstrated flexibility and adaptability; etc. These should be developed through a group process of some kind.

For this kind of exercise, there is no point in using more than 5–7 values for scoring on each criterion. A seven-point scale could be: extremely poor; very poor; slightly poor; neutral; slightly good; very good; extremely good.

Scoring (or ranking)²¹ of the candidates on each criterion could be carried out as follows:

- The evaluators (i.e. members of the evaluation committee) study the submissions and the advisors' preliminary report and discuss matters among themselves.
- The evaluators individually score each candidate on each criterion on a written form.
- A structured group discussion takes place, facilitated by the advisors. Evaluators reveal how they scored, if they wish to do so, and then they discuss why they scored the candidates the way they did. The main role of the facilitators would be to push the evaluators to justify their choices in a reasonable and coherent way and to ensure that all points of view are heard. Another important role would be to ensure consistency of scoring across candidates.
- The evaluators now repeat the exercise of individual scoring and turn in their scoring sheets to the advisors.²²

¹⁹ In general, the terms “attribute” and “criterion” can be used interchangeably; here, we are using them in a special sense. The term “sub-criterion” could be used instead of “attribute.”

²⁰ The goal of the cluster analysis would be to identify higher-level criteria in such a way that attributes falling under any one criterion tend to move more closely together (across different candidates) than do attributes falling under different criteria. There are a number of mathematical methods that can be used to help make this decision.

²¹ The alternative of ranking will be ignored in what follows, and it will be assumed that the method involves scoring.

²² There are a number of different approaches to how interaction and decision-making in a group can be structured. At one extreme, all communication among members is prohibited and members give their decisions or scores individually. At the other extreme, the group has a free-form discussion and then must reach a consensus (the

An interesting question is how the scores for each criterion and for each candidate should be aggregated across the evaluators. General practice is to calculate the mean. But it may be that the *median* would be more robust in resisting bias caused by the corruption of one or a few of the evaluators since the median is not affected by extreme values. For example, consider the following scores (on a 1–7 scale) given by the 10 members of an evaluation committee for one candidate and one criterion: {1,2,2,2,3,3,3,4,4,5}. The mean is 2.9 and the median is 3.0. Suppose the evaluator who gave a score of 1 (underlined) is corrupted and instead gives the maximum score of 7. We now have: {2,2,2,3,3,3,4,4,5,7}. The mean has been boosted to 3.5 by the corrupt evaluator but the median remains 3.0. Of course, the median will not always remain the same, but if the scores are bunched closely together, the median will show less change.

This is an issue that should be explored further by simulating different scenarios. It is surprising that, given the prominent concern about corruption in procurement, there has not been more examination of techniques like this that could help make the process more resistant to the effects of improper influence.

The description above assumes that scoring will take place for each criterion by examining all candidates together. There are other methods, however, based on comparing only two candidates at a time – “pairwise comparisons.” In these methods, evaluators are faced with two candidates and have to determine which one is preferred to the other with respect to a particular criterion and how strongly it is preferred, using a scale of, say, 6–9 values. This is repeated for the *same* criterion for each binary combination of candidates.²³ The next step is to determine, using one of various mathematical techniques,²⁴ the scores that are most consistent with the pairwise preferences that have been expressed. (Once again, the *median* of all evaluators could be used to represent the group’s preference for each value.)

Although pairwise-comparison methods have received some criticism on theoretical grounds, they are often used as a pragmatic way to convert judgmental assessments into a set of scores without requiring the evaluators to assign scores explicitly. They also fit in well with the process of facilitated discussion outlined above.

(Note that the same type of method can be used at an earlier stage to determine the set of weights to use in calculating the total score.)

Regardless of the particular method used, what is important about any sound decision method that involves discretionary judgment is to break the problem down into pieces, constrain

typical jury system). The method recommended here falls between these two extremes, trying to capture the benefits to be obtained from discussion while reducing the direct influence of dominant personalities. The “Delphi method” would go further in dealing with this last aspect by making the group feedback anonymous, but this would make the process much too complicated for present purposes.

²³ If there are n candidates, $n(n-1)/2$ pairwise comparisons have to be made for each criterion. Clearly, the method becomes unwieldy if there is a large number of candidates.

²⁴ One popular method uses matrix algebra and eigenvectors; fortunately, there are specially designed computer programs that turn this into a routine.

discretion to apply only to those areas where it is needed, and insist that evaluators provide sound justification for the assessments they make.

If well documented, a rigorous system for prequalification/shortlisting as described in this section should be considered acceptable by most if not all of the major procurement regimes in the world. The degree of objectivity required for shortlisting is usually less than for the evaluation of bids.

One possible criticism of the procedure described above is that, since the criteria involve discretionary judgment, it is difficult to justify why a candidate who scored, say, 69 is excluded from the shortlist while a candidate who scored 70 should be included. What is the real difference between these two candidates?

An appropriate response to this criticism is that the decision is not arbitrary; it was made by a fair and rigorous procedure and can be justified on reasonable grounds. There are many instances in which decisions are made by public authorities and others on the basis of judgmental scoring or ranking, ranging from the scoring of examinations to decisions about alternative investment projects affecting millions of people to the decisions made by courts of law. Difficult tradeoffs between the use of *sharp rules* and *discretion* pervade many areas of public policy (central bank policy, utility regulation, competition policy, etc.): they have to be faced head on.

It should be noted that the World Bank permits the selection of *consultants* on the basis of scores that almost always include judgmental aspects (e.g. quality of methodology). Provided that the procedure has been carried out in a proper manner, the Bank would reject the claim of a disgruntled bidder who received a score of 80 and lost because the winning bidder received a score of 81. And this concerns the selection of the preferred bidder, not just the shortlisting decision as in this report.

One way to think about the use of judgmental criteria in prequalification is to see it in terms of the classic procurement tradeoff between the conceptual soundness of a method in relation to its ultimate objective (namely, the net benefits flowing from the project) and the ability of the method to guard against manipulation and corruption. Completely mechanical rules help guard against corruption; this brings a benefit. But they also entail a loss if they prevent the use of good judgment where it is needed – i.e. where no set of bright-line tests will suffice. Whether or not the use of judgmental criteria in shortlisting is justified depends on our assumptions about these gains and losses. The two figures on the next page illustrate this.

It seems sensible to assume that the benefits of adding degrees of discretionary judgment to the prequalification/shortlisting process start out strong as just a little discretion is added but then diminish in effect. Experience suggests that even a small amount of discretionary judgment can eliminate the absurd results that a system based only on sharp rules can sometimes produce. The real debate is probably over the shape of the lowest curve, representing the costs that result from biased judgments caused by corruption in the selection of candidates. It makes sense to assume that the ability of corruption to influence the outcome increases as the degree of discretion increases. The net result of the tradeoff depends on the *shape* of that curve.

If we assume that the risk of corrupt influence increases greatly the moment even a small amount of discretion is allowed (**Figure 1**), then the optimal design of the process may be to allow no

discretion at all and to rely only on bright-line tests (a “corner solution”). On the other hand, if we assume that the process can be carefully managed so that the added risk of corrupt influence is small as we begin to increase the discretionary aspects of the decision making (**Figure 2**),²⁵ the optimal design would be to allow discretion up to a certain point – the point where the net benefit curve reaches its maximum.

Figure 1

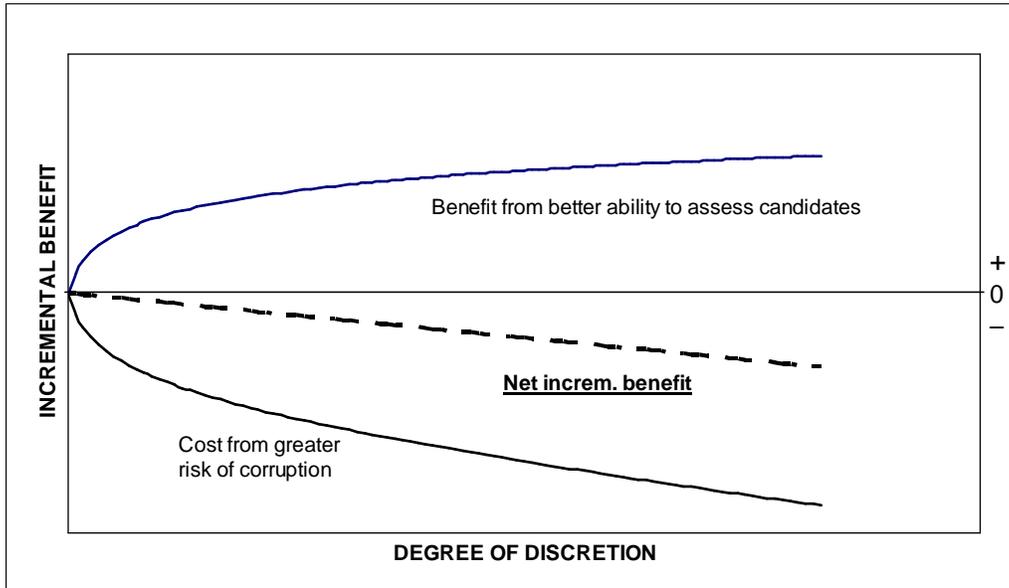
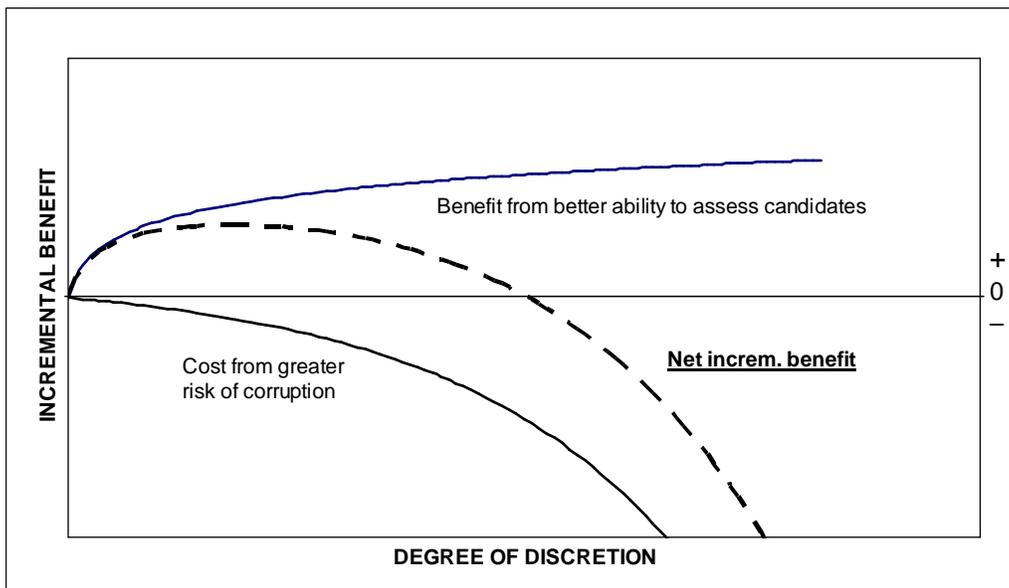


Figure 2



²⁵ E.g. perhaps by the use of the median instead of the mean as the way to aggregate the scores of the evaluation committee members.

The important lesson from this illustration is that, contrary to what is often thought, the ultimate objective in designing a procurement procedure should not be to minimize the risk of corruption. Some risk of corruption may have to be tolerated to obtain greater benefits from a better ability to assess the true qualifications of the candidates or to the true value of the proposals. Good procurement policy must grapple with this key tradeoff.

5. THE CONCESSIONAIRE’S REMUNERATION AND THE PRICE BID

For reasons that will be explained in section 6.2, we propose a single criterion for the evaluation of the bids: a price criterion. This could be the tariff level (lowest is best), the level of subsidies (lowest is best), or an up-front transfer payment to be made by the concessionaire to the municipality (highest is best). To keep the discussion simple and avoid lots of “if this, then that” statements, we will focus on the last alternative, the transfer payment, since we believe it presents some interesting advantages over the others. But it should be clear at the outset that most of what is described below is not dependent on this choice; the method could be modified to fit another kind of price criterion.

The description of the price bid makes sense only in the context of how the concessionaire will be remunerated, so we must begin there. Bear in mind that what follows is just an outline of the basic features, not a full picture.

In the proposed scheme, the public authority would set the customer tariff profile over the initial period of 3–5 years – probably a climb path of some kind. This should be based on willingness-to-pay studies, affordability concerns, social acceptability, and so on. It would be good for the end point of the climb path, after a suitable period, to be in the neighborhood of where the municipality’s advisors think the steady-state tariffs will be. It could be that tariffs are set so that they are, in part, conditional on levels of service attained – e.g. to some degree, tariffs would increase if (and only after) water quality improves.

The concessionaire’s remuneration would be structured in one of two broad ways:

- (a) The concessionaire keeps one part of the tariff (a certain price per cubic meter, subject to indexation and various other adjustments, e.g. for changes in demand) – this is the “base remuneration” – and immediately pays the rest to the municipality. Then the municipality pays the concessionaire specified amounts, in addition, for achieving various targets (e.g.: a certain price per new connection made; specified amounts for increasing the availability of water supply) – these are the “incentive payments.”
- (b) The concessionaire pays the entire amount of tariff revenue (actually tariff *receipts*) to the public authority and then receives a remuneration from the public authority consisting of (i) a fixed periodic fee, (ii) a volumetric fee (price per cubic meter of water) – where (i) and (ii) together are the *base remuneration*²⁶ – and (iii) *incentive payments* for

²⁶ In fact, the actual amount of the base remuneration to be paid to the concessionaire would be the specified full amount multiplied by the revenue collection percentage that the concessionaire achieves. This mirrors what would

achieving various targets.²⁷ More precisely, tariff revenue would flow to, and remuneration payments would be made by, a reliable third party – an accounts bank or trustee – and not the municipality itself. The municipality would have no control over the tariff revenue until the required remuneration had been paid to the concessionaire.

Alternative (a) is more conventional because it is closer to the concession/affermage idea. But (b) more transparently tries to match the fixed and variable nature of the concessionaire's cost structure, and it can also simplify dealing with OBA from the concessionaire's perspective. Alternative (b) would require explicit incentives to increase billings and collections; these incentives would be implicit in alternative (a).

Another point supporting method (b) is that it can simplify and make more transparent the delinking of tariff increases in response to improvements in *levels of service* from increases in the concessionaire's remuneration in response to improvements in *performance*. There are some aspects of performance that one may want to incentivize but that do not involve improvements in general levels of service as perceived by customers – e.g. in some systems, decreases in leakage. Customers and politicians can understand increases in tariffs if services improve, but they may be more resistant to reward the concessionaire through an increase in tariffs for other types of performance improvements. Method (b) can handle this neatly.

One argument in favor of (a) might be that it would keep the concessionaire more oriented towards customers since the concessionaire would receive its revenue directly from them. We suspect that this is merely a question of habit. It is hard to see why a company would not quickly come to give as much attention to customers if it knows that its remuneration depends on them, regardless of whether the money comes directly or whether it comes the next day from the accounts bank. For example, if it knows that the amount it receives will increase as the collection ratio increases, then why would it not try to increase collections?

A more basic drawback with method (b) would be that in some countries there may be a high risk that the public authority or courts might interfere with the operation of the accounts. In that case, the old adage that possession is nine-tenths of the law is fitting, and (a) might be more prudent for the concessionaire.

Some principles to be used in setting the remuneration package would be as follows (the rationale will become clearer once more is said about the transfer payment):

- The incentive remuneration for each service variable should be set so that it gives a real impulse for good performance. Since the concessionaire will not finance capex, the incentive payments do not have to cover capex but only incremental O&M costs and the implicit cost of the concessionaire's "effort." But they should be set generously. This

happen if the concessionaire kept a part of the tariff revenue it collected. If this is not done, something similar has to be incorporated into the incentive payments.

²⁷ In some legal systems, the fact that in this alternative the operator is not remunerated *directly* by user charges might prevent the arrangement from being categorized as any type of "concession," and this might have important consequences. Local counsel should be consulted.

will not give the concessionaire excess profit (on an expected basis) because of the way the bidding mechanism works.

- The total expected remuneration should be set so that any reasonably efficient company would find it more than enough to cover optimal O&M and other justified costs (e.g. financing cost for working capital) for the initial period.
- The remuneration should be set so that even in a very bad scenario (i.e. where the incentive remuneration is very low), the total expected remuneration (i.e. just the base remuneration) will be sufficient to cover essential O&M costs as estimated by the municipality's advisors. The concessionaire must be able to function even in poor conditions without the need for cash injections from the parent company.

There would be different types of incentive payments – for example:

- For a handful of key performance indicators, incentive payments would be made on a linear basis according to the degree that the concessionaire performs better on each dimension. Setting point-value targets should be avoided whenever this makes sense. For example, there would be no specific target for hours per day of water supply (i.e. where the incentive payment would be earned only upon reaching that point and would not increase further if the point is surpassed); instead (in a context where this is desired) the concessionaire would be given a powerful smooth (linear) incentive to increase water availability as much as it can.²⁸
- Various discrete deliverables and outputs (e.g. network model, leakage detection plan, O&M manual) would earn an incentive payment when they are submitted, but the incentive payment would gradually decrease for every month that the submission falls after the due date. In monetary terms, this works like liquidated damages, but it may be contractually more advantageous to the municipality to do it this way, and because of framing effects it may be psychologically preferable.
- There would probably be a few service requirements for which attaining a critical value is so important – e.g. for reasons of public health – that substantial liquidated damages would be justified if the target is not achieved. One good example would be wastewater effluent quality (provided that that municipality has a wastewater treatment plant capable of achieving the targets). But for the most part, liquidated damages should be avoided and positive incentive payments should be used instead.

A fixed amount of capital investments to be made over the initial period would be determined (“capex budget”). This would be based on priority needs, limits on the pace of implementation, etc. If, as is likely, (i) expected tariff revenue minus (ii) concessionaire's expected remuneration is less than the capex budget (in fact, (i) minus (ii) might well be negative), then external funding will be needed. This might come from the World Bank with some counterpart funds from the state (perhaps channeling donor grant funds).

²⁸ Discontinuous and kinked incentive payment functions can encourage gaming behavior.

Bidders would be told what the performance standards are, how their remuneration will be calculated – base remuneration and the incentive payments – and what the capex budget is and the conditions attached to its use (see section 2.3). They would then be asked to bid in the following way:

- (a) If they are able to do so, they would bid on the lump sum payment that they will make to the municipality if they are awarded the contract. The greater the lump sum, the better the bid.
- (b) If bidding on any positive lump sum would be too high for a bidder, then the bidder would bid on the annual payment it would need to receive from the municipality, in addition to the remuneration that has been specified. The lower the additional annual payment needed, the better the bid.

If there is at least one bidder who bids according to (a), then all bidders who bid according to (b) would be disregarded. In other words, bidders using method (b) are considered only if there is no bidder using method (a).

The reason for including method (b) is as follows. If (b) were not included, then the remuneration would have to be set high enough to ensure that *all* bidders would expect a surplus or break even. In that case, the winning bidder might bid quite a high transfer payment. But a higher transfer payment would add costs and would not be an appealing prospect to bidders. So including the possibility of (b) allows the municipality to be more relaxed about getting the remuneration high enough to suit all bidders.

The transfer payment would be put into a special bank account (“segregated account”) governed by a detailed accounts agreement to which the concessionaire, the municipality, and the accounts bank – and possibly the MDB (or BDB) or national government – are signatories. Tariff revenue would go into the segregated account and the concessionaire’s remuneration and the investment funding would come out of it. In reality, there might be several sub-accounts to keep better track of cash flows – and the MDB might request this.²⁹

The simplest way to structure this might be for the transfer payment not to affect the total amount of funding required. Supposing that the maximum amount of external funding had been set based on a pessimistic case for the transfer payment, the most natural adjustment that would be made if the transfer payment turned out to be greater than in the pessimistic case would be to reduce the amount of external funding – i.e. the more efficient the concessionaire expects to be, the more the arrangement would be self-financing.³⁰

²⁹ It should be noted that ring-fencing the funds in this way could have the additional advantage of enabling limited-recourse lending, which would keep project debts off the municipality’s balance sheet. But this verges into the subject matter covered in the “trust model” developed in ORT#4.

³⁰ But it may be thought desirable to allow the municipality and residents to benefit in some way from increases in the transfer payment (i.e. the better the winning bidder bids, the more they benefit), and appropriate adjustments to the scheme could be made to achieve this.

If the contract were terminated for default by the municipality, in addition to other possible payments upon termination,³¹ the municipality would have to pay back to the concessionaire a part of the up-front payment (and any initial working capital investment) that the concessionaire made. The amount to be paid back in any year would equal the present value of the remaining net cash flow of the concessionaire, based on the pro forma cash flow statement attached to the bidder's proposal, in which the present value of the net cash flow over the entire initial period would equal the full transfer payment made (plus any initial working capital investment).^{32,33} (The pro forma financial statements would be subject to scrutiny during the last part of the bidding process – see section 6.3).

This scheme, in the context of the proposed PSP arrangement, has a number of positive features:

- Most important, no matter how high the bid, the concessionaire will receive sufficient remuneration, year by year, to be able to carry on with the concession. This will reduce pressure on the municipality to renegotiate the terms of remuneration if the concessionaire finds that it is making losses; these will be lost returns on equity (a sunk cost), not deficits in cash flow needed for current O&M.³⁴ In turn, this increases the likelihood that bidders will take their bids seriously when they make them, which is what we want. In other words, it takes care of the problem of low balling that might occur when the tariff level is used as the price criterion.

This is similar in concept to a method developed in Chile for toll roads (see Gómez-Lobo and Hinojosa 2000). A minimum toll level is set based on the engineers' estimate of reasonable costs. Bidders can bid down to that level but then, if they want to increase their financial score beyond that, they must bid a transfer payment to the government. This removes the increasing risk of future financial distress that arises when firms can bid as low as they like on tariffs or tolls.

- If the bidding criterion were instead the amount of remuneration to be paid to the concessionaire, or alternatively the amount of remuneration other than that coming from tariffs (i.e. the amount of subsidies), a number of problems could arise.
 - If the criterion is the amount of incentive payments, one first has to fix the performance level being used as a reference. Then, in order to diminish the amount of incentive payments, either one has to diminish the strength of the incentives (i.e.

³¹ A subject for ORT#1.

³² The idea here is that the net cash flow to the concessionaire over the initial period recovers the initial investments that the concessionaire has made – namely, the up-front payment and any initial working capital. The present value of the net cash flow at any point in time in the pro forma cash flow statement represents the expected unrecovered part of the initial investment. This is what the municipality must pay to the concessionaire.

³³ To give more comfort to the concessionaire, the transfer payment could be put into a separate sub-account which would be drawn down according to a schedule that would leave the balance at any time equal to the (declining) required termination payment.

³⁴ For this reason, the concessionaire would be required to make the up-front payment from shareholder equity or subordinated debt, not from third-party senior debt.

the slope of the incentive payment function) or the point at which the incentive payments kick in (i.e. the intercept of the function). But making either one of these adjustments changes the ex post incentives (i.e. the incentives the concessionaire faces once the contract starts) and could have undesirable consequences.³⁵

- If the criterion is instead the base remuneration that the concessionaire receives, there is a risk that the overoptimistic bidder (the one who counts on higher incentive payments) will end up facing the prospect of losses later on – similar to the typical problem faced when the bidding criterion is the tariff level.
- If the concessionaire pays all tariff receipts to the segregated account and then receives remuneration from the account, decisions about the acceptable tariff level and its climb path in these early years can be clearly separated from decisions about the remuneration to be paid to the concessionaire. And if the bidding is conducted in the proposed manner, the bid does not affect the tariff level or climb path. This is preferable.
- The scheme ensures that the up-front payment made by the concessionaire is put back into the system. It does not flow elsewhere, as in some privatization transactions.
- There is less likelihood that the transfer payments offered by bidders will diverge greatly from what was estimated by the advisors since the concessionaire does not directly finance capex – i.e. there is less of a reason for a large mismatch between the advisors' and the bidders' estimates of the concessionaire's future costs.
- Some bidders may complain about this method, but given that the initial period is not a stand-alone contract but the first phase of a long-term concession, it is appropriate that bidders should be willing to put some money on the table. It shows their seriousness. It is important to screen out companies interested in only consultancy or management-type contracts.

One criticism of this approach would be that an up-front transfer payment involves equity and therefore the concessionaire will require, and price in its bid, an equity return. Bidding on the lowest remuneration (e.g. lowest tariff) does not involve the concessionaire's need to finance an up-front payment. (But note that the bank guarantees required by the public authority should be higher in this case, and this too has a cost.) An alternative would be for the bidder to bid periodic payments to be made to the municipality instead of one up-front payment (like the "canon" payment used in some Latin American countries), where these periodic payments are backed by a solid bank guarantee. In theory, there should be no difference in cost, but in practice there might be. One drawback is that this would involve the administrative hassle of calling the guarantee; in contrast, the beneficial effect of up-front equity operates automatically.

On the other hand, in response to this criticism, it can be pointed out that we are not talking about large amounts since the up-front payment is designed just to serve as a bidding criterion and not to raise large sums of money, as in some privatization transactions.

³⁵ This is an example of the classic problem of trying to use one policy instrument to accomplish two objectives.

One of the useful features of this approach is that it is applicable without modification regardless of whether the arrangement needs to be subsidized or is entirely self-supporting from tariff revenue. It is not an “OBA scheme” per se. This brings out a confusion that sometimes appears to be made in discussing output-based aid (OBA). There really are two separate issues: (i) how to incentivize the private company so that it performs well; (ii) whether the arrangement requires external funding or can be financially self-supporting. When the concessionaire is remunerated solely by the tariff revenue it collects, it may seem that the only way to give an extra incentive is through OBA. The approach proposed here makes it clear that we really should be talking about output-based *remuneration*, regardless of where it comes from.³⁶ The concessionaire does not have to worry about a separate set of drawdown procedures dealing just with the OBA funds.³⁷ In its contract, it sees only a unified set of provisions concerning remuneration.

Annex 4 presents a set of fictitious cash flows to illustrate how this method of remuneration and bidding would work.

6. ASSESSMENT OF THE TECHNICAL PROPOSAL

6.1 Introduction

This report does not deal with the contents of the technical proposal. This is an issue involving considerable detail that depends to a large degree on features of the particular transaction. It may be more useful to look at what purpose is to be served by the technical proposal. Public authorities and their advisors should be clear *why* they are asking for this information. Three of the possible reasons for requiring a technical proposal are as follows:

- (A) The proposal demonstrates that the bidder has a good idea about what is entailed in the requirements, has carefully thought about and worked through how it will undertake the required activities and the resources it will need, and has priced its bid accordingly.
- (B) The proposal includes valuable features that are then incorporated into the contractual requirements.
- (C) Certain aspects of the proposal give the public authority more confidence that the bidder will perform better than others, especially in ways that are difficult or impossible to specify explicitly in the contract or to enforce.

In our view, (A) is the only reason that is relevant in the concession selection process that is described in this report. The material that the bidder is asked to submit and the method of assessing the submission should be directed to this purpose.

³⁶ Needless to say, even though these funds are in principle fungible, particular MDBs or BDBs may want their contribution to be earmarked for incentive payments to the concessionaire rather than for some other use.

³⁷ But it would probably have to deal with special drawdown procedures related to *procurement* funded by the MDB or BDB.

Reasons (B) and (C) are relevant only if the technical proposal and the price proposal are going to be scored together using, e.g., a merit point system. They are for fine tuning; it would not make sense to use them in a pass/fail manner.

Reason (B) can be important in some types of projects. But given all the uncertainties that pervade the early years of a water system concession, what is most desired is flexibility of response and the ability to adapt. We want to minimize a focus on the details of specific inputs and instead rely primarily on outputs. For example, it would probably be ill-advised to value a concession proposal more highly because the bidder specifies the particular type of billing software it intends to use, and then hold the bidder to that software by including it as a requirement in the contract. It may well be that, after learning more about system, the concessionaire decides that another type of software is more suitable.

In any case, (B) makes sense only if the desirable features are then incorporated into the contract in a binding manner. All too often, however (and especially when using merit point systems), evaluations are carried out in which a bidder is given high marks because of its impressive intentions, but then this is not made binding in any way.³⁸

With respect to (C), there is no doubt that the municipality would like to have a better indication of the capability and disposition of the concessionaire to perform well, even in ways that are impossible to set out explicitly. E.g.: How smooth will the cooperation be? How much time and effort will be wasted in wrangling with the concessionaire over every little detail? Will the concessionaire behave in a highly opportunistic way during price reviews? But we do not believe that the best way to address these issues is through multi-criteria scoring or at the bid evaluation stage. It will be helpful to look at this issue more closely in the next section.

6.2 The question of multi-criteria (price & non-price) scoring

The terms of reference for this ORT sub-project highlighted two areas to which special attention should be given: introducing multiple criteria into the bidding process and addressing multi-period financial evaluations. The documents produced at various stages by the Operators' Roundtable refer to multi-criteria proposal evaluation. In fact, our proposal does indeed use a multi-criteria selection process if the enhanced prequalification procedure is taken into account, but not combined price and non-price scoring. The term "multi-criteria proposal evaluation," however, is often used to mean scoring of non-price factors and then combining the total with the price score using a weighted average, a process often referred to as the "merit point system."

The desire to give greater emphasis to non-price factors in the selection process for a long-term concessionaire is appropriate, especially given the incomplete-contract nature of the PSP arrangement. But there are a number of reasons why we believe the merit point system is not the best way to accomplish this.

³⁸ Simply attaching the technical proposal to the contract is another common practice but one fraught with danger (even if the rest of the contract takes precedence over the proposal) since the language of the proposal is generally fuzzy and carefully hedged ("it is our intention to do X if the circumstances are conducive ..."); this can easily lead to disputes.

It may be helpful to review quickly how typical MDB procurement methods for different kinds of contracts deal with non-price factors and the rationales.

Procurement for works, according to most MDB guidelines, typically relies on a prequalification procedure using bright-line tests with a pass/fail outcome and then looks only at price. Two of the reasons why this is appropriate are (i) the desired product is clearly specified, either in terms of the specifications of plant and equipment or in terms of performance indicators of some kind; (ii) bonding is used to meet deficiencies in performance. The underlying assumption is not that all firms that have passed the prequalification thresholds are *equally* capable of carrying out the works; the assumption instead is that the prequalified firms are all sufficiently capable and that the combination of clear specifications and performance guarantees can remedy any deficiencies that might arise.

Consultancy contracts historically were awarded on the basis of a technical evaluation only. Price was added to the criteria, but in the beginning it was never given a greater weight than 20%. The weighting for price has typically increased over the years but still rarely exceeds 30%. One can see why non-price factors should be so important. The exact specifications of the product (a study, a report, training, advice-giving, etc.) cannot usually be defined with great precision – that is why the consultants' expertise is desired – and so the procurement focuses on choosing the right *consultants* and must therefore try to determine whether the consultants are likely to produce an adequate product. This reason for assessing the technical proposal falls under category (C) in section 6.1. In an interview with a specific consultant or consultancy team who are being considered for an assignment, this kind of assessment is relevant. The person's behavior in the interview can give good signals about how they will perform on the job.

Stepping outside the world of the MDBs and BDBs, sometimes a merit point system involving both price and non-price factors is used in the procurement of goods or works. It is interesting to examine the cases in which this is used. It can be used, for example, in the procurement of specialized good or systems – e.g. certain IT systems. In these cases, the goods that different bidders supply vary in certain attributes other than price, and this difference has to be taken into account somehow in the evaluation process. The non-price aspects relate to features of the equipment, not of the suppliers, and these attributes are contractible. The rationale for this use of multi-criteria methods falls under category (B).

How does all of this relate to the selection process for concessionaires? The question is why (C) would not be a good rationale for using multi-criteria scoring. With respect to personnel, there is little doubt that the management team fielded by the concessionaire is one of the most important elements contributing to the success or failure of the venture. If we could bind specific people to be in the team for even the first five years, there would be a strong justification for putting them through rigorous scrutiny, including extensive interviews, and relying heavily on non-price factors related to the specific people evaluated. But in practice it is difficult to bind them into the arrangement. By the time the concessionaire is ready to start up, if it proposes another person as general manager, it is unlikely at that time that the municipality will try to terminate the contract because it refuses to approve a replacement proposed by concessionaire.

So we come back to the idea that the municipality is choosing a *company* and must make its choice based on characteristics of the company, especially since the time period is perhaps 25

years rather than just five. But there may be little relation – and even little contact – between the staff in a company who write the technical proposal and the people who run the particular concession. Once a certain threshold of competence has been shown to be met, it is not clear, beyond that, what the relation is between the fine-sounding words in a proposal and the ultimate ability of the company to perform. Assessing the capability and disposition of a company to perform well on a set of activities as broad, complex, and varied as those involved in running a water company involves too much uncertainty for it to be treated in the fine-tuned way that the merit point system presupposes. Trying to accomplish this achieves nothing more than specious precision.

We just cannot predict very well how different companies will perform in the future. The best we can do is to address this issue at the prequalification stage by making a rough cut and taking only the companies that look the most promising, and then by treating the initial concession period as a continuation of the selection process.

There is another problem in using non-price factors in the evaluation. The company's past experience and business potential are surely the aspects we would want to assess. These are the same criteria we have proposed for the prequalification stage. So we are able to do the qualitative part of the evaluation at the prequalification stage, since we have all the relevant information then. There would be no need to wait, and in fact, good procurement practice would say that we should carry out the scoring on the non-price factors and reveal the results to the prequalified bidders at that stage. It would not be fair to make bidders bid without their knowing this, and furthermore, we would want to reveal it because of the strong probability that it would leak out anyway. But what would the effect be? Will a bidder who sees that it has a lower non-price score simply drop out or will it bid even more aggressively to try to compensate? This would appear to bring more complications to the bidding process.

Even if we did decide to use the merit point system, there are a number of other reasons to be cautious in using it. Multi-criteria scoring or ranking procedures require highly expert design and management if they are not to produce irrational or arbitrary results.³⁹ Two aspects that need to be set right are the following:

- The values attached to different non-price attributes and their relative weighting need to be carefully calibrated. The danger is great that the particular scheme adopted will be highly arbitrary. Some research suggests that this calibration is best accomplished through a systematic and time-consuming process of pairwise comparisons; but this is generally not done in conventional procurement. Furthermore, the most common method presumes that trade-offs between attributes are linear. But non-price attributes can interact in much more complex ways.
- In the same vein, the trade-off between price and non-price factors needs careful consideration. The weights given to each are important but so are other things – e.g. the

³⁹ E.g., see the *Multi-Criteria Analysis Manual* prepared by a team from NERA for the U.K. Department of the Environment, Transport and the Regions, http://www.odpm.gov.uk/stellent/groups/odpm_about/documents/page/odpm_about_608524.hcsp (accessed on 30 August 2004).

spread of the non-price scores along their scale.⁴⁰ Moreover, rarely do advisors work with the evaluation committee using various “what if” scenarios to make sure that the trade-offs made are intuitively reasonable.

Another reason for avoiding the merit point system in bid evaluation for concessions is that the discretionary aspects that are inevitable in this process are more easily subject to abuse at this stage than at the prequalification stage. The intensity of the pressure or influence will be much greater when it is a question of making one company win rather than simply assuring its inclusion in a shortlist of five, if the process would be virtually incapable of being influenced after that. This is well understood in procurement practice and is the reason why more discretion has traditionally been tolerated at the prequalification stage than in bid evaluation.

Related to this point is the public perception of fairness and integrity. Even if a judgmental multi-criteria evaluation has in fact been carried out to the highest standards, it will be more open to attack than a bid evaluation based on clear quantitative criteria. The risk of arbitrariness and specious objectivity is too high to recommend using the merit point system in the evaluation of bids as a general rule for the procurement of concessionaires in the Bank’s countries of operation. The documents from the ORT meetings call attention to the need for high perceived transparency in the selection procedure to enhance the political acceptability of the PSP deal. This is much more easily achieved if the ultimate selection of the winning bidder is made on the basis of fully objective, quantitative criteria.

6.3 Implementation assessment

In the selection method proposed in this report, there are two steps at which a review of the bidder’s technical proposal takes place. The first step is part of a rapid examination of all bids to see how they stand in relation to the specific requirements set out in the bidding documents. The purpose of this preliminary examination is to determine whether:

- the bid is complete;
- the documentation has been properly prepared and signed;
- the bid is substantially responsive to the requirements of the bidding documents and constitutes an adequate basis for carrying out the implementation assessment.

A *substantially responsive* bid is, in procurement terminology, one that conforms to all the terms, conditions, and requirements of the bidding documents, without material deviations or reservations. Bids that are not substantially responsive are rejected.

This report proposes that the next step in the assessment of the technical proposal should take place *after* the price evaluation. This is what we refer to as the *implementation assessment*. The in-depth scrutiny of the technical proposal is reserved for the bidder with the best price bid. Since this is very intensive work, it would be a waste of time to carry out the process for all bidders. Moreover, experience indicates that the technical evaluation team will take this exercise

⁴⁰ E.g., it is impossible to say how strong the influence of the technical scores is in an overall weighting of 70:30 without knowing what the spread of the technical scores is.

much more seriously if they know that the bidder they are looking at will indeed be the concessionaire if they give the green light.

If the first-ranked bidder is rejected after the implementation assessment, then the process would be repeated for the next-ranked bidder, based on its price bid.

The purpose of the implementation assessment is to examine whether the bidder has demonstrated that it is capable of satisfactorily implementing the contract.⁴¹ Is the entire bid, including the financial, technical, and scheduling proposals and assumptions, internally consistent and feasible in the context of the requirements of the contract, the operational conditions, and the identified risks? Especially important is to see whether the bid price is consistent with the technical aspects, and whether these aspects are reasonable. The aim of the assessment is also to identify unacceptable risks resulting from any aspect of the proposal. Put simply: Is it likely that the bidder can do all that is needed to perform in the desired way?

One important part of the assessment is to look carefully at the assumptions the bidder has made about its performance and costs to see how realistic they are.⁴² An interesting approach taken in the Dar es Salaam selection process was to require bidders to present special justification if their assumptions about certain key performance variables differed by more than 10% from the indicative figures set out in the bidding documents.

There are two types of direct outcome of the implementation assessment. First, in some cases, it might be that on close scrutiny, the proposal begins to unravel and it becomes clear that the bidder has not worked through carefully enough what is required for the contract. This would suggest that the bidder is not a desirable contract partner. So, even if this would be a rare occurrence, it might happen that the first-ranked bidder is rejected through this process.

Second, it is likely that the detailed scrutiny of the bid will lead the municipality and its advisors to see that certain aspects of the contract need to be made more explicit or more elaborate. In the face of newly identified risks, for example, the municipality might want to add some items to those that will be monitored on a periodic basis. Contract modifications of this sort should be allowed during final negotiations so long as they are not material, in the sense that they could have had a significant effect on the bid prices if they had been introduced into the contract before bidding.

The *indirect effect* of including a rigorous implementation assessment in the selection process is arguably the most important aspect for a transaction like this. Bidders would be expected to give more attention in the bid preparation process to working through the details of activities, costs, and expected performance if they know in advance that the winning proposal will be subject to this kind of intense scrutiny.

⁴¹ It is also important to examine at this stage whether the bidder still satisfies the basic prequalification requirements.

⁴² In the proposed bidding method, involving an up-front transfer payment (which will then be a sunk cost for the bidder), we are more concerned about the bidder's assumptions about performance and costs than about exactly how it arrived at the amount of the transfer payment to be made – e.g. whether the discount rate used seems the most appropriate.

At the conclusion of the implementation assessment, if the municipality concludes that the bidder can implement the contract adequately over the initial concession period, a positive evaluation report is prepared and authorization is sought from the relevant authority to enter into final contract negotiations.

One argument against the method proposed above – and in favor of the usual method, which involves a pass/fail technical evaluation of all bids before prices are considered – is that the evaluators might have a bias (conscious or unconscious) against rejecting the bid that has been declared the best price bid and that they would be able to be more objective in their scrutiny if they did not know the outcome of the price evaluation. This issue deserves more investigation. In any case, this aspect of the report is not essential to the central ideas being proposed.

7. POSITION OF THE BANK’S PROCUREMENT DEPARTMENT

It is important to examine whether the proposals presented in this report would be consistent with the World Bank’s present procurement policies, rules, and practices. The Bank’s Procurement Guidelines do not go into detail concerning the requirements for the procurement of concessions. Since more flexibility may be needed than in the procurement of ordinary goods, works, and services, the basic rule for BOTs, concessions, etc., is that international competitive bidding (ICB) procedures that are “acceptable to the Bank” must be used (para. 3.13(a)). This is further interpreted by the procurement department in notes and instructions and applied on a case-by-case basis. See especially Araujo (1998).

The following, based on an exchange of emails and discussions with the Bank’s procurement department, sums up our best understanding of their current position. There are two areas where the proposals in the report appear to conflict with the present position of the Bank’s procurement department.

- ***Judgmental criteria.*** The procurement department requires that prequalification for concession contracts must take place on a pass/fail basis, determined purely by objective criteria (e.g. quantitative thresholds), and must be carried out without limiting the number in the shortlist to a pre-specified maximum. This mirrors the Bank’s procurement requirements for a works contract.

The proposal in this report for an explicit use of *judgmental* criteria in shortlisting candidates would appear to be in conflict with the position of the procurement department. Removing the judgmental aspect would undermine the entire approach towards prequalification and shortlisting described in this report. The view taken in this report is that it is not appropriate to use only bright-line criteria to shortlist candidates for the kind of long-term business relationship governed by a highly incomplete contract that typifies a water system concession. No set of bright-line tests can suffice.

The idea of restricting the shortlist to a pre-specified number of bidders would also conflict with the position of the procurement department, but this idea was included in the present report simply because it is accepted international practice for concession-type contracts because of high bidding costs. It is not at all a novel recommendation and is not intrinsic to the new approaches suggested in this report.

- ***Mutual convenience termination clause.*** The Bank’s procurement department would object to a clause giving either party the right to a convenience termination at a fixed date (i.e. at the end of the initial period). Their objection concerns giving the *concessionaire* this right. It is not clear whether their objection would apply only to a convenience termination in which the payment to be made by the concessionaire were less than the payment it would have to make if the public authority terminated for default by the concessionaire or whether it would apply to *any* provision allowing the concessionaire to terminate *without cause* at the end of the initial period, regardless of the amount of the termination payment. In this context, the procurement department notes that termination for convenience is normally reserved to the government with due compensation to be made to the concessionaire.

The Bank’s procurement department would have no objection in principle to a two-phase concession arrangement with a different allocation of responsibilities and risks for each phase (as proposed in this report), provided that the terms and conditions are set out in the original contract and the concessionaire is competitively selected for the entire term.⁴³

8. SUMMING UP

The proposals in this report have three main drivers:

- the incomplete-contract nature of most long-term concession agreements;
- high risks during the initial period because of poor information about many aspects of the system;
- high risks during the initial period due to all the problems involved in getting to know a new partner, a new contract, and for the concessionaire a new political, social, and institutional environment.

With respect to the last two points, if the parties can make it through the first five years and emerge with a good working relationship, there is a good chance that the concession will be on a solid footing.

This report tries to summarize existing good practice in a number of areas and also makes some suggestions where there is no generally agreed good practice. It then goes further and proposes a few novel solutions that respond to the drivers noted above:

- an enhanced prequalification procedure;
- bidding on an up-front payment, as in a privatization transaction;

⁴³ A mandatory guidance note in Annex 11 of the Consulting Services Manual addresses the question of how to deal with the conflict of interest when an incumbent management contractor bids on a subsequent concession or lease contract. But that note is written in the assumption that there will be bidding on the new arrangement and does not discuss the possibility that both phases might be set out in the original contract.

- a distinct regime shift after an initial period of 3–5 years, with capital expenditures to be financed by the public authority during the initial period;
- delinking tariff revenue from the remuneration of the concessionaire during the initial period;
- a price bid that explicitly covers only the initial period.

The ideas proposed in this report are not intended to be definitive answers to the problems that plague water concessions today. The purpose of this report will be served if it helps people think in new directions.

PREQUALIFICATION AND BID EVALUATION: KEY FEATURES OF SEVERAL TRANSACTIONS

Assessment of prequalification submissions

Transaction	Main criteria	Pass/fail or ranking?	Method	Comments
Manila (1997)	<ul style="list-style-type: none"> • International operator: proven experience and expertise • Local sponsor: financial strength and management capability • Each of international and local: minimum net worth 	Apparently ranking, since the initial list of about 50 candidates was narrowed down first to seven and then to the final four bidders.	N.A.	
Guayaquil (1999)				<i>[Do not have information about prequalification.]</i>
Sofia (1999)	<ul style="list-style-type: none"> • Experience • Financial capability • Implementation approach • Discussion of key issues 	Not stated explicitly, but says that output will be “shortlist,” and that “limited number” will be pre-qualified, so presumably ranking of some kind.	States that the prequalification statements will be evaluated with reference to the given criteria. Criteria are judgmental rather than bright-line.	
Çeşme-Alaçatı (2000)				<i>[Do not have information about prequalification.]</i>
Tallinn (2000)	<ul style="list-style-type: none"> • Experience • Financial capability 	Pass/fail on each criterion.	Quantitative thresholds.	Restrictive criteria for experience: e.g. management control over water companies in at least 4 countries.
Dar es Salaam (2001)				<i>[Do not have information about prequalification.]</i>

Evaluation of bidders' proposals

Transaction	Technical evaluation			Price criteria**	Combining technical and price	Comments
	Main criteria*	Pass/fail or scoring?	Method			
Manila (1997)	[?]	Pass/fail.	[?] Involved clarification meetings with each bidder.	Tariff level (single number).	N.A.	Two-envelope system. Technical compliance determined first; then financial envelopes were opened.
Guayaquil (1999)	None.	N.A.	N.A.	Greatest number of new connections to be installed during first 5 years.	N.A.	
Sofia (1999)	<ul style="list-style-type: none"> • Quality of technical, commercial, and financing proposals. • Ability to meet service standards. • Robustness of financing plan. 	Scoring.	Says scoring matrix will be used, but no details given in bidding document. Max. possible score for each of 5 categories given in document.	Lowest levelized real tariff over full concession period. Risk adjustment could be applied (judgmental) based on due diligence review of financial model.	Weighted average scoring, after eliminating all but the best financial bids (precisely defined). Strong influence of financial score.	
Çeşme-Alaçatı (2000)	<ul style="list-style-type: none"> • Workplan • Staffing plan, including CVs 	Scoring. Detailed maximum scores given in bidding document.	Judgmental criteria for each sub-category.	Lowest present value of tariffs.	Price criterion is sole determinant for proposals scoring over threshold value in technical evaluation.	

Evaluation of bidders' proposals

Transaction	Technical evaluation			Price criteria**	Combining technical and price	Comments
	Main criteria*	Pass/fail or scoring?	Method			
Tallinn (2000)	None	N.A.	N.A.	Weighted combination of share price offer (positive effect) and proposed annual tariff increase (neg. effect).	N.A.	
Dar es Salaam (2001)	<ul style="list-style-type: none"> • Understanding of key issues • Approach to management and organization • Approach during mobilization • Approach for achieving standards • Realism of technical assumptions • CVs of senior positions • Strategy for procurement of equipment 	Pass/fail.	Assessment of achievability, robustness, consistency, etc.	Lowest proposed tariff.	N.A.	Verification carried out of consistency between technical and financial proposals.

* This does not refer to criteria that merely establish the substantial responsiveness of the proposal, even if the items to be examined are contained in a “technical” part of the proposal.

** Includes other types of quantitative criteria that play the same role as price criteria.

INDICATIVE INSTRUCTIONS FOR PREPARING A REFERENCE CASE

This check list is indicative only and would need to be modified and developed in more detail to be used in an actual selection process.

The City understands that quantitative data concerning some of the points below may not exist or may be spotty and unreliable. Any qualifications about the reliability or meaningfulness of the quantitative data should be made explicit and highlighted by the candidate. This will not be held against the candidate.

In the same vein, the City understands that disagreements or disputes between the candidate and a particular public authority are not necessarily an indication that the candidate has performed poorly or is prone to have difficult relations with public authorities in general.

The candidate should attempt to anticipate and respond to any major criticisms that the relevant public authority might raise.

Failure to submit material information about any aspect of the case may be held against the candidate.

Numbers in parentheses after each heading below indicate the *maximum* number of pages (12 point Times New Roman font, A4 paper) that should be needed for that section. Candidates may write more or less than this number for any particular section, as needed, so long as they respect the overall page limit, which is 20 pages, *excluding* the cover page, table of contents, and attachments (see final bullet point). The City reserves the right not to read beyond the 20th page.

The subheadings preceded by “–” are indicative only and should not be followed slavishly: the candidate should write what it thinks is most appropriate for each major heading (preceded by “•”), making sure, however, that all the subtopics are covered in one way or another. Candidates may use tables to convey quantitative information if they believe that this would be more convenient for the reader.

- **Basic information about the system** (3 p.)
 - Brief information about the physical system for water and wastewater services at the time the PSP arrangement started
 - Condition of the physical system, quality of services, etc., at start of arrangement
 - Other typical indicators (e.g. % service area covered by the services)
 - Institutional framework (who owns assets, who granted the contract or license, etc.)
 - Tariffs before the start of the PSP arrangement
 - [Etc.]
- **The PSP arrangement** (3 p.)
 - Type of arrangement
 - Key responsibilities of each party

- Tariff setting arrangements
- Setting of service standards
- Arrangements for capital expenditures
- Arrangements for monitoring of performance, contract oversight, etc.
- Dispute resolution; regulation
- **The candidate's involvement** (1 p.)
 - Role of the candidate in the PSP arrangement
 - How did the candidate become involved (e.g. competitive bidding; single-source negotiated agreement)
 - Describe the long-term and short-term personnel fielded by the candidate, year by year
- **Brief overview of the course of performance to date** (4 p.)
 - Management issues
 - Levels of service
 - Tariffs
 - Capital investments
 - Penalties, liquidated damages, deficiency points, incentive payments, etc.
 - Other aspects of performance
 - Major renegotiations
 - Crises, extraordinary events, etc.
 - Any evidence or indications of customers' opinions
- **Typical performance indicators over time** (4 p.)

The candidate should give whatever data are available concerning these indicators (or closely related indicators) and present and discuss anything that is needed to be able to properly interpret the data and to understand how they reflect (or do not fairly reflect) the candidate's performance or effort. If such data exist, they should be presented starting from at least one year before the beginning of the candidate's involvement.

- Percentage of population in service area covered
- Unaccounted-for water (breaking down into components, as appropriate)
- Compliance with water and wastewater standards
- Number of burst mains
- Number of incidents of sewer flooding
- Revenue collection efficiency
- Number of company personnel
- [Etc.]
- **Evidence of efficiency gains** (2 p.)
 - Is there any quantitative or qualitative information that would shed light on any efficiency gains (e.g. cost reductions or quality improvements) that have occurred since the candidate's involvement?

- **Main accomplishments and innovations made by the candidate** (2 p.)
 - Describe and discuss.
 - Indicate if the candidate believes that the relevant public authority would have a different opinion from that expressed by the candidate.
- **Disagreements or disputes with the public authority** (2 p.)
 - Describe and discuss any major disagreements or disputes, including any that have gone through the required dispute resolution mechanisms
 - What is the outcome?
- **Other important information** (2 p)
 - Among other things, difficulties encountered, their causes, attempts to overcome them
- **Overall strengths and weaknesses of the candidate as demonstrated by this case** (1 p.)
- **ATTACHMENTS: any relevant articles, papers, or reports, written by *independent* third parties (journalists, scholars, development banks, etc.), about this PSP arrangement** (no page limit)

OUTLINE FOR BUSINESS QUALIFICATION STATEMENT

This outline is indicative only – not an example of the fully detailed points that would be used in an actual qualification assessment. The topics are meant to be suggestive. The City’s advisors would need to develop this outline in greater detail. Indicative or mandatory page limits might be given also.

“Candidate,” as used below, means the company or group of companies that will sign the concession agreement; give an unqualified guarantee of the concessionaire’s obligations; or be the controlling shareholder in the concessionaire and provide acceptable assurances of its continuing ownership stake [*to be specified more precisely*]. “Candidate” also includes any subsidiaries in which this company has a clear controlling interest.

- **Brief profile of candidate**

- History
- Corporate structure
- Activities; recent changes
- Affiliates
- Strategic alliances with other companies
- If the candidate is a joint venture, any previous joint venture arrangements or alliances involving any of these same companies

- **Organizational structure and management**

- Approach to corporate governance
- Policy and practice of recruitment of senior staff for overseas operations
- Policy and practice relating to management information systems
- Internal audit policy and practice (independence, reporting to the board)
- Reporting of compliance with respect to the company’s stated corporate governance and business standards policies
- Summary of strengths and weaknesses

- **Corporate strategy**

- How the candidate fits into the industry, their competitive advantages (e.g. any proprietary technology), core competences, etc.
- Stated corporate strategy and that evidenced by past behavior
- Marketing strategy: geographical areas, types of clients, types of contracts, etc.

- **Position within the industry: market standing**

- Market share
- Reputation

- **Specific markets**

Major operations in the candidate's portfolio:

- What are they? What types of operations are they? Where are they (what countries, what cities)? How long have they been in operation?
- How much of the candidate's revenue comes from each operation, from each country?
- What changes have there been in the portfolio over the past five years? Reason for any withdrawals from operations.
- How stable are conditions in the relevant countries: political stability, macroeconomic strength and stability, etc.?
- Recent events in these countries evidencing the governments' attitudes towards private sector utility companies, foreign involvement in infrastructure, the particular companies, etc.

- **Financial strength**

- Recent credit ratings and rating reports (S&P's, Moody's, etc.)
- Ability to raise financing – evidenced, e.g., by recent equity subscriptions, bond issues, and bank loans
- Audited financial statements for the past three years
- Any unreported contingent liabilities or losses that would require disclosure under International Accounting Standards
- Any material pending or threatened litigation or other legal proceedings
- Statement by the candidate describing how they intend to raise the financing needed for the long-term concession regime, citing recent relevant experience

- **Future challenges and risks, and assessment of the ability of the candidate to cope**

- With respect to coping ability: among other things, evidence of past flexibility in responding to changing circumstances

ILLUSTRATIVE CASH FLOWS RELATING TO THE BID PRICE

This annex presents an illustration of how the up-front transfer payment made by the concessionaire (which is the suggested financial criterion used in bid evaluation) is derived, based on the expected remuneration of the concessionaire (see section 5 of the main body of the report). The illustration also shows the source of the concessionaire's remuneration and funds for the investment program. The figures used are purely for the purpose of illustration and bear no relation to any real project. The pro forma cash flows are given in the table on the next page.

The concessionaire is paid a *base remuneration* and *incentive payments*. The incentive payments would be based on the concessionaire's performance along a number of dimensions. Bidders are given details in the bidding documents about how their remuneration will be calculated. They determine the expected incentive payments they will receive, based on their expected performance, and their expected O&M costs. It is on the basis of their expected (or perhaps conservatively estimated) surplus net cash flow that bidders determine the maximum up-front transfer payment that they are willing to bid. In the illustration, they bid a value of 10.

The city sets a schedule of customer tariffs in advance based on willingness-to-pay studies, indicators of social acceptability, etc. The tariff level might be linked to improvements in levels of service along key dimensions, in line with increased willingness to pay.

Even though the concessionaire's remuneration is also related to performance, customer tariffs and concessionaire remuneration are delinked. The result in the illustration is that in years 1–3 tariff receipts are not sufficient to pay the concessionaire, but in years 4 and 5 there is a surplus left over after paying the concessionaire. The deficit in years 1–3 is made up by payments from an external source – e.g. OBA funds. These external funds are needed to cover the entire incentive payments in years 1 and 2, part of the incentive payments in year 3, and a small part of the base remuneration in years 1 and 2 (the latter being what Marin (2002) calls the “transition” function of OBA – easing transition to cost-covering tariffs).

An investment program also needs to be financed. For the first three years in the illustration, it is entirely funded from external sources. During the last two years, it is partly funded by an increasing surplus of funds from tariffs as the tariff level is increased.

The up-front payment of 10 that the concessionaire makes (i.e. its bid price) is put into the segregated account and is used along with the other funds.

Since these are pro forma cash flows, reality (for this illustration) may turn out to be different – e.g., and especially, the quantities of water sold might be different and the incentive payments might be different. In preparing the concession, sensitivity and scenario analysis would be carried out to determine the extra (stand-by) external funding that might be needed, and commitments from funding sources would be obtained. The important point from the concessionaire's point of view is that the concessionaire does not bear this risk. Under the envisaged PSP contract, the concessionaire has the right to receive the base remuneration and the incentive payments, regardless of what actual customer tariff revenue turns out to be.

Illustrative cash flows relating to the bid price

Contract year:	0	1	2	3	4	5
CONCESSIONAIRE						
Inflows						
Base remuneration from SA		60	65	67	68	70
Incentive payments from SA		5	8	13	18	20
<i>Total inflows</i>		<i>65</i>	<i>73</i>	<i>80</i>	<i>86</i>	<i>90</i>
Outflows						
O&M costs		65	72	78	81	82
<u>Up-front transfer payment to SA</u>	<u>10</u>					
<i>Total outflows</i>	<i>10</i>	<i>65</i>	<i>72</i>	<i>78</i>	<i>81</i>	<i>82</i>
Net cash flow (NPV=0 at 12%)	-10	0	1	2	5	8
SEGREGATED ACCOUNT (SA)						
Inflows						
Tariff receipts		47	60	70	87	93
Up-front transfer payment	10					
External funding received		10	20	20	9	7
<i>Total inflows</i>	<i>10</i>	<i>57</i>	<i>80</i>	<i>90</i>	<i>96</i>	<i>100</i>
Outflows						
Base remuneration to concessionaire		60	65	67	68	70
Incentive payments to concessionaire		5	8	13	18	20
Capital expenditures		2	7	10	10	10
<i>Total outflows</i>		<i>67</i>	<i>80</i>	<i>90</i>	<i>96</i>	<i>100</i>
Net cash flow	10	-10	0	0	0	0
Cash balance	10	0	0	0	0	0
USES OF EXTERNAL FUNDING						
Towards capital expenditures		2	7	10	9	7
Towards incentive payments		5	8	10	0	0
Towards base remuneration		3	5	0	0	0
<i>Total</i>		<i>10</i>	<i>20</i>	<i>20</i>	<i>9</i>	<i>7</i>

REFERENCES

- Araujo, Armando Ribeiro. 1998. "Procurement in Privately Provided Infrastructure (PPI) Projects Financed by the World Bank." Discussion Paper. Operational Core Services, Procurement Policy and Services Group. March. World Bank.
<http://rru.worldbank.org/Documents/Toolkits/Highways/pdf/85.pdf> (accessed on 30 November 2004).
- Arrowsmith, Sue. 1998. "National and International Perspectives on the Regulation of Public Procurement: Harmony or Conflict?" In Sue Arrowsmith and Arwel Davies, eds., *Public Procurement: Global Revolution*. London: Kluwer Law International.
- Bajari, Patrick, Robert MacMillan and Steven Tadelis. 2002. "Auctions versus Negotiations in Procurement: An Empirical Analysis." Department of Economics. Palo Alto, CA: Stanford University.
- Gómez-Lobo, Andrés and Sergio Hinojosa. 2000. "Broad Roads in a Thin Country: Infrastructure Concessions in Chile." Policy Research Working Paper, no. 2279. Washington, DC: World Bank.
- Hammond, John S., Ralph L. Keeney, and Howard Raiffa. 1998. "Even Swaps: A Rational Method for Making Trade-Offs." *Harvard Business Review* (March-April).
- Kelman, Steven. 1990. *Procurement and Public Management*. Washington, DC: AEI Press.
- _____. 2002. "Remaking Federal Procurement." Working Paper No. 3. Kennedy School of Government, Harvard University. Cambridge, MA.
- Klein, Michael. 1998. "Bidding for Concessions." Policy Research Working Paper no. 1957. Private Sector Development Department. Washington, DC: World Bank.
- Littlechild, Stephen. 2002. "Competitive Bidding for a Long-Term Electricity Distribution Contract." *Review of Network Economics* 1 (no. 1, March).
- Marin, Philippe. 2002. *Output-Based Aid: Possible Applications in the Design of Water Concessions*. Washington, DC: World Bank.