- 12.0 Chapter Introduction
- 12.1 <u>Evaluating Overall Price Reasonableness With</u> Price Analysis
- 12.2 Recognizing Alternatives And Their Effect On Contract Price
 - o 12.2.1 <u>Identifying And Considering The Effect</u> Of Cost Drivers
 - o 12.2.2 <u>Identifying And Ameliorating Sources Of</u> Cost Risk
- 12.3 <u>Identifying Key Pricing Elements In</u> Prenegotiation Objectives
- 12.4 Documenting Prenegotiation Positions

12.0 Chapter Introduction

Having analyzed the individual elements of contract cost and profit/fee, you must now meld the results of those analyses into a single prenegotiation position on contract pricing.

12.1 Evaluating Overall Price Reasonableness With Price Analysis

Price Analysis (\underline{FAR} 15.404-1(b)(1)). Price analysis is the process of examining and evaluating a proposed price to determine if it is fair and reasonable, without evaluating its separate cost elements and proposed profit.

Cost Analysis Supplements Price Analysis (FAR 15.404-1(a)(3)). Cost analysis is not a substitute for effective price analysis. You should perform a price analysis whenever there is a valid base for analysis. Effective cost analysis provides insight into what it will cost the firm to complete the contract using the methods identified. However, cost analysis does not necessarily provide a picture of what the market is willing to pay for the product involved. For that you need price analysis.

Remember the Pontiac Trans Am example: Suppose that you wanted to procure a custom-made automobile identical to a Pontiac Trans Am. At your request, your neighborhood

mechanic agrees to build you such a car. In building the car, the mechanic gets competitive quotes on all the necessary parts and tooling, pays laborers only the minimum wage, and asks only a very small profit.

How do you think the final price will compare to a car off an assembly line? Probably at least ten times more expensive. Parts alone may be five times more expensive. The entire cost of tooling will be charged to one car. Labor, although cheaper per hour, will likely not be as efficient as assembly-line labor. Is the price reasonable? That decision can only be made through price analysis.

Bases for Price Analysis (\underline{FAR} 15.404-1(b)(2)). Price analysis **always** involves some form of comparison with other prices. As the contracting officer, you are responsible for selecting the bases for comparison that you will use in determining if a price is fair and reasonable, such as:

- Proposed prices received in response to the solicitation;
- Commercial prices including competitive published price lists, published commodity market prices, similar indexes, and discount or rebate arrangements;
- Previously-proposed prices and contract prices for the same or similar end items, if you can establish both the validity of the comparison and the reasonableness of the proposed price;
- Parametric estimates or estimates developed using rough yardsticks;
- Independent Government Estimates; or
- Prices obtained through market research for the same or similar items.

The order in which the bases for price analysis are presented above represents the general order of base desirability for price analysis. However, the order is not set in concrete.

For example, comparisons with commercial prices can be just as desirable as comparisons with other proposed prices. After all, the prices of commercial products are defined by commercial market competition.

Independent Government estimates are normally considered to be one of the less desirable bases for price analysis. However, in cases (e.g., construction) where

estimates are based on extensive detailed analysis of requirements and the market, the Government estimate can be one of the best bases for price analysis.

Moreover, you should use all bases for which you have recent, reliable and valid data. For example, you would be well advised to consider the last price paid in addition to other proposed prices -- especially if the prior contract was awarded last month and at a reasonable price.

Price Reasonableness Decision. Price analysis is a subjective evaluation. For any given procurement, different bases for price analysis may give you a different view of price reasonableness. Even given the same information, different buyers/contracting officers might make different decisions about price reasonableness.

It is the contracting officer who must be satisfied that the price is fair and reasonable.

Resolving Differences Between Cost and Price Analysis (FAR 15.405(d)). If your price analysis does not support the findings of your cost analysis, you must reexamine your cost analysis result. Look for alternatives that will permit contract award at a reasonable price.

Consider alternative methods of contract completion and closely examine contract for possible changes in contract requirements.

If the results of cost analysis and price analysis cannot be reconciled by the close of negotiations, the contracting officer must refer the contract action to a level above the contracting officer. The problem and the resolution should be documented.

12.2 Recognizing Alternatives And Their Effect On Contract Price

Consider contracting alternatives and their affect on contract price as you complete your analysis. Common alternatives affecting contract pricing involve changes in contract cost or cost risk that are related to changes in contract schedule or other performance requirements.

- 12.2.1 <u>Identifying And Considering The Effect Of</u> Cost Drivers
- 12.2.2 <u>Identifying And Ameliorating Sources Of Cost</u>
 Risk

Focus on Contracting Alternatives. Most negotiators assume that contract schedule and other performance requirements cannot be changed under any circumstances. However, you can often negotiate a better deal for all contracting parties if you consider available alternatives.

Team Effort (\underline{FAR} 1.102-3, $\underline{1.102-4}$, and $\underline{15.404-1(a)}$). Take a team approach the analysis or alternatives. Other members of the Acquisition Team (e.g., technical personnel, the auditor, the price analyst, and contractors) can provide invaluable insight into contract requirements and their affect on contract cost and cost risk.

For example: If you are considering alternatives related to a complex contract proposal, you will generally need support from technical personnel to evaluate the effect of any proposed alternative on contract cost or cost risk. You may also need analysis support from:

- Requiring activity personnel to determine the feasibility of proposed alternatives related to delivery timing, production or performance methods, and materials;
- Technical personnel to consider the effect of proposed alternatives on contract labor and material requirements; and
- The cognizant auditor to consider the effect of the proposed alternatives on labor rates, indirect cost rates, and material pricing.

However throughout any analysis of alternatives, remember that the contracting officer is ultimately responsible for acquiring required supplies and services from responsible sources at fair and reasonable prices.

Caution About Alternatives (FAR 15.206(d) and 15.306(e)). Before bringing a potential alternative (or any other change in terms and conditions) to the negotiation table, you must consider the:

• Costs to the Government affected by the proposed alternative;

- Terms and conditions affected by the proposed alternative (including legal and regulatory requirements); and
- The nature of the discussions.
 - In a non-competitive environment, you may directly negotiate changes in terms and conditions.
 - o In competitive procurements, you may need to amend the RFP and notify other offerors as provided in the FAR. Also remember that you must not reveal one offeror's technical solution to another offeror, including:
 - o Unique technology;
 - Innovative and unique uses of commercial items;
 or
 - Any information that would compromise an offeror's intellectual property.

12.2.1 Identifying And Considering The Effect Of Cost Drivers

Identifying Cost Drivers. Cost drivers are those aspects of proposal or contract requirements that if changed would have a major impact on contract price. Possible cost drivers include contract terms and conditions, delivery requirements, or technical requirements. For example:

- If the contract does not allow for use of existing Government property, then offered prices may include costs for the acquisition or fabrication of additional tooling or test equipment.
- If delivery is needed on an expedited basis, then premium charges may be incurred.
- If contract technical requirements call for an expensive process when another less expensive process would meet the needs of end users, then offered prices would be fair but unreasonably high through no fault of the offerors.

Considering the Cost Driver Effect on Contract Price. Work with other members of the Acquisition Team to identify the cost drivers that appear to be affecting contract price in the current acquisition environment. Having identified the factors that appear to be driving contract cost, you can begin reviewing the impact of alternatives. The following

scenarios are examples of how you might consider the effect of schedule changes on contract price:

Example 1. Normal delivery time for Item A is six months after receipt of an order at a unit price of \$1,000. The requiring activity wants the part in three months at the same price. The offeror can get the part in three months, but only at a premium price of \$1,250. In this case, schedule is a cost driver with a shorter delivery schedule resulting in a cost increase.

Example 2. The requiring agency has requested delivery of Item B twelve months from today. The offeror has quoted a unit price of \$5,000 for the 12-month delivery. At the same time, the offeror has offered to add this Item B requirement to a projected production run. By combining the requirements, a second set-up charge can be avoided and the part can be purchased for \$4,500, but delivery cannot be made in less than 15 months. If the requiring activity cannot accept the 15 month delivery, schedule will be a significant cost driver.

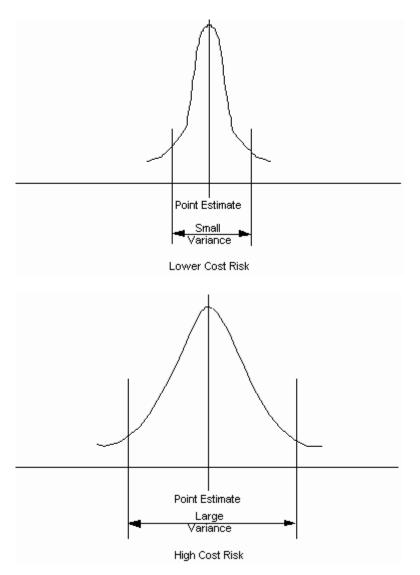
Example 3. The proposal calls for a delivery 36 months after receipt of an order. During the technical analysis, you determined that the offeror's shop loading schedule would allow for delivery in 24 months. The proposed part has been in continuous production for several years and is "well down the improvement curve." The earlier delivery year has significantly lower projected labor rates, and the additional volume would significantly reduce overhead rates. As a result, earlier delivery should actually reduce contract cost.

12.2.2 Identifying And Ameliorating Sources Of Cost Risk

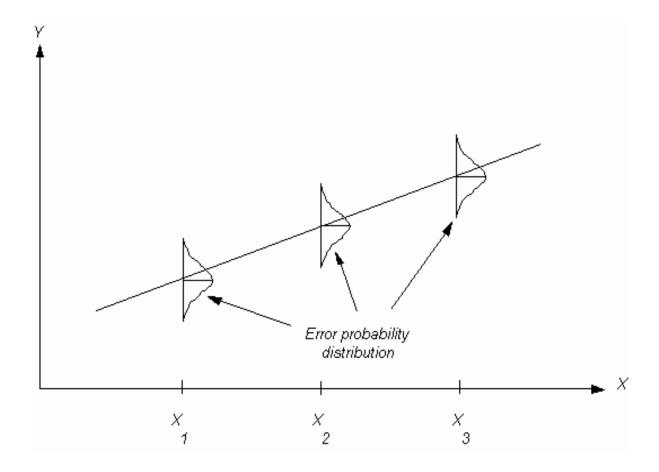
Identify Sources of Cost Risk. Most cost estimates, whether they are the offeror's proposed or the Government's recommended, include a "point estimate" -- the point estimate is an estimate of what the estimator believes is most likely to happen. In most cases, the point estimate is one of a range of possible costs.

Since things rarely happen exactly as predicted, there are usually variances between projected and actual costs. Known to statisticians as an error probability

distribution, the greater the potential variability between the projected and actual cost, the greater the cost risk.



Even in the case of a line-of-best-fit trend analysis, you are dealing with a point estimate-a point on the best-fit line with a probability distribution surrounding it.



Typically, cost risk increases when market prices are volatile or you lack cost information on the market. For example, cost risk is typically quite high for contracts that require new and untested product technology.

Even when there is substantial cost risk, you can make a point estimate. However as contractor cost risk increases, contractors normally become more concerned about the upper limit of cost risk and less concerned about the point estimate. In such situations, you must find a way to ameliorate the risk involved.

Identify Means of Reducing or Controlling Contractor Cost Risk. Remember that there are a variety of methods that you should consider for reducing and controlling contract cost. Among the most important are the appropriate use of:

• An appropriate contract type;

- Clear technical requirements;
- Government furnished property; and
- Other contract terms and conditions.

12.3 Identifying Key Pricing Elements In Prenegotiation Objectives

Pricing Elements by Contract Type. In preparing your negotiation objective, you must establish a position on each of the key elements that will define the contract pricing arrangement. Depending on the contract type, you may be able to restrict negotiations to total price or you may be required to negotiate agreement on several elements needed to define the pricing arrangement.

Contract E	lements by Contract Type
Contract Type	Pricing Elements Requiring Negotiation
Firm fixed-price and firm fixed-price level of effort FAR 16.202 FAR 16.207	Total price
Fixed-price economic price adjustment FAR 16.203	Base price Contract amount subject to adjustment Basis for determining economic adjustment Limits on economic adjustment
Fixed-price incentive firm FAR 16.403-1	Target cost Target profit Cost sharing arrangement under target cost Cost sharing arrangement over target cost Ceiling price
Fixed-price incentive successive targets FAR 16.403-2	Initial target cost Initial target profit Initial cost sharing arrangement under target Initial cost sharing arrangement over target Ceiling for firm target profit Floor for firm target profit

Point(s) where firm target cost and firm target profit will be negotiated Ceiling price
Firm fixed-price for initial period Stated time(s) for prospective price redetermination
Fixed ceiling price Agreement to price redetermination after contract completion
Fixed price (including normal profit) Award fee pool Plan for periodic evaluation
Target cost Target fee Cost sharing arrangement under target cost Cost sharing arrangement over target cost Minimum fee Maximum fee
Estimated cost Base fee Award fee
Estimated cost Fixed fee
Labor-hour rate(s) Material handling costs (indirect costs) or provision to charge material on a basis other than cost Ceiling price
Labor-hour rate(s) Ceiling price

Relationship Between Price and Contract Type ($\underline{\text{FAR}}$ $\underline{16.103(b)}$). As you prepare your negotiation objectives, remember that the contract type decision itself is subject to negotiation. Contract type and contract prices are closely related and should be negotiated together. The objective is to negotiate a contract type and price (or estimated cost and fee) that will result in reasonable

contractor risk and provide the contractor with the greatest incentive for efficient and economical contract performance.

12.4 Documenting Prenegotiation Positions

Prenegotiation Documentation (FAR 15.406-1(b) and FAR 15.406-3(a)). In many contracting activities, contracting officers must prepare written **prenegotiation memoranda** to document these prenegotiation objectives. Whether you work for such an activity or not, you should draft the following elements of the Price Negotiation Memorandum (PNM) **before** negotiations:

- Purpose of the negotiation (new contract, final pricing, etc.)
- Description of the acquisition, including appropriate identifying numbers (e.g., RFP number).
- The current status of any contractor systems (e.g., purchasing, estimating, accounting, and compensation) to the extent they were considered in developing the prenegotiation objective.
- If the offeror was not required to submit cost or pricing data to support any price negotiation over the cost or pricing data threshold, the exception used and the basis for using it.
- If the offeror was required to submit cost or pricing data, the extent to which the contracting officer:
 - o Relied on the data submitted and used them in preparing negotiation objectives;
 - o Recognized any submitted data as inaccurate, incomplete, or noncurrent and the action that the contracting officer has taken or will take regarding the data; or
 - o Determined that an exception applies and will not require certification.
- A summary of the contractor's proposal, field pricing and internal analyses, and the Government prenegotiation objective. Carefully summarize the reasons for any pertinent variances in major cost elements.
- A summary of the most significant facts or considerations controlling the establishment of the prenegotiation price objective.

- A summary and quantification of any significant effect that direction from Congress, other agencies, or higher-level officials (i.e., officials who would not normally exercise authority during the contract award and review process) has had on the contract action.
- The basis for the profit/fee prenegotiation objective.

Additional DocumentationI. In preparing your prenegotiation documentation, you should also document any important aspects of the procurement situation that affected your prenegotiation objectives, such as:

- The items or services and quantities being purchased.
- The place of contract performance.
- The delivery schedule or period of performance.
- Any differences between the proposed delivery schedule and the objective schedule.
- Any previous buys of similar products and related information:
 - o When.
 - o How many were acquired.
 - o Schedule/production rate.
 - o Contract type.
 - o Unit prices or total prices, including both target and final prices, if applicable.
- Any Government-furnished material which will be provided as a result of the contract and its estimated dollar value.
- Any unique aspects of the procurement action.
- Any outside influences or time pressures associated with the procurement (e.g., procurement priority and funding limitations).

Summarizing Prenegotiation Positions. As a minimum, your prenegotiation documentation should outline the offeror's estimating rationale, the Government's prenegotiation objective, and key differences between the two positions. Generally, this summary begins with a tabular presentation similar to the following:

Cost Element	Proposed	Objective	Difference	Reference
Engineering Direct Labor	\$1,000,000	\$900,000	\$100,000	See Para A
Engineering	\$2,500,000	\$2,025,000	\$475,000	See Para B

Overhead				
Subtotal	\$3,500,000	\$2,925,000	\$575,000	
G&A Expense	\$350,000	\$292,500	\$57,500	See Para C
Total Cost	\$3,850,000	\$3,217,500	\$632,500	

Using this type of tabular cost element summary, you can identify the areas and degree of differences and provide a general format for more detailed analysis.

- In Paragraph A, describe the rationale used by the offeror in developing the proposal and by the Government in developing the Government objective. Focus on the differences between the two positions. Also reference any audit or technical reports and outline your proposed disposition for any significant findings.
- In Paragraphs B and C, address the same subjects found in Paragraph A with one major exception. Since these are overhead and G&A expense rates, you need to address whether the dollar differences are the result of differences in the application base or in the rates themselves. If you look closely at the detailed examples below, you will see that the engineering overhead dollar reductions are the result of both reduced engineering labor dollars (the indirect cost base) and a reduced engineering overhead rate. For G&A expense, the difference is only in the subtotal dollars used as the allocation base with no difference in the G&A rate.

Engineering Overhead	Calculations
Proposed	\$1,000,000 x 250% = \$2,500,000
Objective	\$900,000 x 225% = \$2,025,000
General & Administrative Expense	Calculations
Proposed	\$3,500,000 x 10% = \$350,000
Objective	\$2,925,000 x 10% = \$292,500

Consider Risk by Developing a Range of Positions. The Government objective is a point estimate within a range of reasonable prices. The most likely cost estimate should be

your objective, but you should consider other reasonable positions based on the information available. While your agency or contracting activity guidance may vary, the classic approach to developing a negotiation range calls for three positions -- minimum, objective, and maximum.

- Objective. The Government cost objective should be your best estimate of what the effort should cost, and the position where you would ideally like to settle.
- Minimum. The minimum, sometimes called the "going in position," should be at the low end of the reasonable range. In effect, you are saying that a price lower than the minimum is unreasonably low. Support this position with a detailed rationale. If you use the minimum as your opening offer, you must be ready to explain to the offeror why that position is reasonable.

There may be situations where the offeror has proposed a cost below what you believe is a reasonable minimum objective. In such situations, you should present to the offeror your reasons for believing that the proposed cost is unreasonably low. If the offeror fails to change or support the cost, you must consider that failure in your analysis of proposal cost realism.

• Maximum. The maximum is at the high end of the reasonable range. In effect, you are saying that a price higher than the maximum is unreasonably high. You would not go above your maximum without additional data that would validate a higher figure. If you needed a negotiation clearance prior to entering negotiations, you will likely have to seek another approval before negotiating a price higher than the maximum. In any event, if you exceed the maximum, be prepared to document a clear audit trail of how you concluded a higher price was both fair and reasonable.

Document the References Used in Position Development. Documentation of the reference documents used in developing your negotiation positions is essential. You need to be able to find key references during management review of contract negotiation objectives, during negotiations, and during preparation of the price negotiation memorandum. If a question arises later concerning defective pricing, it is vital that you have a detailed record of the information that you relied on during negotiations.

Price Prenegotiation Memorandum Checklist. The Price Prenegotiation Memorandum Checklist presented below highlights points that you should consider as you prepare for price negotiations. Even if your organization does not require a prenegotiation memorandum, the checklist provides a guide to important points that you should consider as you complete your contract pricing position.

		Price Prenegotiation Memorandum Checklist $^{rac{1}{2}}$
Subje	ct :	Line
	1.	Identify company/division/cost center and location.
	2.	Show contract or solicitation number.
	3.	Identify item to be purchased.
	4.	Identify fiscal year funds.
	-	
Memora	and	um Text
Intro	duc	tory Summary
elemer differ	nts cen	Provide comparative figures summarizing pricing of the proposal, objective, and ces, by cost, profit/fee, price, profit/fee rate, and licable:
	Incentive share	
	Minimum/maximum fee	
	Ceiling price and percentage of target cost	
	Option prices	
	Ту]	pe contract
Partio	cul	ars
	1.	Identify dates, places, and participants in fact-

finding.
2. Identify quantities being negotiated.
3. Show unit prices quoted and objective.
Procurement Situation
1. Identify type of negotiation action (e.g., a new contract).
2. Describe contract items or services included in objective amount and identify status (development, production, etc.).
3. Place of contract performance.
4. Show delivery schedule or period of performance.
5. State if there is any differences between the delivery schedule objective and the delivery schedule proposed.
6. State whether there have been any previous buys of similar products, and if so identify:
When
How many
Schedule/production rate
Contract type
Unit prices or total prices including both target and final prices if applicable
7. Identify if Government facilities will be furnished as a result of the contract, and, if so, the estimated dollar value.
8. Describe any unique features of the procurement action; for example should-cost, design-to-cost,

life-cycle cost, or special provisions affecting cost.
9. Describe any outside influences or time pressures associated with the procurement; for example, procurement priority, funding limitations, etc.
Prenegotiation Summary
1. Show proposed costs, prenegotiation objectives, and differences, tabulated in parallel form by major element of cost.
2. Identify the major considerations in pricing each major cost element in a separate paragraph showing when applicable:
Treatment accorded the element in the proposal including derivation of the estimate and "as of" data used as a basis for projection.
Availability, adequacy, and use of subcontractor cost or pricing data.
Extent and adequacy of offeror review of subcontract proposals.
Describe how the Government objective for each major cost element was developed.
Consideration given to information contained in in-house technical evaluations, field analyses, or audit reports.
Description of any additional or updated information obtained during fact-finding and the consideration given to it.
Identification of any offeror provided data that formed the basis of the objective.
Identification of any data or information relied on instead of contractor provided data
Impact of the procurement on company volume and its

impact, if any, on each major cost element.
If economic adjustment, specified contingencies, savings clauses, or other provisions are included, describe the details and rationale for use.
3. Describe, in a separate paragraph, how the Government profit objective was developed.
If structured approach used, rationale supporting assigned weights.
If structured approach not used, details on alternate approach and any weights used.
4. Justify the contract type selected including, as applicable:
Share line
Ceiling price
Miscellaneous
1. Identify audit reports received.
2. Identify contractor reviews received:
Purchasing system
Accounting system
Estimating system
Property system
Compensation system
3. Identify field technical reports received.
4. Identify in-house technical evaluations received.

 $^{\mbox{\scriptsize 1}}$ Refer to your agency or contracting activity guidance for specific requirements.