



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會



REFERENCE MATERIALS

ON REASONABLE CONSULTANCY FEE EVALUATION SYSTEM

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Preface

The Construction Industry Council (CIC) is committed to seeking continuous improvement in all aspects of the construction industry in Hong Kong. To achieve this aim, the CIC forms Committees, Task Forces and other forums to review specific areas of work with the intention of producing Alerts, Reference Materials, Guidelines and Codes of Conduct to assist participants in the industry to strive for excellence.

The CIC appreciates that some improvements and practices can be implemented immediately whilst others may take more time for implementation. It is for this reason that four separate categories of publication have been adopted, the purposes of which are as follows:

Alerts	The Alerts are reminders in the form of brief leaflets produced quickly to draw the immediate attention of relevant stakeholders to the need to follow some good practices or to implement some preventive measures in relation to the construction industry.
Reference Materials	The Reference Materials are standards or methodologies generally adopted and regarded by the industry as good practices. The CIC recommends the adoption of the Reference Materials by industry stakeholders where appropriate.
Guidelines	The Guidelines provide information and guidance on particular topics relevant to the construction industry. The CIC expects all industry stakeholders to adopt the recommendations set out in the Guidelines where applicable.
Codes of Conduct	The Codes of Conduct set out the principles that all relevant industry participants should follow. Under the Construction Industry Council Ordinance (Cap 587), the CIC is tasked to formulate codes of conduct and enforce such codes. The CIC may take necessary actions to ensure compliance with the codes.

If you have read this publication, we encourage you to share your feedback with us. Please take a moment to fill out the Feedback Form attached to this publication in order that we can further enhance it for the benefit of all concerned. With our joint efforts, we believe our construction industry will develop further and will continue to prosper for years to come.

Purpose

The recommendations stated in the Reference Materials are intended to assist clients in the private sector (i.e., non-profit organisations etc.) in the assessment of consultancy fees with evaluation mechanisms which discourage unreasonably low bids. To achieve this, this document describes the objectives, principles, processes and methodologies to assess consultancy fees.

List of Abbreviations

AACSB	Architectural and Associated Consultants Selection Board
aka	also known as
ALBs	Abnormally Low Bids
CIC	Construction Industry Council
EACSB	Engineering Associated Consultants Selection Board
NGO	Non-Governmental Organisation
PTE	Pre-tender Estimate
QBS	Quality-based System
SD	Standard Deviation

Executive Summary

In view of the growing competition in the construction industry over the recent years, clients in the private sector have been receiving very low bids from consultants to secure jobs. At the same time, Consultants in the construction industry are also faced with fierce competition resulting in low fees, or unreasonably low fees on proposals submitted, which over time could impact the quality of work, adequacy of manpower and the financial stability and health of the industry.

Unreasonably low bid refers to a situation where tenderers aggressively compete against each other over price. There is no defined definition of “unreasonably low bid”, but it is understood that a bid may be considered “unreasonable” if it is below cost that put the delivery of the project at risk. Such unreasonably low bids are seen to have lead to unsatisfactory accomplishment/completion of the assignment and incompetent and/or inadequate resources being deployed by the consultants.

With the above context, apart from identifying unreasonably low fee as good practice, the Reference Materials introduces 3 fee evaluation mechanisms to assess consultancy fees with the aim to assist clients in the private sector. It is primarily targeted at quasi-government organisations, non-profit organisations (NGOs) and the private enterprises. These recommendations include:

1. Quality Based Selection
2. Fee Assessment Scoring Method
3. Average Price Scoring Method

This document describes the principles, features, methodologies and application for each of the recommendations (in Section 3) to allow clients in the private sector to follow the step-by-step guideline for implementing the recommended practices during tendering. The principles behind the recommendations will be explained in detail in Section 3 of the document to allow clients to adopt suitable strategies and methodologies to suit their particular needs.

By implementing the recommended mechanisms, clients in the private sector could help improve project outcomes. The recommendations could also help reduce the variations in the submitted fees, thus preventing the fee component from outweighing the technical aspects of the assessment. Finally, the recommended mechanisms could also disincentivise consultants from submitting unreasonably low bids to secure jobs.

1 Introduction

1.1 Preface

This Reference Materials provide guidance for implementing mechanisms to evaluate the fee component during tender evaluation in appointing consultants. These mechanisms aim to safeguard clients in the private sector against awarding the consultancy service to consultants whose submitted fee is unreasonably low by guiding the client to identify and assess unreasonably low bids with the aim to disincentivise consultants from submitting unreasonably low bids for the purpose of securing jobs.

An “unreasonably low bid” refer to a situation where tenderers aggressively compete against each other over price. There is no definition of “unreasonably low bid”, but it is understood that a bid may be considered “unreasonably low” if it is below cost and puts the delivery of the project at risk. Such unreasonably low bids are seen to lead to unsatisfactory accomplishment and/or completion of the assignment where incompetent and/or inadequate resources being deployed by consultants.

This document is intended to assist the clients in the private sector, including quasi-government organisations, non-profit organisations (NGOs) and the private enterprises, to procure consultancy services. It would be particularly useful for less experienced clients in the private sector who are not in the construction related sector. Detailed background of the Study is under Appendix A.

1.2 Definitions

In this document, unless the context otherwise specifies, the following definitions apply:

Term	Definition
Clients	The party named in an agreement that employs the consultant for consultancy services in the private sector.
Consultants	The party employed by the client to deliver consultancy services.

2 Reference Materials for Consultancy Fee Evaluation

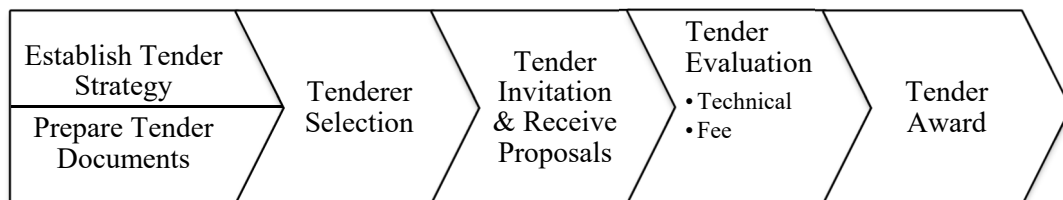
2.1 How to use the Reference Materials

Given the variations in project characteristics, circumstances, and risks, there is no fail-safe selection process that is applicable for all projects. The principles and basis behind the recommendations would be explained in detail so that clients in the private sector could follow the step-by-step guideline to implement the recommended methods during tendering to suit their particular needs.

The content of this report covers the following:

- Background to the subject of fee evaluation in consultancy tender assessment in Hong Kong.
- Principles, features, methodologies and application for each of the recommendations.
- Practical guidance on the implementation of the recommended fee evaluation mechanism.
- Caveats that clients in the private sector have to be aware of when implementing the recommendations.

This document detailed 3 tender fee evaluation mechanisms, some of which could be used in conjunction. Below outlines when to implement each of the recommendations during tendering.



Before scoring the fee component or considering the fee as a determining factor to award the tender, the client could consider carrying out the Abnormally Low Bids Assessment in the tender evaluation process to identify and treat the unreasonably low bids.

When deciding which tender evaluation approach shall be used, the clients could consider using Quality-based Selection or Two Envelope System. Quality-based Selection involves evaluating the technical component of the proposals first, follows by evaluating the financial component.

If Two-Envelope System is adopted as the tender evaluation approach, the lowest price method is usually used to calculate the fee score (i.e., the lowest bid would score the highest on the fee component). To secure jobs, consultant would submit low price bids to achieve high fee score. In addition, it is observed that there could be a large variation in the submitted fees, which could outweigh the technical considerations when evaluating the tender. This report has therefore introduced the

Fee Assessment Scoring Method and Average Price Scoring Method in calculating the fee score.

2.2 Benefits of Adopting the Reference Materials

Although the cost of engaging consultancy services is relatively low comparing to the total project cost, the impact of consultants on project is substantial. Appointing a suitable consultant at an appropriate fee enables the clients in the private sector to improve outcomes of consultancy tender by ensuring the selected consultant can deliver a quality service.

This document aims to provide the clients in the private sector with guidance to evaluate the fee proposals of tenders. By implementing the mechanisms recommended to evaluate the fee component of the submitted consultancy fee, the consequential benefits that could be realised includes:

- Changing construction industry culture by promoting healthier competition among consultants
- Encouraging consultants to submit a price that is economic and can sustain sufficient resources to support the delivery of project
- Disincentivising the consultants in submitting unreasonably low bid to secure jobs. It can reduce the variations in the submitted fees which prevents fee component from outweighing the technical assessment
- Facilitating better decision making by the clients in the private sector by establishing a protocol to evaluate fee
- Reinforcing value-for-money based procurement
- Early identification of project risks, threats, and opportunities

2.3 Various Fee Evaluation Mechanisms in Different Regions

Tender fee evaluation mechanisms in the public and private sectors in different regions were appraised and compared based on desktop research and interviews. Good practices from different regions were identified and further developed to form four recommendations for promulgation to the Hong Kong clients in the private sector in the construction industry. This section summarises the analysis on the various types of fee evaluation mechanism in relation to the recommendations in this document.

2.3.1 Tendering Approaches

There are generally four tendering approaches to engage consultants, namely: Design Competition, Price-based Competition, Quality-based Selection and Two-envelope System. The considerations in deciding the suitable tendering approach are based on the technical complexity, need for innovative solutions and emphasis on technical requirements etc. (decision map in Appendix B1).

Quality-based Selection and Two-envelope System are explicitly elaborated below in the Reference Materials in view of the objective of the document:

Quality-based Selection

This method is considered as one of the prominent method in some regions. It involves evaluation against technical component first, follows review on fee component. The sequence in reviewing the fee component would start from the top-ranked firm in technical capabilities. If agreement cannot be reached with the top-ranked firm, review on the fee component begin with the second-ranked firm. This process goes on until tender is awarded.

Two-envelope System

One of the most commonly used methods across the regions (including Hong Kong) is the Two-envelope System. It requires the tenderers to submit their technical (aka quality, non-financial) and fee (aka financial) proposals separately for evaluation. The tenderer with the highest combined score (adding up the technical and fee scores) is awarded the contract as the proposal is considered to be the most economically advantageous tender offering value-for-money. In general, the more complex the requirements, the more technical components take precedent, and the less influence price should have on the selection of consultant. The weighting allocated to the financial component would be lower.

Two-envelope System is appropriate when the scope of services is clearly and precisely defined in the tender documents so that the consultant can come up with their proposal best fit the clients in the private sector and establish a reasonable resources estimation for the project.

Two-Envelope Tendering Process	
1	<p>Client to consider the following to decide whether to proceed with a construction project and their needs in acquiring consultancy services:</p> <ul style="list-style-type: none"> • Project aspiration, purpose and objective • Project nature (e.g. complexity, type, scale) • Client's requirements and needs • Client's profile, experience and in-house capabilities • Services required to deliver the project • Source of funding and estimated budget • Project timeframe and urgency, and lead-time required
	If No → No further Step. If Yes → Proceed to Step 2
2	<p>Client to prepare the following prior to engaging consultant and decide whether to go for Two-Envelope System:</p> <ul style="list-style-type: none"> • Procurement and Tendering Method • Pre-tender Estimate for consultancy services • Scope of services required and roles & responsibilities • Consultant selection method and criteria • Expected deliverables • Project financing
	If No → No further Step. If Yes → Proceed with Steps 3-8
3	<p>Client has to establish the following and prepare tender documents based on project nature, characteristics, and complexity:</p>

	<ul style="list-style-type: none"> • Relative weightings for technical and fee components (if quality of service is of sufficiently high importance, the Client shall consider giving a heavier weighting for technical component) • Passing mark for individual attributes • Marking criteria and evaluation method for the different components • Mandatory / Minimum requirements
4	Client to issue tender documents requesting identified consultant to submit technical and financial proposals simultaneously in different envelopes. Client might carry out tender briefing session or query sessions to brief tenderer or clarify with the tenderer any questions regarding the tender.
5	Client to carry out formal process to deal with clarification requests during tendering process, if any.
6	Consultants to submit their responses to client with detailed plans on their qualifications and how the consultancy firm would approach the project.
7	<p>Client's tender assessment panel to evaluate the two proposals.</p> <ol style="list-style-type: none"> a) Client would usually evaluate the technical proposal against the selection criteria outlined in tender documents first (such as background, skills, project references, experience of key personnel, management plan and roles) and score the technical proposal accordingly. b) Follows by assessment on fee proposal to score the fee proposed using a formula. The fee scoring approaches identified and studied are highlighted under Section 2.3.2.
8	Client to fill in the marking schedule and justifications to record the decision-making process and award the contract to the highest combined score tenderer.

2.3.2 Fee Scoring Approaches

Four types of fee scoring approaches were identified and analysed, some of which have integrated a measure for unreasonably low bid control. These formulae could be used when the tendering approach involves the calculation of fee score (e.g., two-envelop system).

- **Type A – Lowest Price Method** – Calculate tenderers' fee scores in relation to the lowest received price. Tender with the lowest price will score the highest fee score.
- **Type B – Lowest Price Method with Adjustment Factor** – In addition to Lowest Price Method, this calculation introduces a discounting factor to deduct fee score if the proposed fee falls below a threshold derived by the client based on received fees.
- **Type C – Fee Assessment Scoring Method** – In addition to Lowest Price Method, this method introduces another formula to calculate fee score if any of the received fee falls below a threshold derived from the received fees and with/without PTE. Further details are available under Section 3.2 Fee Assessment Scoring Method.
- **Type D – Average Price Scoring Method:** The highest fee score is given to the tender price closest to the average. Further details are available under Section 3.3 Average Price Scoring Method.

2.4 Assessment of Unreasonably Low Fee

2.4.1 General Principles

The client could consider initiating a review process to identify and treat abnormally low bids when evaluating the tenderers' prices. This mechanism recommends the client to follow a systematic process to gain a better insight of the reasons for the consultant to submit an abnormally low price, and based on the information provided, to justify and decide whether to accept or reject the low bid.

This mechanism can discourage consultants to submit unreasonably low bids by the following: -

- Bringing a clear message to tenderer that the client values reasonably priced bids and tenderers that are submitting unjustified unreasonable low fee will not be considered further.
- Enhancing the process to handle Abnormally Low Bid (ALB) during tender fee evaluation that will better enable them to obtain value for money.
- Introducing a mechanism to review reasonableness of proposed fee and adequacy of resources for carrying out the project.
- Ensuring the price being paid and condition of offer is fair and reasonable.

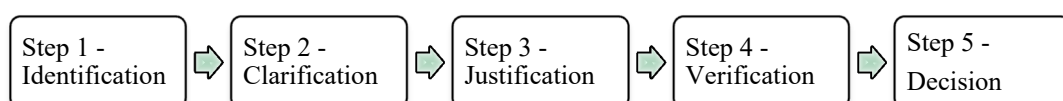
2.4.2 Features and Characteristics

This recommendation involves introducing a proactive and structured process for the client to evaluate the fee appears to be unreasonably low. It encourages the client to go through a process to identify, review, justify and treat unreasonably low bid systematically before scoring the fee component of the tenders. This process enables the client to understand the rationale and underlining reason behind the submission of low bid and helps the client to justify the bid by deciding whether the reasoning received is acceptable to the client.

2.4.3 Methodology

The steps which the client could consider taking are highlighted below if the client plans to introduce the ALB mechanism during their tendering process once the proposed fee(s) are received from the consultants. Nonetheless, in addition to the general procedure mentioned below, the client should also supplement their internal governance procedure as gateways to ensure the decision is well-informed and adequate scrutiny of potential unreasonably low bids.

Procedure to response to Potential Abnormally Low Bids



The client has to establish the process before issuing tender and stringently follow the process during the selection process to prevent any disputes. The information and inputs received from the consultants should be well-recorded and documented. Bid Evaluation Report should include the basis upon decision has been made, and client's decision to accept or reject the bid.

Step 1 – Identification

Client to determine whether the bid is abnormally low and to identify the potential ALB out of all the received bids. The aim is to outline the unrealistic fees that cannot sustain the project and to identify the parts being underestimated by the tenderer. An Evaluation Report shall be drafted with full details if ALB is identified.

There are various approaches to identify potential ALB. Depending on the availability of the resources and information as outlined in the table below (e.g., the number of received bids), the client can choose at least one of the four methods to assess the reasonableness of received consultancy fees.

Practice 1 - by Expert Judgement	
<input type="checkbox"/> Obtain support from professionals/experts in the sector	It involves assessing tender using appropriate professional advice based on their knowledge of sector to consider whether any of the received bids are abnormally low falling significantly below the current market price.
Practice 2 – by Comparing with the PTE	
<input type="checkbox"/> Confidence in the accuracy of PTE	<p>PTE for consultancy services established at the start of the project illustrates the estimated fee that the client thinks is reasonable to pay the consultant. Strategic use of the PTE on the consultancy fee as a benchmark could also facilitate the client to use the PTE as a tool to evaluate the rationality of the proposed fee received during tendering stage. The client could use this PTE as a benchmark to evaluate the reasonableness of proposed fee (e.g., consider the proposal to be perceived ALB if the price is considerably below the PTE. The client can use any discount factor in calculating the benchmark price based on PTE to suit specific needs. An example is 20% or more below the PTE).</p> <p>Client could also compare the subtotals for each constituent parts in coming up the PTE (e.g. unit rate, manhours) against the ones proposed by the consultants to assess the resources committed to the project and to illustrate the unreasonably priced/estimated items. It can ensure the components in the proposed fee are made up with realistic elements (e.g., preventing consultants from proposing high level of staff inputs to score high mark in technical proposal with an unrealistically low unit salary rates). The unrealistic elements could be highlighted for further explanation.</p>

Practice 3 – by Comparing with the Market Price	
<ul style="list-style-type: none"> □ Could be used with \geq 4 received bids 	<p>This adopts formula to calculate the market price range on the basis of the adjusted average to identify ALBs. The potential ALBs are those with tender price falling outside the market fee range. To prevent the adjusted average to differentiate the tenderers that are very closely priced, proximity margin (i.e., proximity to the lowest qualified price) is also introduced.</p> <p>The tender will be considered as potential ALB if it is below certain percentage of the adjusted average and falls outside the proximity margin.</p> <p>The following steps will have to be carried out to identify the potential ALB(s). The sample factors mentioned are only indicative figures and the clients are free to choose different figures to suit their particular needs.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <ol style="list-style-type: none"> 1. Calculate the average of all received price excluding the highest tender price to establish adjusted average. 2. Identify the lowest qualifying price i.e., the lowest price submitted that is more than or equal to 85% of the adjusted average price. Note that 85% is a recommended percentage and the percentage can be determined at clients' discretion. 3. Calculate the proximity margin as a certain percentage of the lowest qualifying price, i.e. 1% of the lowest qualifying price. Note that 1% is a recommended percentage and the percentage can be determined at clients' discretion. 4. Does the received fee meet the following two criteria? <ol style="list-style-type: none"> a. Falls below the figure calculated in step 2 b. Falls outside the proximity margin 5. Identify potential ALB <ul style="list-style-type: none"> ○ Meet both criteria – The bid is a potential ALB ○ Does not meet both criteria – there is no potential ALB </div> <p>Flow chart and worked examples are under Appendix C. The factors used in the work illustration are only examples and the client can use other figures to suit their needs.</p>
Practice 4 – by Comparing with the Market Price (in term of Standard Deviation)	
<ul style="list-style-type: none"> □ Could be used with \geq 5 received bids □ Received bids are competitive and independent 	<p>The potential ALBs are identified when the bids are more than <i>one</i> standard deviation below the mean of received bids. Other than one standard deviation, the client can adjust the factor as appropriate.</p> <p>Worked examples in Appendix C.</p>

If potential ALBs are identified, based on the findings, the client shall conduct a gap analysis to identify the gap that may be underestimated. During the assessment, the client shall consider the following: -

- a) Any price items to be omitted in the proposal?
- b) Any price items appear to be significantly lower than the estimate / other received bids? If so, is this arithmetical error?
- c) Any consistently under-priced price items?

Step 2 – Clarification

Based on the gaps, the client should request for clarification from the tenderer on the elements that appear abnormally low. The request should include client's basis on which determine the bids to be ALB and the information required from the tenderer. Information such as further breakdown of fee in correlation with the following areas could be supplemented by the consultant as supporting information:

- Scope of services
- Methodology
- Roles and Responsibilities
- Allocation of risks
- Project References
- Organisation Chart
- Schedule / programme
- Unit Price
- Estimation of resources
- Contract implementation at similar price range

The aim is to ask the tenderer to provide information for client to understand why the tenderer has submitted the proposed fee and to ensure the consultant is able to perform the contract and complete the project for the cost quoted. A reasonable response time should be given to the consultant to collect the information. The client may reject the bid if the tenderer fails to respond within a reasonable time or fails to justify the proposed price.

Step 3 – Justification

In response to client's request, the tenderer shall submit their justifications within the required time during the tender process to substantiate their pricing of respective inputs. The justification might have to be provided based on the format requested by the client for their internal assessment. Furthermore, the consultant could consider providing other documentary/evidence that were used for determining the proposed price. Failing to provide reasonable justifiable explanation account for the low price may result in disqualification.

The following aspects could be considered as consultant's explanations indicating circumstances where the consultant has an advantage comparing to the general market/other consultants:

- Economics of scale provided
- Exceptionally favourable conditions
- Conscious strategic decision to low bid with exceptionally low profit margin for entering a new market
- Favourable work arrangement
- efficient or innovative method of working for utilising resources required
- Efficiency in staff/resources mobilisation as there are other projects near the proposed site/with similar

- Financial status / subsidy offering competitive proposal scope, which could benefit Consultant from economies of scales

Step 4 – Verification

Once received consultants' justifications, the client shall verify their proof/evidence accordingly and fully analyse the information. The client should evaluate how the consultant can deliver the services required for the price submitted and their ability to complete a quality project at the proposed price. The client should also review the consistency of information provided with the estimate of resources inputs required.

Step 5 – Decision

Depending on client's judgement, the client shall make decision whether they are going to object the tenderer based on the verified justifications. All the considerations should be well documented for final decision-making. The client could include in the rejection of proposal their grounds on which they have rejected the proposal.

2.4.4 Application

Depending on the tendering approach chosen, the client can introduce this process once received the fee proposal from the consultants before scoring the fee component. It helps the client to decide whether to further evaluate the received bid for their further considerations. Yet, it does not remove the need to undertake the normal tender assessment process. Detailed tender report and scrutiny of individual rates shall be undertaken before awarding a project.

2.4.5 Caveats and Potential Areas for Future Improvements

Client has to consider the following for implementation of ALB mechanism:

- The tender document has to mention abnormally low bids identified will be excluded if the tenderer could not explain to the satisfaction of the client.
- ALB Mechanism may incur additional review process when evaluating tender, and client has to ensure sufficient time is allowed in the tender evaluation process.

3 Recommended Fee Evaluation Mechanisms

3.1 Method 1: Quality-Based Selection ¹

3.1.1 General Principles

Quality-based Selection (QBS) is recommended to facilitate the client to engage the most qualified consultant at an affordable price for delivering the project. This selection method puts consultants' qualifications and technical capabilities first by encouraging the client to acquire consultancy services on the basis of quality. It allows the client to employ technically sound consultants, which guarantees project quality and to deliver the best quality affordable services to client. The quality services delivered could hopefully contribute to the overall value of the project.

Under this mechanism, the primary focus is on the selection criteria that can deliver the best services for the client (i.e., put the emphasis on technical assessment). Nonetheless, the importance of consultancy fee has not been undermined. Clients would have to compare the fee with their budget to ensure the proposal is affordable. Fee is treated as the outcome of the selection process and will no longer be one of the key driving factors when evaluating tender. The consultant will be accepted as long as the proposed fee of the most technically sound consultant is within client's budget.

3.1.2 Features and Characteristics

With Quality-based Selection, technical proposal is assessed first to rank the consultants by technical competencies and qualifications. The best qualified consultant will be awarded as long as the proposed fee is within clients' budget. If the proposed fee falls outside client's budget or agreement cannot be reached, the client will award the consultant ranked next. This process continues until the project is awarded.

This mechanism ensures the client is receiving the best affordable consultancy services contributing to a quality project, while the consultants are paid with a fair and dually agreed fee for delivering quality services.

3.1.3 Methodology

1	Client to assess their aspirations, purpose and objectives of the proposed project to define their requirements and needs. Client to start deriving the services required.
2	Client to outline services required and start formulating the selection criteria for project consultants, determining the selection method to be used, and securing financing for the project.
3	Client to prepare an estimate of the cost for consultancy services.

¹ The recommendation is a consolidated reference of mechanisms in various regions, such as the consultancy fee evaluation mechanisms adopted in the United States.

4	If client confirmed to go for QBS - Client to issue tender document (with objectives, goals, background information, scope of services, responsibilities, expected deliverables etc.) to consultants requesting the shortlisted firms to submit technical and financial proposals.	
5	Client to carry out formal process to deal with clarification requests during tender process.	
6	Consultants to submit their proposals to client with detailed plans on how the consultancy firm will approach the project.	
7	Client to open and evaluate technical proposal against the selection criteria outlined in tender documents (such as background, skills, project references, experience of key personnel, management plan and roles) and score the technical proposals. Rank the firms by their competencies, design and technical abilities.	
8	Client to open top ranked consultant's financial proposal.	
9	Client to check if the submitted fee is within their budget.	
10	If No – Proceed to open the fee proposal of the consultant with the next highest technical score. Then proceed to Step A9.	If Yes – Proceed to award the project to the consultant if the proposed fee opened is within the client's budgets.

If none of the received fees fall within the client's budget, the client is recommended to review their PTE/budget as well as scope of services to ensure it is realistic. After the review, client could consider re-tendering the services.

3.1.4 Application

Quality-based selection could be used for various types and nature of projects. Especially for large and complex projects with long timeline that require highly technical solutions. A general flowchart stating the considerations in choosing this tendering evaluation approach is available under Appendix B1.

Client would have to consider the following when deciding whether QBS should be used to acquire consultancy services:

- **May sacrifice money in exchange for quality** – It is unlikely to award the bid to the cheapest services provider with a better value for money. Quality-based selection puts the emphasis on the technical aspect. There is a possibility that the awarded tenderer's price may be relatively expensive as their proposed fee has not been taken into consideration during the tender evaluation as one of the evaluation criteria.

3.1.5 Caveats and Potential Areas for Future Improvements

The client should be mindful of the following when using this mechanism to select consultants:

- Client has to shortlist the suitable consultants in the tendering process to ensure the technical competency of invited tenderers are comparable.

- Technical competency
 - Project experiences
 - Financial capability
 - Access to support resources
 - Availability of key personnel
 - Resources within the firm (capacity to complete the work)
- Client would have to pay particular effort in preparing a reasonable budget/PTE to ensure the budget/PTE reflects the market situation.
 - Consultants might be submitting their best technical team in the proposal for high technical mark, of which the consultant might not be able to commit to it once the project is awarded. Hence the client has to state project team requirement clearly in the contract and tender documents.
 - Client's objectives, scope of services and marking schedule have to be clearly written and adequately defined in the tender documents for consultants to provide well informed proposal that can demonstrate their understandings of the services and their capabilities to perform them. It facilitates fair assessment over the technical aspect.
 - It is important to ensure the technical marking scheme is well defined and drafted fairly preventing putting some consultants in an advantageous/disadvantageous position. The client has to ensure suitable personnel are in the tender assessment panel to evaluate the technical component to ensure the consultant selected is the best and can meet client's requirements. Assessment on technical component can sometimes be subjective.

3.2 Method 2: Fee Assessment Scoring Method ²

3.2.1 General Principles

It is a scoring method that can be used if the client has to compute a fee score during the tender evaluation process. This method involves calculating a central tendency of received prices to derive a threshold (e.g., 0.8 of the central tendency which is the average of the fees received) to identify excessively low-price proposals. Depending on the number of excessively low/high bids received, the client can calculate the fee score using different formula.

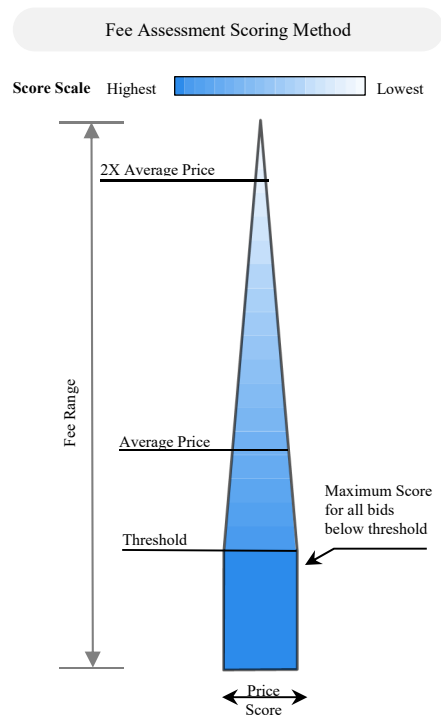
This fee score calculation method encourages tenderers to submit a bid in a reasonable price range as compared to other bidders by reducing the relative advantage of bids with proposed fee that are exceptionally low (i.e., lower than a threshold). It can reduce the incentive for tenderer to submit an unreasonably low-price bid as it does not have extra benefits in score when compared to the fee falling above the threshold. It can therefore discourage large fee variation.

² The recommendation has made reference to various mechanisms adopted in different regions and it is the consolidated outcomes of the those used in Singapore and Hong Kong mechanism.

3.2.2 Features and Characteristics

This mechanism consists of two different formulae to calculate the fee score. In a normal circumstances, the calculation of fee score is generally based on the lowest price method.

Nonetheless, if the lowest fee received from tenderer is below a threshold derived from received tenders (e.g., 80% of the mean of confirming bids), another formula will be used to calculate fee score for the tenders above the threshold so that the tenders will receive a higher fee score. The excessively low bids will no longer have a further advantage. All the tenders with proposed price below the threshold will obtain the same mark (i.e., full score mark).



3.2.3 Methodology

This method requires the client to carry out fee calculation following below process:

General Equation	
<p>If $P_b \geq Factor \times F_x$,</p>	$Fee\ Score = \left(\frac{P_b}{P_p} \right)$
<p>If $P_b < Factor \times F_x$,</p>	$Fee\ Score = \left(\frac{Factor \times F_x}{P_p} \right)$
<p>If $P_b < Factor \times F_x = Max\ Fee\ Score$</p>	
<p>P_p: Proposed Price P_b: Lowest Price received F_x: Central Tendency of Conforming Bids. This figure could be calculated as the mean or median of received bids.</p>	
Fee Assessment Scoring Method Process	
<p>1. Calculation of Central Tendency (F_x) by one of the following:</p> <ul style="list-style-type: none"> • by Mean → refer to A. • by Median → refer to B. 	

A. Calculate F_x based on Mean		
Ai	Identify outlier bids	<p>When calculating the mean price of received fee, outlier bids are excluded from the calculation to prevent skewed threshold.</p> <p>Outlier bids are defined as bids that are at a certain percentage below and/or at a certain percentage above (i.e., low outlier or high outlier) the average fee of all received bids.</p> <div style="border: 1px solid black; padding: 5px;"> <ol style="list-style-type: none"> 1. Calculate the mean of all received bids. 2. Exclude the bids that are above certain percentage of the mean [1] of all received bids. 3. Remove the high outliers (if any) and compute a new mean [2]. 4. Exclude the bids that are below certain percentage of the mean [2] of the conforming bids. 5. Calculate mean [3] of all conforming bids. </div>
Aii	Calculation of F_x	<p>Based on the number of outlier bids identified, client could determine the number of “conforming bids” and use below formula to calculate F_x with the conforming bids.</p> <ul style="list-style-type: none"> <input type="checkbox"/> If none, or at least half are outlier bids, F_x calculation to include all bids. <input type="checkbox"/> If less than half are outlier bids, F_x calculation to exclude outlier bids. <p>Formula to calculate central tendency (F_x) as a mean of confirming bids, it involves summing up the bid price and divide it by the total number of values.</p> $F_x = \frac{\sum \text{Proposed fees of all conforming bids}}{\text{No. of conforming bids}}$
B. Calculate F_x based on Median		
Bi.	Calculation of F_x	<p>Calculated by identifying the middle number of the received fee when the fee is arranged in an order. If there are two numbers in the middle (i.e. no. of received bids is an even number), median would be the sum of the two fees divided by 2.</p>
2	Calculation of fee score	<p>Based on the central tendency calculated in step 1, client has to decide which formula to be used to calculate fee score.</p> <p>The formula to be used to calculate proposed price’s fee score varies depending whether the lowest price received is \geq factor $\times F_x$ (i.e. lower than the threshold that is set at a percentage of the central tendency of consultancy fee of all conforming bids):</p> <ul style="list-style-type: none"> <input type="checkbox"/> If the lowest quoted fee is higher than factor $\times F_x$ use below formula: $\text{Fee Score} = \left(\frac{P_b}{P_p} \right)$ <input type="checkbox"/> The lowest quoted fee is lower than factor $\times F_x$, use below formula: $\text{Fee Score} = \left(\frac{\text{Factor} \times F_x}{P_p} \right)$ <p>Any fee quoted below factor $\times F_x$ will get maximum fee score.</p>
3	Adjust the fee score with the price weighting to determine the final score in pricing proposal.	

Worked examples are illustrated in Appendix D1. The factors used in this mechanism is for reference only. The client can adopt ‘factors’ to their discretion that suit their requirement.

3.2.4 Application

This fee scoring method can be considered when the procurement method involves scoring of the fee component. It can be used if the client would like to reduce the variation in fee score for all the bids if abnormally low fee bid was identified.

3.2.5 Caveats and Potential Areas for Future Improvements

Considering that this method involves calculation of central tendency of conforming bids, it is recommended to use this method when there are four or more selected firms. Although the competitiveness of excessive low bids is significantly reduced, one of the considerations when using this method is the low-price bids are still getting the highest fee score and tenderers might still be submitting a relatively low fee for a higher score, rather than aiming to submit a reasonable fee. Furthermore, this method cannot perform under a general situation of low bids as it is unable to identify a reasonable mean of conforming price when low bids are submitted by majority of the tenderers.

3.3 Method 3: Average Price Scoring Method³

3.3.1 General Principles

Apart from scoring the fee using the Fee Assessment Scoring Method (in Section 3.2), another way to calculate fee score is to use Average Price Scoring Method. The tenderers have to submit a fee proposal that is closer to the central tendency (i.e., average of the fees received) for higher fee score.

It is effective to discourage tenderers to submit an unreasonable low-price bid as the lowest bids will no longer receive the highest marks. It incentivises the tenderers to submit a bid within the market price range in order to score high. Competitiveness of excessively low price is reduced.

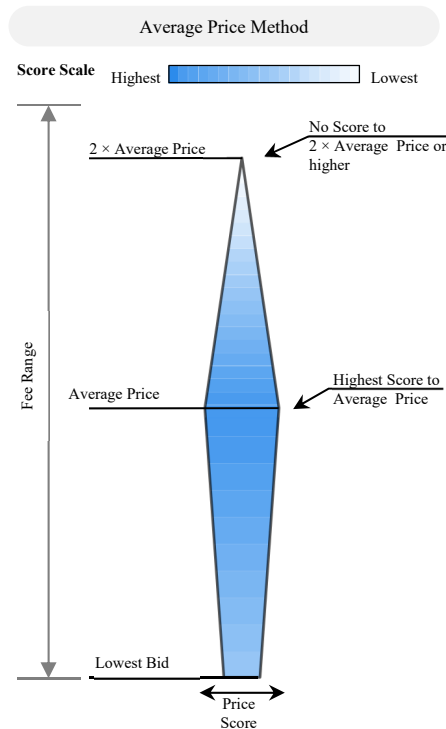
³ The recommendation has made reference to various mechanisms adopted in different regions and it is the consolidated outcomes of the reference mechanisms (such as the consultancy fee evaluation mechanisms adopted in Macao).

3.3.2 Features and Characteristics

Fee score of received bid is computed relative to the average price derived from the received fees and with/without PTE. The tenderer with the proposed fee closest to the average price will obtain the highest fee score, while tenderers with proposed fee further away from the average price will be given a lower fee score. Tenderers with proposed fee more than twice the average price will not be given any fee score.

This method introduces two different formulae to calculate fee score in relation to the average price. The first formula is used to calculate fee score for bids with proposed fee higher than the average price, while the second formula is used to calculate fee score for bids with proposed fee lower or equal to the average price.

When using the second formula, client could consider imposing a factor in the formula (as indicated under General Equation under 3.3.3), so that the consultants submitting a relatively lower fee will still have an advantage of obtaining a relatively higher fee score comparing to the consultants submitting a higher fee.



3.3.3 Methodology

If evaluation of tender involves scoring the fee component (such as Two-Envelope System), the client can follow the following steps to carry out the assessment:

General Equation	
If $P_p > P_{re}$,	$Fee\ Score = \left[1 - \left(\frac{P_p - P_{re}}{P_{re}} \right) \right]$
If $P_p \leq P_{re}$,	$Fee\ Score = \left[1 - \left(\frac{ P_p - P_{re} }{Factor \times P_{re}} \right) \right]$
If $\left(\frac{P_p - P_{re}}{P_{re}} \right) \geq 1$, $PF = 0$.	
P_p : Proposed Price	
P_{re} : Average Price	
P_F : Final score in fee proposal	
Factor: A figure that is > 0 . The larger the factor, the less variation in the fee score for bids with proposed price lower than the average price.	

Average Price Scoring Process		
1	Components of Market price (P_{re})	<p>Other than basing the calculation on the received bids, client to decide whether to include PTE in the fee calculation.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Yes – P_{re} will be calculated based on the sum of all received bids and PTE. <input type="checkbox"/> No – P_{re} will be calculated based on the sum of all received bids.
2	Calculation of Average price (P_{re})	<p>There are different methods to calculate the central tendency of received fees (i.e., either by mean or median).</p> <p>Below illustrates the calculation of mean:-</p> <ul style="list-style-type: none"> <input type="checkbox"/> If number of tenders received >3, average price is calculated by: <ol style="list-style-type: none"> 1. Sum up the received bid prices except the highest and lowest price received (& PTE) 2. Divide the sum by number of data inputs. <input type="checkbox"/> If number of tenders received ≤ 3, average price is calculated by: <ol style="list-style-type: none"> 1. Sum up the received bid prices (& PTE) 2. Divide the sum by number of data inputs. <p>Median on the other hand can be calculated by identifying the middle number of the received fees when the fees are arranged in an order. If there are two numbers in the middle (i.e. no. of received bids is an even number), median would be the sum of the two fees divided by 2.</p>
3	Identify outlier bid	<p>Identification of outlier bid based on the proposed price (Pp).</p> $\left(\frac{Pp - Pre}{Pre} \right)$ <p>If the result is equal or larger than 1, the tender is considered as an high outlier. Final score in fee proposal (P_F) of high outlier bid will be 0.</p>
4	Calculate the fee score for remaining bids	<p>The formula to calculate proposed price's fee score varies relative to the market price : -</p> <ul style="list-style-type: none"> <input type="checkbox"/> If the proposed price (Pp) $>$ market price (P_{re}), use formula: $PF = \left[1 - \left(\frac{Pp - Pre}{Pre} \right) \right]$ <input type="checkbox"/> If the proposed price (Pp) \leq market price (P_{re}), use formula: $PF = \left[1 - \left(\frac{ Pp - Pre }{\text{factor} \times Pre} \right) \right]$

5	Adjust the fee score with the price weighting to determine the final score in pricing proposal.
---	---

A worked example is illustrated in Appendix D2. The client can adopt ‘factors’ to their discretion that suit their requirement.

3.3.4 Application

Average Price Scoring Method can be used if the procurement method requires the client to derive a fee score using a formula. This method is typically used for projects with high complexity and project sum to ensure the proposed price can guarantee the project outcome’s quality, especially for infrastructure projects.

3.3.5 Caveats and Potential Areas for Future Improvements

The client shall consider carefully whether to include their PTE in market price calculation, depending on their confidence in the accuracy of estimation. It is preferable to include PTE in the calculation of market price so that it is not solely calculated based on the submission from tenderers.

Furthermore, this method is scoring the fee based on the average price. The tender option might not be the most economically sound option as it encourages tenderer to price closest or slightly lower than average price of submitted tenders. It might not be the best price offer for the client.

Appendix A

Study Background

A1 Background

Consultants' selection is a critical decision the clients make to encourage the success of the entire project over its complete lifecycle. It is important to obtain the most appropriate expertise available in the market in terms of expertise, knowledge, past experience, abilities and reputation. Selecting a competent consultant can support project delivery to meet clients' requirements with the best for money solutions and reduce the risk of poor-quality design. Tender evaluation is to assess the consultants and select the most appropriate tenderer to deliver the project. It is vital to select the suitable tendering strategy and methodology for a particular project to plan and manage the process in selecting the consultants.

Fee evaluation mechanism is one of the key processes for achieving best value-for-money in consultancy tender. Client procuring the consultancy on the basis of appropriate quality will obtain a quality service. The saving achieved by selecting a lower priced offer might be later outweighed by the risks.

In view that the growing competition in the construction industry is becoming evident over the recent years, clients in the private sector have been receiving very low bids from consultants to secure jobs. Consultants within the construction industry are also facing a challenge where fierce competition is driving low fee proposals being submitted, which over time could impact their quality of work, adequacy of manpower and financial stability.

Within the context of the above, there is a need to introduce and consider other initiatives in assessing the consultancy fee and manage the process that is present when evaluating tender during tender evaluation process and develop alternate fee evaluation mechanisms for consultancy tender in managing unreasonably low bids for promulgation to the clients in the private sector in the construction industry.

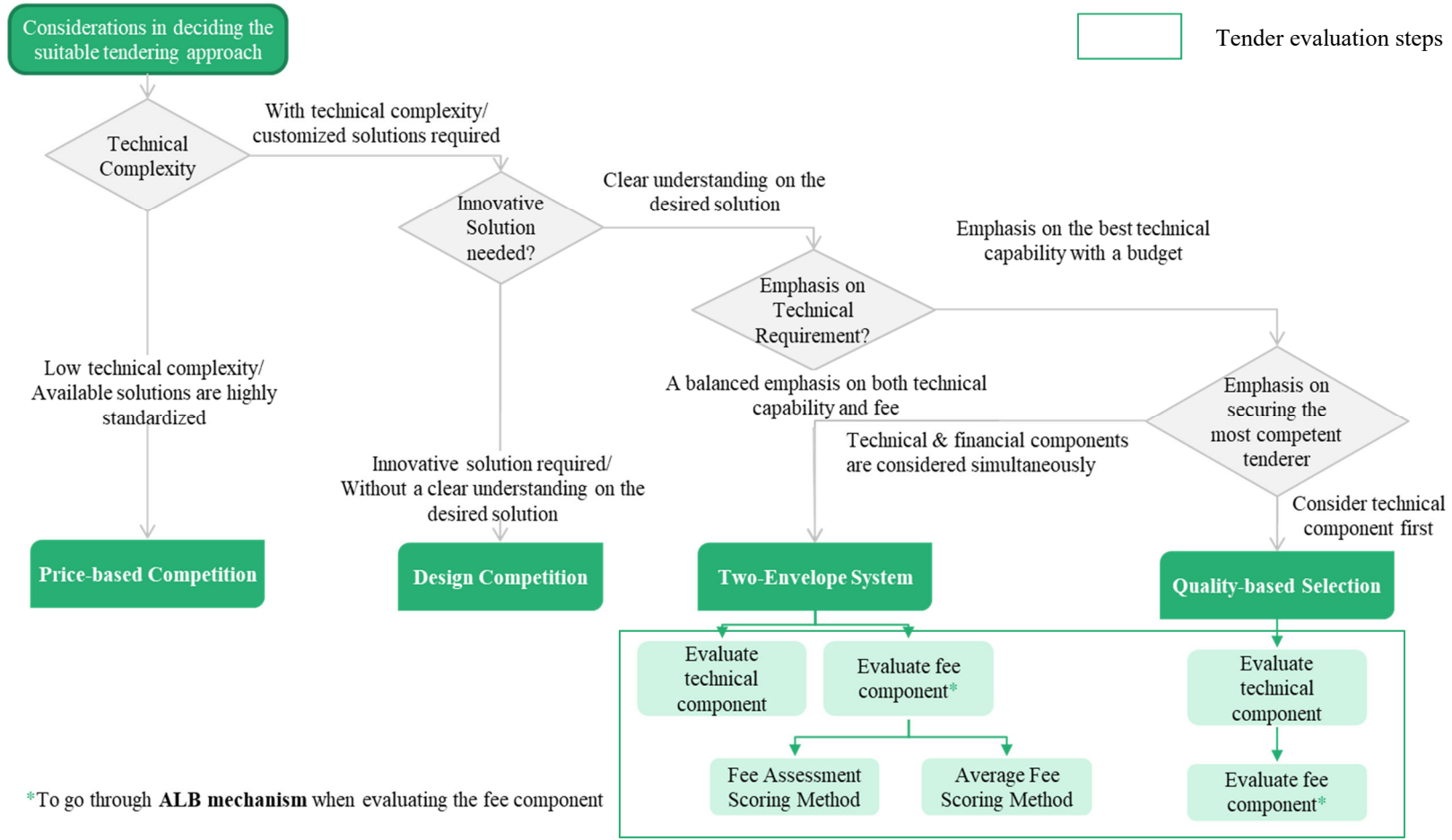
Failure to implement mechanism(s) to evaluate reasonableness of fee would have damaging effect to client's project, including the following:

- Employed unsuitable consultant preventing effective allocation and utilisation of resources
- bad performance of the deliverable that can better meet client body's requirements
- Uncertainty in project duration, cost, quality of output and outcomes for all stakeholders as the consultant cannot deliver the works required for the cost quoted
- Dispute between both parties on consultancy fee and project scopes at later stage.
- Enhanced competition with potential efficiency gain in procurement for construction consultancy services.

Appendix B

Tendering Approaches

B1 Considerations



B2 Tendering Approaches Characteristics

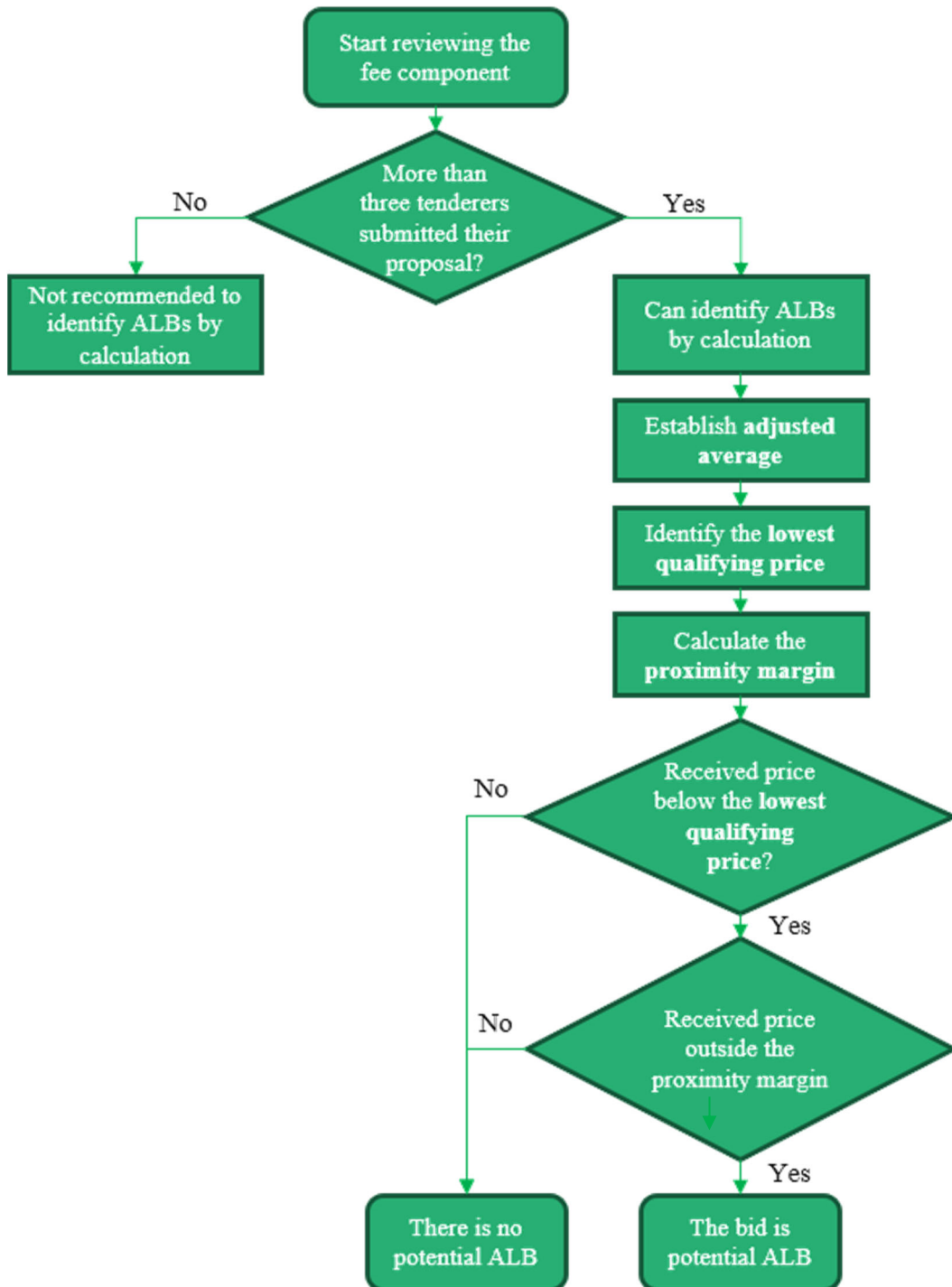
Methods	Consideration		Technical-to-Fee Ratio	Description	Application
	Technical	Fee			
Price-based Competition	Minimum threshold	✓	Meeting min. Technical Requirement ↓ 100% Price	<ul style="list-style-type: none"> The selection criterion is based on the price. The consultant with lowest proposed price will be selected under this method. This method can provide the best price guarantee. 	<ul style="list-style-type: none"> For services with low technical requirement or standardize available solutions.
Two-Envelope System	✓	✓	Various Weighting	<ul style="list-style-type: none"> Competing tenderers are required to submit their offers in two separate envelopes – technical and fee proposals for separate evaluation. The selection is based on the best combined score in technical and fee. 	<ul style="list-style-type: none"> To achieve the best value-for-money.
Quality-based Selection	✓	✓	100% Technical ↓ Fee within Budget	<ul style="list-style-type: none"> Client first establishes a budget for the consultancy services. Then, consultant to submit their technical proposal according to the services outlined by the client. The consultant submitting the best proposal would be appointed as long as proposed fee is within the client's budget. If it is found the proposed fee of preferred tenderer is above client's budget, the consultant ranked second will be considered. 	<ul style="list-style-type: none"> For projects with a fixed budget, or there are difficulties in identifying the extent of services required. .
Design Competition	✓	✓	Varies	<ul style="list-style-type: none"> In addressing client' vision or needs, consultants to prepare proposals with innovative and creative solutions. The proposals are then evaluated based on consultants' creativity, technical ability, and financial feasibility. Client might establish a set of fixed selection criteria. 	<ul style="list-style-type: none"> Usually for large, complex and prestigious project requiring innovative solution.

Appendix C

Identification of Potential Abnormally Low Bids

C1 Identification of ALBs by Calculation

C1.1 Flow Chart



C1.2 Worked Example

The factors used in the example are for illustration only. The client can adopt 'factors' to their discretion that suit their requirement.

Base Case Scenario																	
<ul style="list-style-type: none"> 6 tenderers have submitted the fee PTE was established by the client 	<table border="1"> <thead> <tr> <th>Tenderer</th> <th>Proposed Fee by Tenderers (\$ Mi)</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>66</td> </tr> <tr> <td>B</td> <td>69</td> </tr> <tr> <td>C</td> <td>70</td> </tr> <tr> <td>D</td> <td>71</td> </tr> <tr> <td>E</td> <td>74</td> </tr> <tr> <td>F</td> <td>79</td> </tr> <tr> <td>PTE</td> <td>74</td> </tr> </tbody> </table>	Tenderer	Proposed Fee by Tenderers (\$ Mi)	A	66	B	69	C	70	D	71	E	74	F	79	PTE	74
Tenderer	Proposed Fee by Tenderers (\$ Mi)																
A	66																
B	69																
C	70																
D	71																
E	74																
F	79																
PTE	74																
1	<p>Calculate the Adjusted Average Price</p> $\text{Adjusted Average} = \frac{66+69+70+71+74}{5} = \$70M$																
2	<p>Calculate 85% of Adjusted Average to determine the Adjusted Average Boundary</p> $\text{Adjusted Average Boundary} = 70 \times 0.85 = \$59.5M$																
3	<p>Identify the Lowest Qualifying Price</p> <p>The lowest tender that is \geq\$59.5M (i.e., \$66M).</p>																
4	<p>Calculate Proximity Margin</p> $\text{Proximity Margin} = 66 \times 0.01 = \$0.66M$																
5	<p>Calculate the Proximity Boundary</p> $\text{Proximity Boundary} = \text{Lowest Qualifying Price} - \text{Proximity Margin}$ $\$66M - \$0.66M = \$65.34M$																
6	<p>Does the received fee meet the following two criteria?</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> below the adjusted average boundary (Figure in Step 2) <input checked="" type="checkbox"/> below proximity margin (Figure in Step 5) 																
7	<p>Identification of Potential ALBs</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> There is no potential ALB. 																

C2 Identification of ALBs by Standard Deviation

C2.1 Worked Example

The factors used in the example are for illustration only. The client can adopt 'factors' to their discretion that suit their requirement.

<p>Base Case Scenario</p> <ul style="list-style-type: none"> • 6 tenderers have submitted the fee • PTE was established by the client 		<table border="1"> <thead> <tr> <th>Tenderer</th> <th>Proposed Fee by Tenderers (\$ Mil)</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>66</td> </tr> <tr> <td>B</td> <td>69</td> </tr> <tr> <td>C</td> <td>70</td> </tr> <tr> <td>D</td> <td>71</td> </tr> <tr> <td>E</td> <td>74</td> </tr> <tr> <td>F</td> <td>79</td> </tr> <tr> <td>PTE</td> <td>74</td> </tr> </tbody> </table>	Tenderer	Proposed Fee by Tenderers (\$ Mil)	A	66	B	69	C	70	D	71	E	74	F	79	PTE	74
Tenderer	Proposed Fee by Tenderers (\$ Mil)																	
A	66																	
B	69																	
C	70																	
D	71																	
E	74																	
F	79																	
PTE	74																	
1	<p>Calculation</p> <ul style="list-style-type: none"> • The mean of the received bid price is \$71.5M. • The standard deviation is \$4.1M • The perceived ALBs are any bid below $\\$71.5M - \\$4.1M = \\$67.4M$. 																	
2	<p>Identification of Potential ALBs</p> <ul style="list-style-type: none"> ✓ Tenderer A is considered as a potential ALB. 																	

Appendix D

Worked Examples

D1 Fee Assessment Scoring Method

D1.1 Worked Example 1

The factors used in the example are for illustration only. The client can adopt 'factors' to their discretion that suit their requirement.

Base Case Scenario		Tenderer	Proposed Fee by Tenderers (\$ Mil)
<ul style="list-style-type: none"> 6 tenderers have submitted the fee PTE was established by the client 		A	66
		B	69
		C	70
		D	71
		E	74
		F	79
		PTE	74

1 Identify Outlier Bids

- Mean of all received bids = $\frac{66+69+70+71+74+79}{6} = \71.5M
- Exclude the bids 50% above mean of all received bids (i.e., $71.5 \times 150\% = \$107.25\text{M}$)
- No high outlier identified.
- Exclude the bids 20% below mean of all received bids (i.e., $71.5 \times 80\% = \$57.2\text{M}$)
- No low outlier identified
 - ✓ No outlier identified. Hence, to include all qualified bids in F_x computation.

2 Calculation of Fee Score

Determine whether the lowest price received is $\geq 0.8 F_x$

$$0.8 F_x = 0.8 \times 71.5 = \$57.2\text{M}$$

✓ The lowest quoted fee is higher than $0.8 F_x$

Tenderer	Proposed Fee (\$ Mil)	Formula	Fee Score
A	66	$\left(\frac{P_b}{P_p}\right)$	100%
B	69		96%
C	70		94%
D	71		93%
E	74		89%
F	79		84%

3 Calculate Final Fee Score

Adjust the fee score with the pricing weighting to determine the final score in pricing proposal.

D1.2 Worked Example 2

The factors used in the example are for illustration only. The client can adopt 'factors' to their discretion that suit their requirement.

Base Case Scenario		Tenderer	Proposed Fee by Tenderers (\$ Mil)
<ul style="list-style-type: none"> 6 tenderers have submitted the fee PTE was established by the Client Tenderer A submitted a fee that seems relatively low Tenderer F submitted a fee that seems relatively high 	A	51	
	B	69	
	C	73	
	D	75	
	E	77	
	F	120	
	PTE	75	

Tenderer	Proposed Fee by Tenderers (\$ Mil)	Conforming Bids/Outlier
A	51	Low Outlier
B	69	Conforming bid
C	73	Conforming bid
D	75	Conforming bid
E	77	Conforming bid
F	120	High Outlier

1 Identify Outlier Bids	
1. Mean of all received bids	$\text{Mean} = \frac{51+69+73+75+77+120}{6} = \77.5M
2. Exclude the bids 50% above mean of all received bids (i.e., $77.5 \times 150\% = \$116.25\text{M}$)	
3. Tenderer F's bid is a high outlier bid. Exclude \$120M and calculate a new mean.	$\text{Mean excluding high outlier} = \frac{51+69+73+75+77}{5} = \$69.00\text{M}.$
4. Exclude the bids 20% below mean of all received bids (i.e., $69 \times 80\% = \$55.2\text{M}$)	
5. Tenderer A's bid is a low outlier bid. Exclude \$51M when calculating F_x .	

2 Calculation of F_x	
There are 4 conforming bids and less than half are outlier bids. Hence, outliers will be excluded in F_x calculation.	$F_x = \frac{69+73+75+77}{4} = \73.5M

3 Calculation of Fee Score

Determine whether the lowest price received is $\geq 0.8 F_x$

$$0.8 F_x = 0.8 \times 73.5 = \$58.80M$$

✓ The lowest quoted fee is lower than $0.8 F_x$

Tenderer	Proposed Fee (\$ Mil)	Formula	Fee Score
A	51	$\left(\frac{0.8 \times F_x}{P_p}\right)$	100%
B	69		85%
C	73		81%
D	75		78%
E	77		76%
F	120		49%

4 Calculate Final Fee Score

Adjust the fee score with the pricing weighting to determine the final score in pricing proposal.

D2 Average Price Scoring Method

D2.1 Worked Example

The factors used in the example are for illustration only. The client can adopt ‘factors’ to their discretion that suit their requirement.

Base Case Scenario																									
<ul style="list-style-type: none"> 6 tenderers have submitted the fee PTE was established by the client 	<table border="1"> <thead> <tr> <th>Tenderer</th> <th>Proposed Fee by Tenderers (\$ Mil)</th> </tr> </thead> <tbody> <tr><td>A</td><td>66</td></tr> <tr><td>B</td><td>69</td></tr> <tr><td>C</td><td>70</td></tr> <tr><td>D</td><td>71</td></tr> <tr><td>E</td><td>74</td></tr> <tr><td>F</td><td>79</td></tr> <tr><td>PTE</td><td>74</td></tr> </tbody> </table>	Tenderer	Proposed Fee by Tenderers (\$ Mil)	A	66	B	69	C	70	D	71	E	74	F	79	PTE	74								
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A	66																								
B	69																								
C	70																								
D	71																								
E	74																								
F	79																								
PTE	74																								
1 Components of Market Price (Pre)	Client decided to include PTE in the fee calculation ✓ P_{re} will be calculated based on the sum of all received bids and PTE.																								
2 Calculation of Market Price (P_{re})	✓ Number of tenders received >3, market price calculation illustrated below Market Price = $(69+70+71+74+74) / 5 = \$71.6M$																								
3 Identify Outlier Bid	To calculate a factor with formula $\left(\frac{P_p - P_{re}}{P_{re}}\right)$ to identify outlier bid.																								
	<table border="1"> <thead> <tr> <th>Tenderer</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>Factor</td> <td>-0.078</td> <td>-0.036</td> <td>-0.022</td> <td>-0.008</td> <td>0.034</td> <td>0.103</td> </tr> </tbody> </table>	Tenderer	A	B	C	D	E	F	Factor	-0.078	-0.036	-0.022	-0.008	0.034	0.103										
Tenderer	A	B	C	D	E	F																			
Factor	-0.078	-0.036	-0.022	-0.008	0.034	0.103																			
	✓ All results are smaller than 1, there is no outlier bid.																								
4 Calculate Fee Score of Remaining Bids	Check if the propose fee is above / below the market price (i.e. \$71.6M) to identify which formula to be used and calculate fee score.																								
	<table border="1"> <thead> <tr> <th>Tenderer</th> <th>Proposed Fee (Mil)</th> <th>Formula</th> <th>Fee Sore</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>66</td> <td rowspan="4">$\left[1 - \left(\frac{ P_p - P_{re} }{2 \times P_{re}}\right)\right]$</td> <td>96.09%</td> </tr> <tr> <td>B</td> <td>69</td> <td>98.18%</td> </tr> <tr> <td>C</td> <td>70</td> <td>98.88%</td> </tr> <tr> <td>D</td> <td>71</td> <td>99.58%</td> </tr> <tr> <td>E</td> <td>74</td> <td rowspan="2">$\left[1 - \left(\frac{P_p - P_{re}}{P_{re}}\right)\right]$</td> <td>96.65%</td> </tr> <tr> <td>F</td> <td>79</td> <td>89.66%</td> </tr> </tbody> </table>	Tenderer	Proposed Fee (Mil)	Formula	Fee Sore	A	66	$\left[1 - \left(\frac{ P_p - P_{re} }{2 \times P_{re}}\right)\right]$	96.09%	B	69	98.18%	C	70	98.88%	D	71	99.58%	E	74	$\left[1 - \left(\frac{P_p - P_{re}}{P_{re}}\right)\right]$	96.65%	F	79	89.66%
Tenderer	Proposed Fee (Mil)	Formula	Fee Sore																						
A	66	$\left[1 - \left(\frac{ P_p - P_{re} }{2 \times P_{re}}\right)\right]$	96.09%																						
B	69		98.18%																						
C	70		98.88%																						
D	71		99.58%																						
E	74	$\left[1 - \left(\frac{P_p - P_{re}}{P_{re}}\right)\right]$	96.65%																						
F	79		89.66%																						
5 Calculate Final Fee Score	Adjust the fee score with the pricing weighting to determine the final score in pricing proposal.																								

Feedback Form

Reference Materials on Reasonable Consultancy Fee Evaluation System

To improve future editions of this publication, we would be grateful to have your comments

(please put a “✓” in the appropriate box.)

1. As a whole, the publication is:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Informative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comprehensive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Practical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the publication enable you to understand more about the subject?	Yes	No	No Comment		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Have you made reference to the publication in you work?	Quite Often	Sometimes	Never		
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Assessment of Unreasonably Low Fee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
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