

Defense Acquisition University

Contract Pricing Reference Guide

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Table of Contents

1.0 Chapter Introduction	4
1.1 Matching Contract Type To Contract Risk.....	4
1.2 Utilizing Fixed-Price Economic Price Adjustment Contracts	12
1.3 Structuring and Applying Incentive Pricing Arrangements	18
1.4 Structuring And Applying Award-Fee Pricing Arrangements.....	34
1.5 Structuring Fixed-Price Redeterminable Pricing Arrangements	39
2.0 Chapter Introduction	48
2.1 Examining Indirect Cost Importance, Composition, And Allowability	48
2.2 Identifying Pools And Bases For Rate Development.....	56
2.3 Identifying Inconsistencies And Weaknesses In Rate Development.....	63
2.4 Analyzing Estimated Rates	70
2.5 Contract Forward Pricing	78
2.6 Contract Billing.....	80
2.7 Determining Final Indirect Costs.....	87
Chapter 3 Reviewing the Contractor's Pricing and Accounting Practices.....	98
3.1 Reviewing Accounting Systems.....	98
3.1 Reviewing Accounting Systems.....	99
3.2 Establishing The Government's Position On CAS Cost Impact Adjustments	104
3.3 Reviewing Cost Estimating Systems	112
3.4 Recognizing Potential Indicators Of Fraud And Other Wrongdoing	117
Chapter 4 Forecasting Cost Overruns.....	120
4.0 Chapter Introduction	121
4.1 Identifying And Analyzing Cost And Schedule Variances	122
4.1 Identifying And Analyzing Cost And Schedule Variances (cont)	126
4.2 Estimating Cost To Complete	145
4.3 Resolving Potential Cost Overruns.....	148
Appendix 4A, Earned Value Management System Guidelines	151
Chapter 5 Recognizing and Adjusting Defective Cost Pricing	153
5.0 Chapter Introduction	154
5.1 Identifying Possible Defective Pricing.....	161
5.2 Developing The Government Position On Price Adjustment.....	163
5.3 Completing Settlement Action	169
Chapter 6 Pricing Equitable Adjustments and Settlements.....	171
6.0 Chapter Introduction	172
6.1 Issues And Factors To Consider In Making Equitable Adjustments.....	172
6.2 Pricing Contract Changes	185
6.3 Other Situations Requiring Adjustment.....	189
6.4 Definitizing Undefinitized Contract Actions	196

6.5 Special Considerations For Pricing Claims	198
Chapter 7 Pricing Termination Settlements.....	201
7.0 Chapter Introduction	201
7.0 Chapter Introduction	202
7.1 Commercial Item Contract Termination for Convenience.....	202
7.2 Commercial-Item Contract Termination For Cause.....	203
7.3 Noncommercial-Item Fixed-Price Contract Termination For Convenience	204
7.4 Noncommercial-Item Fixed-Price Contract Termination For Default.....	210
7.5 Cost-Reimbursement Contract Termination For Convenience	212
7.6 Cost-Reimbursement Contract Termination For Default	214
7.7 Equitable Adjustment For Continued Portion Of A Fixed-Price Contract	215
Chapter 8 Conducting Cost Realism Analysis.....	216
8.0 Chapter Introduction	217
8.1 Evaluating Cost Realism.....	217
8.2 Considering The Uncompensated Overtime Effect On Cost Realism.....	224
8.3 Considering Cost Realism In Cost-Reimbursement Proposal Evaluation.....	228
8.4 Considering Cost Realism In Fixed-Price Proposal Evaluation.....	234
Chapter 9 Performing Financial Analysis	238
9.0 Chapter Introduction	239
9.1 Identifying Sources Of Financial Information.....	242
9.2 Identifying Key Financial Indicators	245
9.3 Applying Financial Indicators To Responsibility Decisions.....	250
9.4 Applying Financial Indicators To Contract Financing Decisions.....	255
9.5 Applying Financial Indicators To Performance Bond Decisions.....	268
9.6 Applying Financial Indicators To Progress Payment Administration	270
9.7 Applying Financial Indicators To Subordination Agreement Need Decisions	280

List of web links to the “Source” documents referenced in this CPRG Volume 4

Use the following web page links for researching any specific references cited in this CPRG Volume 4 to the Federal Acquisition Regulation (FAR), to the Defense Federal Acquisition Regulation Supplement (DFARS), to the Cost Accounting Standards (CAS), and to the other source documents listed below.

1. Acquisition.gov FAR page: <https://www.acquisition.gov/browse/index/far>
2. Acquisition.gov DFARS page: <https://www.acquisition.gov/dfars>
3. CFR Title 48 Chapter 99, Cost Accounting Standards (CAS): https://www.acquisition.gov/chapter_99
4. DCAA Contract Audit Manual: <https://www.dcaa.mil/Guidance/CAM-Contract-Audit-Manual/>
5. DCAA Pamphlet No. DCAAP 7641.90, Information for Contractors, January 2005
<https://fddocuments.in/document/dcaap764190.html>
6. DoD Instruction 7640.02: Policy for Follow-Up on Contract Audit Reports
<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/764002p.pdf>
7. Defense Contract Management Agency (DCMA) Earned Value Management Implementation Guide:
<https://www.dcms.mil/Portals/31/Documents/Policy/DCMA-INST-208.pdf?ver=2017-03-09-075739-897>
8. OMB Circulars, Federal Procurement:
<https://www.whitehouse.gov/omb/information-for-agencies/circulars/#procurement>
9. Bureau of Public Debt website: <https://www.publicdebt.treas.gov/>
10. The 14 General Principles of Ethical Conduct, 5 C.F.R §2635.101(b)
<https://www.justice.gov/civil/page/file/1072396/download>
11. DLA ASSIST Quick Search for “Data Item Descriptions”: <https://quicksearch.dla.mil/qsSearch.aspx>
12. “DoD Forms” Management Program: <https://www.esd.whs.mil/Directives/forms/>
13. GSA “Standard Forms”: <https://www.gsa.gov/reference/forms#>
14. DAU Earned Value Management (EVM) Gold Card:
[https://www.dau.edu/tools/t/EVM-General-Reference-\(Gold-Card\)](https://www.dau.edu/tools/t/EVM-General-Reference-(Gold-Card))
15. Bureau of Labor Statistics: Producer Price Index: <https://www.bls.gov/ppi/>
Bureau of Labor Statistics: Employment Cost Index: <https://www.bls.gov/ncs/ect/>
16. The Securities and Exchange Commission (SEC): <http://www.sec.gov/>
17. Dun and Bradstreet: www.dnb.com
18. Moody’s Investor Services: <https://www.moody.com/>
19. The International Directory of Corporate Affiliations:
www.columbia.edu/cu/lweb/indiv/business/guides/intldocompany.html
20. Standard and Poor: <http://www.standardpoor.com/ratings/>
21. Thomas Register: <http://www.thomasregister.com/>
22. The Value Line Investment Survey: <http://www.valueline.com/>
23. The Risk Management Association (RMA) eStatement Studies: <http://www.rmahq.org/RMA>
24. OMB Prompt Payment Regulations: <http://www.fms.treas.gov/prompt/regulations.html>
25. DoD Class Deviations issued by the Principal Director of Defense Pricing and Contracting, OSD:
https://www.acq.osd.mil/dpap/dars/class_deviations.html

Chapter 1

Establishing and Monitoring Contract Type

1.0 Chapter Introduction

When used in this chapter, the terms "contract type" and "type of contract" refer to the contract compensation arrangement. The contract compensation arrangement is the method of determining the dollars due to the contractor under the contract. In this chapter, you will learn about the development and application of common compensation arrangements:

1.1 Matching Contract Type To Contract Risk

Points to Consider ([FAR 16.103](#)). Contract type selection is the principal method of allocating cost risk between the Government and the contractor. There is no single contract type that is right for every contracting situation. Selection must be made on a case-by-case basis considering contract risk, incentives for contractor performance, and other factors such as the adequacy of the contractor's accounting system. Your objective should be to select a contract type that will result in reasonable contractor risk with the greatest incentive for efficient and economical contract performance. Selecting the proper contract type will make the work more attractive to more potential offerors, thereby increasing competition.

As you match contract type to contract risk, consider the following:

- Identify available contract types;
- Consider acquisition method;
- Consider commerciality of the requirement;
- Consider cost risk associated with the contract action;
- Consider appropriate performance incentives;
- Consider the accounting system adequacy; and
- Document the selection decision.

Identify Available Contract Types. The table on the following pages compares the most common type of contract arrangements. Most of those arrangements fit into two general categories fixed-price and cost-reimbursement, but labor-hour and time-and-materials contracts have characteristics of both:

- **Fixed-Price** ([FAR subpart 16.2](#)). Under a fixed-price contract, the contractor agrees to deliver the product or service required at a price not in excess of the agreed-to maximum. Fixed-price contracts should be used when the contract risk is relatively low, or defined within acceptable limits, and the contractor and the Government can reasonably agree on a maximum price. Contract types in this category include:
 - Firm fixed-price (FFP)
 - Fixed-price contracts with economic price adjustment (FP/EPA)
 - Fixed-price award-fee (FPAF)
 - Fixed-price incentive (firm target) (FPIF)
 - Fixed-price incentive (successive targets) (FPIS)
 - Fixed-price contract with prospective price redetermination (FPPR)
 - Fixed-ceiling-price contract with retroactive price redetermination (FPRR)
 - Firm fixed-price level of effort term contract (FFP/LOE)

- Cost-Reimbursement** ([FAR subpart 16.3](#)). Under a cost-reimbursement contract, the contractor agrees to provide its best effort to complete the required contract effort. Cost-reimbursement contracts provide for payment of allowable incurred costs, to the extent prescribed in the contract. These contracts include an estimate of total cost for the purpose of obligating funds and establishing a ceiling that the contractor cannot exceed (except at its own risk) without the approval of the contracting officer. Contract types in this category include:
 - Cost (CR)
 - Cost-sharing (CS)
 - Cost-plus-fixed-fee (CPFF)
 - Cost-plus-award-fee (CPAF)
 - Cost-plus-incentive-fee (CPIF)
- Labor-Hour (LH) and Time-and-Materials (T&M)** ([FAR subpart 16.6](#)). There are two other types of contract compensation arrangements that do not completely fit the mold of either fixed-price or cost-reimbursement contracts. Labor-hour and time-and-materials contracts both include fixed labor rates but only estimates of the hours required to complete the contract. They are generally considered to most resemble cost-reimbursement contracts because they:
 - Do not require the contractor to complete the required contract effort within an agreed-to maximum price; and
 - Pay the contractor for actual hours worked.

Comparison of Major Contract Types					
	Firm Fixed-Price (FFP)	Fixed-Price Economic Price Adjustment (FP/EPA)	Fixed-Price Incentive Firm Target (FP/IFT)	Fixed-Price with Award Fees (FP/AF)	Fixed-Price Contract with Prospective Price Redetermination (FP/PPR)
Principal Risk to be Mitigated	Contractor assumes all cost risk.	Unstable market prices for labor or material over the life of the contract.	Moderately uncertain contract labor or material requirements	Risk that the user will not be fully satisfied because of judgmental acceptance criteria.	Costs of performance after the first year because they cannot be estimated with confidence.
Use When	<ul style="list-style-type: none"> The requirement is well defined. Contractors are experienced in meeting it. Market conditions are stable. Financial 	The market prices at risk are severable and significant. The risk stems from industry-wide contingencies beyond the contractor's control. The	A ceiling price can be established that covers the most probable risks inherent in the nature of the work. The proposed profit sharing formula would motivate the contractor	Judgmental standards can be fairly applied by an Award-fee panel. The potential fee is large enough to both: <ul style="list-style-type: none"> Provide a meaningful incentive. 	The Government needs a firm commitment from the contractor to deliver the supplies or services during subsequent years. The dollars at risk outweigh the administrative burdens of an FPPR.

Comparison of Major Contract Types					
	Firm Fixed-Price (FFP)	Fixed-Price Economic Price Adjustment (FP/EPA)	Fixed-Price Incentive Firm Target (FPIF)	Fixed-Price with Award Fees (FPAF)	Fixed-Price Contract with Prospective Price Redetermination (FPPR)
	risks are otherwise insignificant	dollars at risk outweigh the administrative burdens of an FP/EPA.	to control costs to and meet other objectives.	<ul style="list-style-type: none"> Justify related administrative burdens. 	
Elements	A firm fixed-price for each line item or one or more groupings of line items.	A fixed-price, ceiling on upward adjustment, and a formula for adjusting the price up or down based on: <ul style="list-style-type: none"> Established prices. Actual labor or material costs. Labor or material indices. 	<ul style="list-style-type: none"> A ceiling price Target cost Target profit Delivery, quality, and/or other performance targets (optional) Profit sharing formula 	<ul style="list-style-type: none"> A firm fixed-price. Standards for evaluating performance. Procedures for calculating a fee based on performance against the standards 	<ul style="list-style-type: none"> Fixed-price for the first period. Proposed subsequent periods (at least 12 months apart). Timetable for pricing the next period(s).
Contractor is Obligated to:	Provide an acceptable deliverable at the time, place and price specified in the contract.	Provide an acceptable deliverable at the time and place specified in the contract at the adjusted price.	Provide an acceptable deliverable at the time and place specified in the contract at or below the ceiling price.	Perform at the time, place, and the price fixed in the contract.	Provide acceptable deliverables at the time and place specified in the contract at the price established for each period.
Contractor Incentive (other than maximizing goodwill) ¹	Generally realizes an additional dollar of profit for every dollar that costs are reduced	Generally realizes an additional dollar of profit for every dollar that costs are reduced.	Realizes a higher profit by completing the work below the ceiling price and/or by meeting objective performance targets.	Generally realizes an additional dollar of profit for every dollar that costs are reduced; earns an additional fee for satisfying the performance standards.	For the period of performance, realizes an additional dollar of profit for every dollar that costs are reduced.

Comparison of Major Contract Types					
	Firm Fixed-Price (FFP)	Fixed-Price Economic Price Adjustment (FP/EPA)	Fixed-Price Incentive Firm Target (FPIF)	Fixed-Price with Award Fees (FPAF)	Fixed-Price Contract with Prospective Price Redetermination (FPPR)
Typical Application	Commercial supplies and services.	Long-term contracts for commercial supplies during a period of high inflation	Production of a major system based on a prototype	Performance-based service contracts.	Long-term production of spare parts for a major system.
Principal Limitations in FAR parts 16, 32, 35, and 52	Generally NOT appropriate for R&D.	Must be justified.	Must be justified. Must be negotiated. Contractor must have an adequate accounting system. Cost data must support targets.	Must be negotiated.	MUST be negotiated. Contractor must have an adequate accounting system that supports the pricing periods. Prompt redeterminations.
Variants	Firm Fixed-price Level of Effort.		Successive Targets		Retroactive Redetermination

¹ Goodwill is the value of the name, reputation, location, and intangible assets of the firm.

Comparison of Major Contract Types					
	Cost-Plus Incentive-Fee (CPIF)	Cost-Plus Award-Fee (CPAF)	Cost-Plus Fixed-Fee (CPFF)	Cost (C) or Cost-Sharing (CS)	Time & Materials (T&M)
Principal Risk to be Mitigated	Highly uncertain and speculative labor hours, labor mix, and/or material requirements (and other things) necessary to perform the contract. The Government assumes the risks inherent in the contract -benefiting if the actual cost is lower than the expected cost-losing if the work cannot be completed within the expected cost of performance.				
Use When	An objective relationship can be established between the fee and such measures of performance as actual costs, delivery dates,	Objective incentive targets are not feasible for critical aspects of performance. Judgmental standards can be fairly applied. Potential fee	Relating fee to performance (e.g., to actual costs) would be unworkable or of marginal utility.	<ul style="list-style-type: none"> The contractor expects substantial compensating benefits for absorbing part of the costs and/or foregoing fee 	No other type of contract is suitable (e.g., because costs are too low to justify an audit of the contractor's indirect

Comparison of Major Contract Types					
	Cost-Plus Incentive-Fee (CPIF)	Cost-Plus Award-Fee (CPAF)	Cost-Plus Fixed-Fee (CPFF)	Cost (C) or Cost-Sharing (CS)	Time & Materials (T&M)
	performance benchmarks, and the like.	would provide a meaningful incentive.		or <ul style="list-style-type: none"> The vendor is a non-profit entity 	expenses).
Elements	<ul style="list-style-type: none"> Target cost Performance targets (optional) A minimum, maximum, and target fee A formula for adjusting fee based on actual costs and/or performance 	<ul style="list-style-type: none"> Target cost Standards for evaluating performance A base and maximum fee Procedures for adjusting fee, based on performance against the standards 	<ul style="list-style-type: none"> Target cost Fixed fee 	<ul style="list-style-type: none"> Target cost If CS, an agreement on the Government's share of the cost. No fee 	<ul style="list-style-type: none"> A ceiling price A per-hour labor rate that also covers overhead and profit Provisions for reimbursing direct material costs
Contractor is Obligated to:	Make a good faith effort to meet the Government's needs within the estimated cost in the Schedule.				Make a good faith effort to meet the Government's needs within the ceiling price.
Contractor Incentive (other than maximizing goodwill) ¹	Realizes a higher fee by completing the work at a lower cost and/or by meeting other objective performance targets.	Realizes a higher fee by meeting judgmental performance standards.	Realizes a higher rate of return (i.e., fee divided by total cost) as total cost decreases.	If CS, shares in the cost of providing a deliverable of mutual benefit	
Typical Application	Research and development of the prototype for a major system.	Large scale research study.	Research study	Joint research with educational institutions.	Emergency repairs to heating plants and aircraft engines.
Principal Limitations in FAR parts 16, 32, 35, 52	The contractor must have an adequate accounting system. The Government must exercise surveillance during performance to ensure use of efficient methods and cost controls. Must be negotiated. Must be justified. Statutory and regulatory limits on the fees that may be negotiated. Must include the applicable Limitation of Cost clause at FAR 52.232-20 through FAR 52.232-23.				Labor rates must be negotiated. MUST be justified. The Government MUST

Comparison of Major Contract Types					
	Cost-Plus Incentive-Fee (CPIF)	Cost-Plus Award-Fee (CPAF)	Cost-Plus Fixed-Fee (CPFF)	Cost (C) or Cost-Sharing (CS)	Time & Materials (T&M)
					exercise appropriate surveillance to ensure efficient performance.
Variants			Completion or Term.		Labor Hour (LH)

Consider Acquisition Method ([FAR 14.104](#) and [FAR 16.102](#)). The acquisition method selected for a particular acquisition may limit the available choice of contract type:

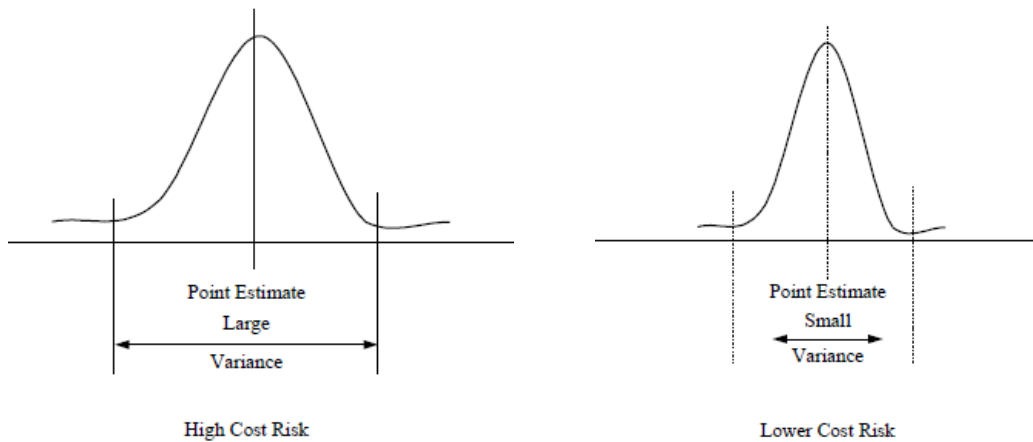
- **Simplified Acquisition.** When using simplified acquisition procedures purchase orders are normally firm fixed-price. You may use an unpriced order in certain situations when it is impossible to obtain firm pricing prior to issuing the purchase order. Whenever you use an unpriced order, the order must include a dollar limit on the Government's obligation and the contracting officer must follow-up to assure timely pricing.
- **Sealed Bidding.** When using sealed bidding procedures:
 - You will normally use a firm fixed-price contract.
 - You may use a fixed-price contract with economic price adjustment if the contracting officer determines (in writing) what type of contract is necessary to protect the contractor and the Government against significant fluctuations in labor or material costs or to provide for contract price adjustments in the event of changes in the contractor's established prices.
 - You must not use any other contract type.
- **Negotiation.** When using the negotiation procedures prescribed in FAR Part 15:
 - You may use any contract type or combination of contract types that will promote the best interests of the Government, as long as you meet the specific limitations in FAR Part 16.
 - You must not use any contract type not prescribed in the FAR unless authorized by agency regulation or a FAR deviation.

Consider Commerciality of the Requirement ([FAR 12.207](#)). When acquiring a commercial item:

- You normally should use a firm fixed-price contract.
- You may use a fixed-price contract with economic price adjustment if the contracting officer determines (in writing) what type of contract is necessary to protect the contractor and the Government against significant fluctuations in labor or material costs or to provide for contract price adjustments in the event of changes in the contractor's established prices.
- You must not use any other contract type in acquiring commercial items.

Consider Cost Risk . Encourage contractors to accept reasonable cost risks of contract performance. However, requiring contractors to accept unknown or uncontrollable cost risk can endanger contract performance, substantially reduce competition, and/or substantially increase contract price. To realistically choose the proper contract type to meet a specific contract situation, you must consider the proper allocation of cost risk.

Cost estimates, whether they are the offeror's proposed or the Government's recommended, are point estimates. In all contracts involving forward pricing, the point estimate is a projection of what the estimator believes is most likely to happen. Since things rarely happen exactly as predicted, there is usually some variation between projected and actual cost. The greater the potential variability between the projected and actual cost, the greater the cost risk.



Cost Reimbursement

Fixed Price

Quantitative analysis techniques can provide invaluable information about the distribution of values around the most likely future cost. For example, consider the confidence interval when your estimate is based on sampling analysis and the prediction interval when your estimate is based on regression analysis. However, use this information wisely. If the variance is large, attempt to determine why the interval is so large and what can be done to narrow it, before you select a contract type to share the risk.

As a minimum, your appraisal of cost risk should consider two areas of particular concern, contract performance risk and market risk.

- Performance Risk. Most contract cost risk is related to contract requirements and the uncertainty surrounding contract performance. The lower the uncertainty the lower the risk. Therefore, your appraisal of cost risk should begin with an appraisal of performance risk. For larger more complex contracts, you will likely need assistance from other members of the Government Acquisition Team (e.g., representatives from the requiring activity, engineering staff, contracting, and program/project management).
- Areas that you consider should include:
 - Stability and clarity of the contract specifications or statement of work;
 - Type and complexity of the item or service being purchased;
 - Availability of historical pricing data;
 - Prior experience in providing required supplies or services;
 - Urgency of the requirement;
 - Contractor technical capability and financial responsibility; and
 - Extent and nature of proposed subcontracting.
 - The figure below depicts what happens as the contract requirement becomes better defined.

COST RISK AND CONTRACT TYPE							
Cost Risk	High	_____				Low	
Requirement Definition	Vague	_____				Well-defined	
Production Stages	Concept Studies & Basic Research	Exploratory Development	Test/ Demonstration	Full-scale Development	Full Production	Follow-on Production	
Contract Type	Varied	CPFF	CPIF, FPIF	CPIF, FPIF, or FFP	FFP, FPIF, or FPEPA	FFP, FPIF, or FPEPA	

- Performance risk should be reduced from a high to a relatively low level, as the requirement progresses from vague to well-defined and experience with the product increases.
 - Research and development contracts generally have a rather high performance risk. This is due to the factor of ill-defined requirements that arise from the necessity to deal beyond, or at least very near, the upper limits of current technology (i.e., "the state of the art").
 - Follow-on production contracts generally have a relatively low performance risk. Requirements are well known, there is a cost history to draw on, contractors have experience producing the product, etc.
- As performance risk changes, so should contract type. Note that cost-reimbursement, time & materials, or labor-hour contracts are generally associated with higher-risk requirements and fixed-price contracts are generally associated with lower-risk requirements.
- **Market Risk.** Changes in the marketplace will also affect contract costs. Preferred acquisition practice calls for forward pricing of contract efforts, because forward pricing provides a baseline which you and the contractor can use to measure cost or price performance against contract effort.
 - Forward pricing requires the contracting parties to make assumptions about future changes in the marketplace. A volatile market will increase the cost risk involved in contract pricing, particularly when the contract period will extend several years. What will material and labor cost two years from now? Will material shortages occur two years from now? In cases where these unknown costs are significant, contract period risk becomes an important consideration in selection of contract type.
 - Fixed-price contracts with economic price adjustment, for example, are designed specifically to reduce this risk for contractors.

Consider Appropriate Performance Incentives (FAR 16.103(b)). Select the contract type (or combination of types) that will appropriately motivate contract performance.

- When the risk involved is minimal or can be predicted with an acceptable degree of certainty, use a firm fixed-price contract, because it best utilizes profit to motivate efficient contract performance and cost control.
- When there is no reasonable basis for firm pricing, consider other contract types. Using a firm fixed-price contract may limit competition, encourage inflated contract pricing, and efforts to control costs may actually hamper effective contract performance.

Consider Accounting System Adequacy (FAR 16.104(i)). Before agreeing on a contract type other than firm fixed-price, you must ensure that the contractor's accounting system will permit timely development of all necessary cost data in the form required for the proposed contract type. A careful account system

review is particularly important when the contractor's only experience has been with firm fixed-price contracts. *Document the Selection Decision* ([FAR 16.103\(d\)](#)). Assure that the contract file contains documentation showing why the particular contract type was selected, unless you are:

- Making a fixed-price acquisition using simplified acquisition procedures;
- Using a firm fixed-price contract for any requirement other than major systems acquisition or research and development; or
- Awarding the set-aside portion of a sealed bid partial set-aside for small business.

1.2 Utilizing Fixed-Price Economic Price Adjustment Contracts

This section will examine procedures for establishing a fixed-price economic price adjustment contract (FPEPA) and the procedures for making price adjustments using one type of FPEPA contract.

- 1.2.1 - Establishing Terms And Conditions For Economic Price Adjustment
- 1.2.2 - Making An Economic Price Adjustment Using Cost Indexes

General Characteristics ([FAR 16.203](#)). A fixed-price with economic price adjustment (FPEPA) contract is designed to cope with the economic uncertainties that threaten long-term fixed-price arrangements. The economic price adjustment (EPA) provisions provide for both price increases and decreases to protect the Government and the contractor from the effects of economic changes. *Situations for Use* ([FAR 16.203-2](#)). You may use an FPEPA contract in sealed bidding or negotiation when both of the following conditions exist:

- There is serious doubt concerning the stability of market or labor conditions that will exist during an extended period of contract performance.
 - Volatility of the markets for labor and material. The more volatile the market, the greater the benefits that can be derived from FPEPA utilization.
 - Projected contract period. The longer the contract, the greater the contractor's exposure to an uncertain market. FPEPA contracts are normally not used for contracts that will be completed within six months of contract award.
 - The amount of competition expected. If markets are truly volatile, many firms may be unwilling to submit an offer without EPA protection.
 - Dollar value of the contract. The greater the cost risk to the contractor, the greater the benefits that can be derived from an FPEPA contract. Follow the procedures at [DFARS PGI 216.203-4](#) when using an economic price adjustment clause based on cost indexes of labor or material ([DFARS 216.203-4\(2\)](#)).
- Contingencies that would otherwise be included in the contract price can be identified and covered separately in the contract.

Limitations on Use ([FAR 16.203-3](#)). You must not use an FPEPA contract unless you have determined that it is necessary for one of the following reasons.

- To protect the contractor and the Government against significant fluctuations in labor or material costs.
- To provide for contract price adjustment in the event of changes in the contractor's established prices.

1.2.1 Establishing Terms And Conditions For Economic Price Adjustment

Establishing the Base for Adjustment ([FAR 16.203-2](#)). When establishing a base for adjustment, ensure that contingency allowances are not duplicated by inclusion in both the base price and the adjustment requested by the contractor under the EPA provision.

If you do not require cost or pricing data, obtain adequate information to establish the base level from which adjustment will be made. If necessary, you may require verification of the data submitted.

EPA Clauses in Negotiated Contracts ([FAR 16.203-4](#)). The key provision in an FPEPA contract is the EPA clause. FAR identifies the four types of economic price adjustment presented in the table below. In developing an FPEPA contract, you can choose from the FAR EPA clauses, use an agency-prescribed clause, or develop your own unique clause following agency guidelines. For commercial items, consider market research and commercial practice in clause development.

When you are contracting by negotiation and an FPEPA contract is appropriate:		
Consider adjustment based on:	When the following requirements are met:	And adjustment can follow the requirements of:
Established Prices for Standard Supplies	<ul style="list-style-type: none"> • A fixed-price contract is contemplated. • Contract is for standard supplies with an established catalog or market price. • If the contract unit price reflects a net price after applying a trade discount from a catalog or list price, you must document both the catalog or list price and the discount. 	<ul style="list-style-type: none"> • Economic Price Adjustment-Standard Supplies (FAR 52.216-2); or • An agency-prescribed EPA clause if you determine that use of the above provision is inappropriate (e.g., DFARS 252.216-7000, Economic Price Adjustment-Basic Steel, Aluminum, Brass, Bronze, or Copper Mill Products).
Established Prices of Semi standard Supplies	<ul style="list-style-type: none"> • A fixed-price contract is contemplated. • The contract is for semi standard supplies with prices that can be reasonably related to the prices of nearly equivalent standard supplies with an established catalog or market price. • If the contract unit price reflects a net price after applying a trade discount from a catalog or list price, you can document both the catalog or list price and the discount. • Before contract award, you must reach agreement in writing with the contractor on the identity of the standard item related to each line item. 	<ul style="list-style-type: none"> • Economic Price Adjustment- Semi standard Supplies (FAR 52.216-3); or • An agency-prescribed EPA clause if you determine that use of the above provision is inappropriate.

When you are contracting by negotiation and an FPEPA contract is appropriate:		
Consider adjustment based on:	When the following requirements are met:	And adjustment can follow the requirements of:
	<ul style="list-style-type: none"> • Note: If the supplies are standard, except for preservation, packaging, and packing, use the Standard Supplies provision, above. 	
Actual Cost of Labor or Material	<ul style="list-style-type: none"> • A fixed-price contract is contemplated. • No major design engineering or development is involved. • One or more identifiable labor or material cost factors is subject to change. • The contract Schedule must describe in detail: • Types of labor and materials subject to adjustment under the provision. • Labor rates, including fringe benefits that may be increased or decreased. • Quantities of the specified labor and materials allocable to each unit to be delivered under the contract. • When negotiating adjustments under the contract, you must be able to: • Consider work in process and materials on hand at the time of changes in labor rates, including fringe benefits. • Not adjust any indirect costs except fringe benefits. • Consider only fringe benefits specified in the contract Schedule. 	<ul style="list-style-type: none"> • Economic Price Adjustment- Labor and Material (FAR 52.216-4); or • An agency-prescribed EPA clause if you determine that use of the above provision is inappropriate (e.g., DFARS 252.216-7001, Economic Price Adjustment- Nonstandard Steel Items).

When you are contracting by negotiation and an FPEPA contract is appropriate:		
Consider adjustment based on:	When the following requirements are met:	And adjustment can follow the requirements of:
Price/Cost Indexes for Labor or Material	<ul style="list-style-type: none"> • The contract involves an extended performance period with significant costs beyond one year. • Contract amount subject to adjustment is substantial. • Labor and material prices are too unstable to permit reasonable division of risk between the contractor and the Government without an EPA clause. 	<ul style="list-style-type: none"> • EPA clause prepared and approved following agency procedures.

EPA Provisions in Sealed Bidding ([FAR 14.408-4](#)). In sealed bidding, you cannot negotiate the terms of an EPA clause. When you prepare the invitation for bids (IFB), the contract clause must be established in a way that is compatible with the requirements of the sealed bidding process.

When an IFB contains an economic price adjustment clause and...	Then...
No bidder takes exception to the clause	Evaluate bids on the basis of the quoted prices without adding the allowable EPA.
A bidder increases the maximum percentage of EPA stipulated in the invitation or limits the downward EPA provisions of the IFB	Reject the bid as nonresponsive.
A bid deletes the EPA clause	Reject the bid as nonresponsive because downward adjustment is limited by the deletion.
A bidder decreases the maximum percentage of EPA stipulated in the invitation	Evaluate bids at the base price. If the bidder with the reduced ceiling is in position to receive award, the award must reflect the lower ceiling.

When an IFB does not contain an economic price adjustment clause, but a bidder proposes one...	Then...
With a ceiling that the price will not exceed	<ul style="list-style-type: none"> ○ Evaluate the bid on the basis of the maximum possible EPA of the quoted price. ○ If the bid is eligible for award, request the bidder to agree to the inclusion in the

When an IFB does not contain an economic price adjustment clause, but a bidder proposes one...	Then...
	<p>contract of an approved EPA clause subject to the same ceiling.</p> <ul style="list-style-type: none"> ○ If the bidder will not agree to an approved clause, award may be made based on the original bid.
Without a ceiling that the price will not exceed	Reject the bid unless there is a clear basis for evaluation.

Developing an EPA Clause Based on Cost Indexes ([DFARS 216.203-4](#)). When you develop an EPA clause based on cost indexes for labor or material, the clause must be prepared and approved in accordance with agency procedures. Assure that the clause:

- Is not unnecessarily complex.
- Accurately identifies the index(es) which will be used in making adjustments:
 - Normally, you should not use more than two indexes, one for labor (direct and indirect) and one for material (direct and indirect).
 - The index should encompass a large sample of relevant items while still bearing a logical relationship to the type of contract costs being adjusted.
 - Commonly used indexes include the following series published by the U.S. Department of Labor, Bureau of Labor Statistics (BLS):
 - Producer Price Index for industrial commodities.
 - Employment Cost Index for wages and salaries, benefits, and compensation costs for aerospace industries.
 - Wages and Income Series by Standard Industrial Classification (SIC).
 - If no single index relates directly to the costs to be adjusted, you may need to develop a composite index.
- Clearly identifies a base index period comparable to the base contract period for adjustment.
- Clearly identifies events that will trigger price adjustments.
 - Adjustments should be frequent enough to afford the contractor appropriate economic protection without creating a burdensome administrative effort.
 - Normally, the adjustment period should range from quarterly to annually.
- States the percentage of the base price that is subject to adjustment. Normally, you should:
 - Not apply adjustments to the profit portion of contract price. Obtain adequate information from the contractor and other sources to assure that the baseline is reasonable.
 - Exclude any areas of cost that do not require adjustment, such as firm fixed-price subcontracts, areas of overhead that should remain relatively stable (e.g., depreciation), labor costs covered by a union agreement, and other costs not likely to be affected by changes in the economy.
 - Allocate the portions of contract price subject to adjustment to specific periods of time (e.g., quarterly) based on the most probable pattern of expenditure or commitment (expenditure profile).
 - State that the portion of contract price subject to adjustment must not be modified except in the event of significant changes in contract scope.

- Reasonably provides for potential economic fluctuations within the original contract period, including options. Do not provide for an adjustment beyond the original contract period, including options.
- Clearly identifies any limits on adjustment, ceiling on upward adjustments or floor on downward adjustments. Normally, you should not include a ceiling or a floor for adjustment unless the adjustment is based on indexes below the four-digit level of the BLS indexes identified above.
- Clearly identifies any minimum change required to trigger adjustment. For example, the contract could state that, "No adjustment will be made unless the index indicates a price change of 2 percent or more from base period prices. However, if the index does indicate an increase or decrease of more than 2 percent, the adjustment will consider the full amount of the change for the portion of contract price indicated in the contract."
- Clearly identifies any requirement for the prime contractor to extend EPA coverage to subcontractors to assure a proper allocation of risk.
- Clearly states how EPA adjustments will be considered in applying any cost incentives included in the contract. Normally, a contract that includes a cost incentive provision should provide that any sums paid to the contractor because of EPA provisions must be subtracted from the total allowable costs for the purpose of establishing the total costs to which the provision applies.
- Clearly state how the pricing of contract modifications will be affected by the EPA provisions. Normally, modifications are priced as though the EPA provision did not exist.

1.2.2 Making An Economic Price Adjustment Using Cost Indexes

Steps for Making an Economic Price Adjustment. When you have developed and awarded an FPEPA contract based on cost index(es), you must administer the EPA provisions as presented in the contract. In general, the adjustment process will follow a 5-step procedure:

Step 1. Identify the index(es) which will be used in making adjustments.

Step 2. Identify the base period and times or events that will trigger price adjustments.

Step 3. Identify the percentage of the base price subject to adjustment.

Step 4. Identify any limits on adjustment.

Step 5. Calculate the adjusted price.

$$\text{Adjusted Unit Price} = \left[\frac{I_2}{I_1} \times S(P) \right] + [(1 - S)(P)]$$

Where:

I_1 = Index for Base Period

I_2 = Index for Adjustment Period

S = Percentage of Price Subject to Adjustment

P = Base Unit Contract Price

Example of an Economic Price Adjustment. The following example demonstrates the application of the above steps in making a contract price adjustment for a manufactured item. In the example, an EPA clause was included in the contract, awarded in December 20X1, for deliveries during calendar year 20X2. An estimated 25 percent of the contract price is related to the market price of silver and fluctuations in the market make it extremely difficult to estimate costs over the next year.

Step 1. Identify the index(es) which will be used in making adjustments. The contract states that price adjustments will be made using the Producer Price Index (PPI) for "silver bar, refined, .999 fine" (PPI 1022-0272).

Step 2. Identify the base period and times or events that will trigger price adjustments. The contract provides for adjustment consideration using the April 20X2 index for scheduled second quarter deliveries, the July 20X2 index for scheduled third quarter deliveries, and the October 20X2 index for scheduled fourth quarter deliveries. The base period for adjustment purposes is December 20X1. The calculation presented below is for the 5,000 units scheduled for delivery during the second quarter of 20X2.

Step 3. Identify the percentage of the base price subject to adjustment. The EPA clause states that 25 percent of the contract unit price is subject to adjustment. The unadjusted contract unit price is \$200 per unit. That means that \$50 of the unit price is subject to adjustment and \$150 is not.

Step 4. Identify any limits on adjustment. Because of the extreme volatility of the silver market, the EPA clause does not include a limit on any adjustment.

Step 5. Calculate the adjusted price. Adjust the price using the index for April 20X2 when:

- I₁ = Index for Base Period = 45.0 in December 20X1
- I₂ = Index for Adjustment Period = 67.5 in April 20X2
- S = Percentage of Price Subject to Adjustment = 25%
- P = Base Unit Contract Price = \$200

$$\begin{aligned}
 \text{Adjusted Unit Price} &= \left[\frac{I_2}{I_1} \times S(P) \right] + [(1 - S)(P)] \\
 &= \left[\frac{67.5}{45.0} \times .25(\$200) \right] + [(1 - .25)(\$200)] \\
 &= (1.50 \times \$50) + \$150 \\
 &= \$75 + \$150 \\
 &= \$225
 \end{aligned}$$

The total price for the 5,000 units scheduled for delivery during the second quarter is \$1,125,000. The economic price adjustment is a \$125,000 increase.

1.3 Structuring and Applying Incentive Pricing Arrangements

This section examines procedures for structuring and applying incentive pricing arrangements.

- 1.3.1 – Structuring A Cost Incentive Pricing Arrangement
- 1.3.2 – Applying A Cost Incentive Pricing Arrangement

General Characteristics ([FAR 16.401](#) and [FAR 16.402](#)). Incentive contracts are designed to attain specific acquisition objectives by positively rewarding identified contractor achievements exceeding stated target(s) and negatively rewarding contractor failures to attain stated targets. Profit/fee will increase when target(s) are surpassed. They will decline when target(s) are not achieved. Changes in profit/fee will follow an agreed-to formula-type incentive arrangement. Contracts may include:

- **Cost Incentives.** Most incentive contracts include only an incentive for controlling cost. You cannot provide for other incentives without also providing a cost incentive or constraint.
- **Performance Incentives.** Consider technical performance incentives in connection with specific product characteristics or other specific elements of contract performance. When a variety of specific characteristics contribute to the overall contract performance, you must balance the incentives so that no one of them is exaggerated to the detriment of overall contract performance.
- **Delivery Incentives.** Consider delivery incentives when improvement from a required delivery schedule is a significant Government objective. Delivery incentives should specify the application of the incentive structure in the event of delays beyond the control and without the fault or negligence of the contractor or subcontractor.

If you use multiple incentives, structure them in a manner that compels trade-off decisions among the incentive areas. Be careful to avoid using too many incentives. If there are too many incentives, it may be impossible for the contractor to logically consider the trade-offs available and determine the effect on profit/fee.

Types of Incentive Contracts ([FAR Subpart 16.4](#)). There are three types of incentive contracts that provide for changes in profit/fee following an agreed-to formula-type incentive arrangement: the fixed-price incentive firm target (FPIF); fixed-price incentive successive targets (FPIS); and cost-plus-incentive-fee (CPIF). Because the FPIF and CPIF contracts are used much more frequently than FPIS contracts, the remainder of this section will concentrate on the development of those pricing arrangements.

There two other incentive contracts described in the FAR -- the cost-plus-award-fee (CPAF) contract and the fixed-price contract with award fee (FPAF). These contract types are not examined in this section, because award-fee incentives are not based on any type of formula arrangement. They are examined in a later section of the chapter.

Situations for FPIF Contract Use ([FAR 16.403](#) and [FAR 16.403-1\(b\)](#)). An FPIF contract is appropriate when:

- A firm fixed-price contract is not suitable;
- The nature of the supplies or services being acquired and other circumstances of the acquisition are such that the contractor's assumption of a degree of cost responsibility will provide a positive profit incentive for effective cost control and performance;
- The parties can negotiate (at the outset) a firm target cost, target profit, and profit adjustment formula that will provide a fair and reasonable incentive and a ceiling that provides for the contractor to assume an appropriate share of the risk.
- If the contract also includes incentives on technical performance and/or delivery, the performance requirements provide a reasonable opportunity for the incentives to have a meaningful impact on the contractor's management of the work.
- Limitations on FPIF Contract Use ([FAR 16.403-1\(c\)](#)). Do not use an FPIF contract unless:
- The contractor's accounting system is adequate for providing data to support negotiation of final cost and incentive price revision; and
- Adequate cost or pricing information is available for establishing reasonable firm targets at the time of initial contract negotiation.

Situations for CPIF Contract Use ([FAR 16.405-1\(b\)](#)). A cost-plus-incentive-fee contract is appropriate for noncommercial service or development and test programs when:

- A cost-reimbursement contract is necessary;
- The parties can negotiate a target cost and a fee adjustment formula that are likely to motivate the contractor to manage effectively.
 - The fee adjustment formula should provide an incentive that will be effective over the full range of reasonably foreseeable variations from target cost.
 - If a high maximum fee is negotiated, the contract shall also provide for a low minimum fee that may be a zero fee or, in rare cases, a negative fee
- The contract may include technical performance incentives when it is highly probable that the required development of a major system is feasible and the Government has established its performance objectives, at least in general terms.

Limitations on CPIF Contract Use ([FAR 16.405-1\(c\)](#)). Do not use a CPIF contract unless:

- The contractor's accounting system is adequate for determining costs applicable to the contract; and
- Appropriate Government surveillance during performance will provide reasonable assurance that efficient methods and effective cost controls are used.

1.3.1 Structuring A Cost Incentive Pricing Arrangement

Basic Elements of Incentive Arrangement (FAR 16.402-1(b)). The basic elements of the cost incentives in CPIF contracts and the FPIF contracts are compared in the table below. Note that the first three elements are similar for both contract types.

Contract Elements	
FPIF Contract	CPIF Contract
Target Cost	Target Cost
Target Profit	Target Fee
Profit Adjustment Formula	Fee Adjustment Formula
Price Ceiling	Minimum Fee
	Maximum Fee

Target Cost. Both FPIF contracts and CPIF contracts have a target cost. If the contractor completes the contract at the target cost, there will be no positive or negative cost incentives applied.

What is a good target cost? The target cost should be the most likely contract cost. You and the contractor must reach agreement on target cost based on judgment and the facts available at the time of contract negotiation.

Target Profit/Fee. “Profit” is the difference between cost and price for the FPIF contract. “Fee” is the difference between cost and price in the CPIF contract. Target profit/fee is the difference between cost and price at target cost.

Your profit/fee objective should be based on the results of your analysis using your agency's structured approach to profit/fee analysis.

Profit/Fee Adjustment Formula. The profit adjustment formula of the FPIF contract and fee adjustment formula of the CPIF contract have a similar purpose -- to adjust profit/fee as cost increases or decreases. A single contract can have one adjustment formula for all levels of cost or there may be more than one (e.g., one above target cost and one below target cost).

The adjustment formula represents the allocation of cost risk between the Government and the contractor. The adjustment formula is normally described as a share ratio written as:

S_G/S_C , where:

S_G = Percentage of cost risk assumed by the Government

S_C = Percentage of cost risk assumed by the contractor.

The two parts ($S_G + S_C$) of the ratio must always total 100 percent of the cost risk (e.g., 70/30). A 70/30 share ratio means that the Government accepts 70 percent of the cost risk and the contractor accepts 30 percent. A 60/40 share ratio means that the Government accepts 60 percent of the cost risk and the contractor accepts 40 percent.

Steps for Developing an Adjustment Formula. You should develop the contract adjustment formula based on an analysis of the reasonable changes in profit/fee over the range of probable costs. Consider the following steps as you develop the share ratio for adjustment calculations:

Step 1. Develop a target cost objective as described above.

Step 2. Develop a target profit/fee objective as described above.

Step 3. Develop a pessimistic cost estimate. The target cost is only one cost in the range of reasonable costs. The pessimistic cost should be an estimate of the highest cost that you would consider probable based on the information available at the time of contract negotiation.

- Quantitative analysis techniques can provide invaluable information for you to use in estimating the pessimistic cost. For example, consider the high side of the confidence interval when your estimate is based on sampling analysis and the high side of the prediction interval when your estimate is based on regression analysis.
 - If the pessimistic cost is very high relative to the estimate, the risk may be too great for an incentive contract. You may need to consider another contract type (e.g., a cost-plus-fixed-fee contract).

Step 4. Develop an estimate of an appropriate profit/fee if costs reached the pessimistic cost estimate. In your analysis, consider the target profit/fee objective and the quality of contractor effort required to limit costs to the pessimistic cost estimate.

Step 5. Develop an optimistic cost estimate. The optimistic cost should be an estimate of the lowest cost that you would consider probable based on the information available at the time of contract negotiation.

- Quantitative analysis techniques can provide invaluable information for you to use in estimating the optimistic cost. For example, consider the low side of the confidence interval when your estimate is based on sampling analysis and the low side of the prediction interval when your estimate is based on regression analysis.
- There is no reason that the difference between target cost and the optimistic cost must be equal to the difference between target cost and pessimistic cost. In fact, the two will normally not be equal.

Step 6. Develop an estimate of an appropriate profit/fee if costs were limited to the optimistic cost estimate. In your analysis, consider the target profit/fee objective and the quality of contractor effort required to limit costs to the optimistic cost estimate.

Step 7. Calculate the under-target share ratio.

- Calculate contractor share. Use the following formula to calculate the contractor's percentage share of cost risk:

$$S_{CU} = (P_T - P_O) / (C_T - C_O) \times (-100)$$

Where:

S_{CU} = Contractor percentage share of cost risk (This will be a negative number, indicating that profit/fee will go up as costs go down.)

P_T = Target profit/fee

P_O = Profit/fee at optimistic cost estimate

C_T = Target cost

C_O = Optimistic cost estimate

- Calculate Government share. Calculate the Government share of cost risk by subtracting the contractor share from 100 percent:

$$S_{GU} = 100\% - S_{CU}$$

Where:

S_{GU} = Government percentage share of cost rise

S_{CU} = Contractor percentage share of cost rise

- Write the under-target share ratio in the form S_G/S_C .

Step 8. Calculate the over-target share ratio.

- Contractor share. Use the following formula to calculate the contractor's percentage share of cost risk:

$$S_{CO} = (P_T - P_P) / (C_T - C_P) \times (100)$$

Where:

S_{CO} = Contractor percentage share of cost risk (This will be a negative number, indicating that profit/fee will go up as costs go down.)

P_T = Target profit/fee

P_P = Profit/fee at pessimistic cost estimate

C_T = Target cost

C_P = Pessimistic cost estimate

- Government share. Calculate the Government share of cost risk by subtracting the contractor share from 100 percent:

$$S_{GO} = 100\% - S_{CO}$$

Where:

S_{GO} = Government percentage share of cost risk

S_{CO} = Contractor percentage share of cost risk

- Write the over-target share ratio in the form: S_{GO}/S_{CO} .

Example of Sharing Arrangement Formula Development. You have analyzed a contractor's proposal considering all available information. As a result of your analysis, you have completed Steps 1 through 6 of adjustment formula development and prepared the three positions presented in the table below.

You must now use this information to calculate the under target and over-target share ratios using the calculations in Step 7 and Step 8 as shown in the examples below.

Prenegotiation Estimates			
Element	Optimistic Cost	Most Likely (Target Cost)	Pessimistic Cost
Direct Material Cost	\$250,000	\$300,000	\$320,000
Direct Labor Cost	\$320,000	\$400,000	\$600,000
Indirect Cost	<u>\$230,000</u>	<u>\$300,000</u>	<u>\$380,000</u>
Total Cost	\$800,000	\$1,000,000	\$1,300,000
Profit/Fee	<u>\$150,000</u>	<u>\$100,000</u>	<u>\$10,000</u>
Total Price	\$950,000	\$1,100,000	\$1,310,000

Step 7. Calculate the under-target share ratio.

- Contractor share.

$$\begin{aligned} S_{CO} &= (P_T - P_P) / (C_T - C_P) \times (-100) \\ &= (\$100,000 - \$150,000) / (\$1,000,000 - \$800,000) \times (-100) \\ &= -\$500,000 / \$200,000 \times (-100) \\ &= 25\% \end{aligned}$$

- Government share.

$$S_{GU} = 100\% - S_{CU}$$

$$= 100\% - 25\%$$

$$= 75\%$$
- Write the under-target share ratio as 75/25.

Step 8. Calculate the over-target share ratio.

- Contractor share.

$$S_{CO} = (P_T - P_P) / (C_T - C_P) \times (-100)$$

$$= (\$100,000 - \$10,000) / (\$1,000,000 - \$1,300,000) \times (-100)$$

$$= \$90,000 / -\$300,000 \times (-100)$$

$$= 30\%$$
- Government share.

$$S_{GO} = 100\% - S_{CO}$$

$$= 100\% - 30\%$$

$$= 70\%$$
- Write the over-target share ratio as 70/30. Note that the over-target share ratio and the under-target share ratio are not the same. That is not unusual.

Final Steps for Developing a CPIF Arrangement. As you learned above, the basic elements of the CPIF contract and the FPIF contract are quite similar. Both have a target cost. CPIF target fee and FPIF target profit are both developed using structured profit/fee analysis. Both have sharing arrangements for costs over and under target.

The differences between the CPIF and FPIF pricing arrangements occur when contract costs are substantially above or below target cost. The CPIF contract pricing arrangement must include a minimum fee and a maximum fee that define the contract range of incentive effectiveness (RIE). When costs are above or below the RIE, the Government assumes full cost risk for each additional dollar spent within the funding or cost limits established in the contract. Consider the following final steps when developing a CPIF pricing arrangement.

Step 9. Set the minimum fee. No matter what fee you calculate using the share ratio, the contractor's actual fee cannot be less than the minimum fee stated in the contract. In effect, you are telling the contractor that the Government will accept the risk of contract cost exceeding the cost at the point where minimum fee is reached.

- The pricing arrangement should be structured so that the minimum fee is reached at the pessimistic cost estimate.
- The minimum fee may be zero, but it should rarely be less than zero.

Step 10. Set the maximum fee. No matter what fee you calculate using the share ratio, the contractor's actual fee cannot be more than the maximum fee stated in the contract. Logically, the pricing arrangement should be structured so that the maximum fee is reached at the optimistic cost estimate.

Example of CPIF Arrangement Development. Use the proposal analysis in the following table to develop a contract pricing arrangement including: target cost, target fee, under-target share ratio, over-target share ratio, maximum fee, and minimum fee.

CPIF Contract Prenegotiation Estimates			
Element	Optimistic Cost	Most Likely (Target Cost)	Pessimistic Cost
Direct Material Cost	\$250,000	\$300,000	\$320,000
Direct Labor Cost	\$320,000	\$400,000	\$600,000
Indirect Cost	<u>\$230,000</u>	<u>\$300,000</u>	<u>\$380,000</u>
Total Cost	\$800,000	\$1,000,000	\$1,300,000
Profit/Fee	<u>\$250,000</u>	<u>\$70,000</u>	<u>\$20,000</u>
Total Price	\$920,000	\$1,070,000	\$1,420,000

Steps 1-6 have been completed in the table above. Note that:

- Target cost should be the most likely cost -- \$1,000,000
- Target fee -- the \$70,000 in the "Most Likely Cost" column in above table -- was developed using structured fee analysis.

Step 7. Calculate the under-target share ratio.

- Contractor share.

$$S_{CU} = (P_T - P_O) / (C_T - C_O) \times (-100)$$

$$= (\$70,000 - \$120,000) / (\$1,000,000 - \$800,000) \times (-100)$$

$$= \$-50,000 / \$200,000 \times (-100)$$

$$= 25\%$$
- Government share.

$$S_{GU} = 100\% - S_{CU}$$

$$= 100\% - 25\%$$

$$= 75\%$$
- Write the under-target share ratio as 75/25.

Step 8. Calculate the over-target share ratio.

- Contractor Share.

$$S_{CO} = (P_T - P_P) / (C_T - C_P) \times (-100)$$

$$= (\$70,000 - \$20,000) / (\$1,000,000 - \$1,400,000) \times (-100)$$

$$= \$50,000 / -\$400,000 \times (-100)$$

$$= 12.5\%$$
- Government Share.

$$S_{GO} = 100\% - S_{CO}$$

$$= 100\% - 12.5\%$$

$$= 87.5\%$$
- Write the over-target share ratio as 87.5/12.5.

Step 9. Set the minimum fee. Minimum fee should be the fee at the pessimistic cost. That fee is \$20,000.

Step 10. Set the maximum fee. Maximum fee should be the fee at the optimistic cost. That fee is \$120,000.

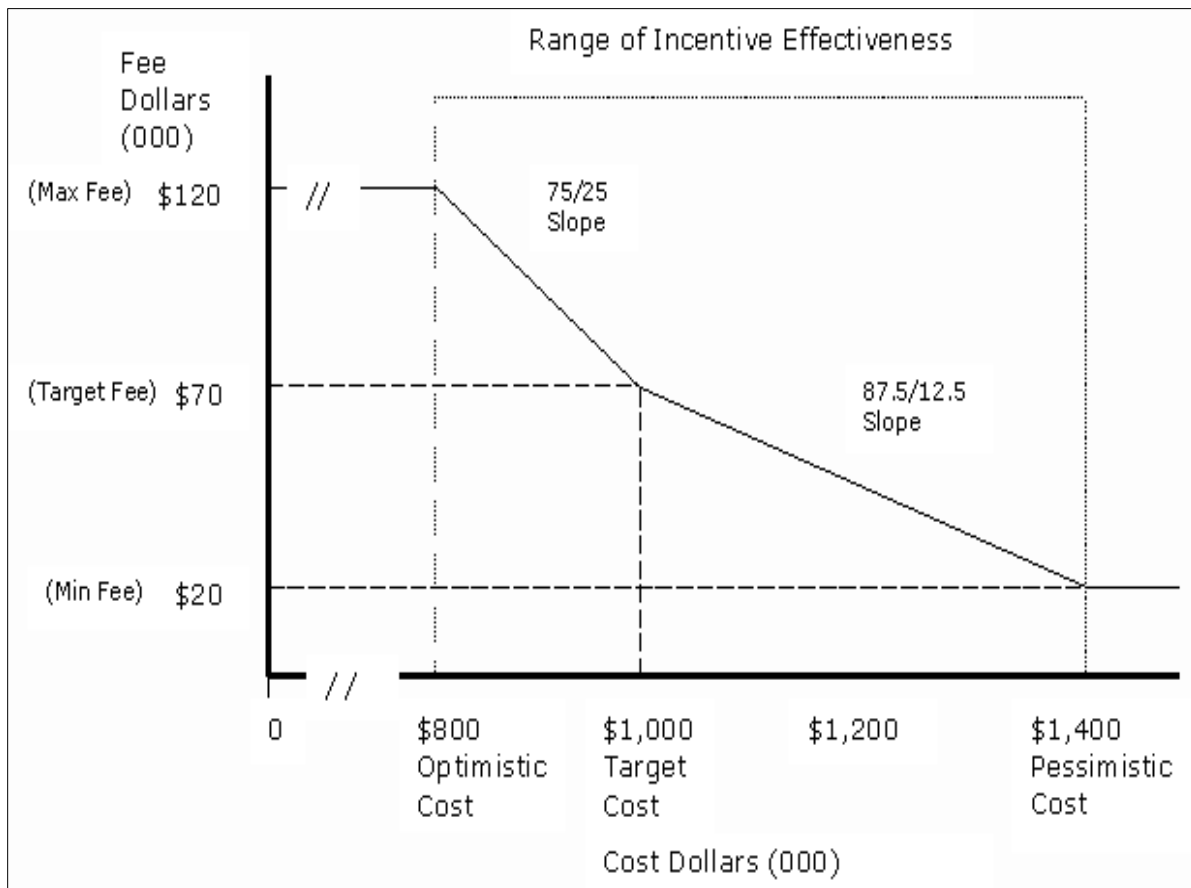
CPIF Range of Incentive Effectiveness. Whenever you develop a CPIF pricing arrangement, assure that you know the range over which the cost incentives are effective. The range of incentive effectiveness (RIE) is the range over which CPIF incentives can be expected to motivate contractor performance.

The RIE is not identified in the contract, but it is defined by the share ratio(s), minimum fee, and maximum fee. The cost incentive will be effective in the range between the cost point where the maximum fee is reached and the cost point where the minimum fee is reached -- the range between the optimistic cost estimate and the pessimistic cost estimate. Beyond these points, the contractor has no contract incentive to control cost, because fee is fixed.

In the example above, we developed the following pricing arrangement.

Target Cost:	\$1,000,000
Target Fee:	\$70,000
Under-Target Share Ratio:	75/25
Over-Target Share Ratio:	87.5/12.5
Maximum Fee:	\$120,000
Minimum Fee:	\$20,000

The range of incentive effectiveness would be between the optimistic cost (\$800,000) and the pessimistic cost (\$1,400,000) as shown in the figure below:



CPIF Pricing Arrangement. Note that the optimistic cost estimate and pessimistic cost estimate used to develop the pricing arrangement are not given in the terms of the pricing arrangement. If a contractor had presented an offer which included the elements above, you could calculate the offer RIE by using the following formulas to calculate the optimistic cost and pessimistic cost:

<p>Optimistic Cost $C_O = C_T - (P_O - P_T) / S_{CU}$</p>	<p>Pessimistic Cost $C_P = C_T - (P_T - P_P) / S_{CO}$</p>
<p>Where: C_O = Optimistic cost C_T = Target cost P_T = Target fee P_O = Maximum fee (fee at the optimistic cost) S_{CU} = Contractor under-target share</p>	<p>Where: C_P = Pessimistic cost C_T = Target cost P_T = Target fee P_P = Minimum fee (fee at the pessimistic cost) S_{CO} = Contractor over-target share</p>

Example of Calculating CPIF Range of Incentive Effectiveness. We can use the pricing arrangement above to calculate the optimistic and pessimistic costs used to develop the pricing arrangement.

Step 1. Calculate the optimistic cost that is consistent with the pricing arrangement.

$$\begin{aligned}
 C_O &= C_T - (P_O - P_T) / S_{CU} \\
 &= \$1,000,000 - (\$120,000 - \$70,000) / 25\% \\
 &= \$1,000,000 - \$50,000 / 25\% \\
 &= \$1,000,000 - \$200,000 \\
 &= \$800,000
 \end{aligned}$$

\$800,000 is the optimistic cost estimate. Note that is the number we used in developing the pricing arrangement.

Step 2. Calculate the pessimistic cost that is consistent with the pricing arrangement.

$$\begin{aligned}
 C_P &= C_T - (P_T - P_P) / S_{CO} \\
 &= \$1,000,000 + (\$70,000 - \$20,000) / 12.5\% \\
 &= \$1,000,000 + \$50,000 / 12.5\% \\
 &= \$1,000,000 + \$400,000 \\
 &= \$1,400,000
 \end{aligned}$$

\$1,400,000 is the pessimistic cost estimate (Note that is the number we used in developing the pricing arrangement.)

Step 3. Use the calculated optimistic cost and the pessimistic cost to describe the RIE. The RIE in this example would be \$800,000 to \$1,400,000. Outside that range, the proposed incentive arrangement would not incentivize the contractor to control costs.

Example of FPIF Arrangement Development. Use the proposal analysis in the following table to develop a contract pricing arrangement including: target cost, target profit, under-target share ratio, over-target share ratio, and ceiling price.

FPIF Contract Prenegotiation Estimates			
Element	Optimistic Cost	Most Likely (Target Cost)	Pessimistic Cost
Direct Material Cost	\$250,000	\$300,000	\$320,000
Direct Labor Cost	\$320,000	\$400,000	\$600,000
Indirect Cost	<u>\$230,000</u>	<u>\$300,000</u>	<u>\$380,000</u>
Total Cost	\$800,000	\$1,000,000	\$1,300,000
Profit	<u>\$150,000</u>	<u>\$100,000</u>	<u>\$25,000</u>
Price	\$950,000	\$1,100,000	\$1,325,000

Steps 1-6 have been completed in the table above. Note that:

- Target cost should be the most likely cost, \$1,000,000
- Target profit -- the \$100,000 in the "Most Likely Cost" column in above table was developed using structured profit analysis.

Step 7. Calculate the under-target share ratio.

- Contractor share.

$$\begin{aligned}
 S_{CU} &= (P_T - P_O) / (C_T - C_O) \times (-100) \\
 &= (\$100,000 - \$150,000) / (\$1,000,000 - \$800,000) \times (-100) \\
 &= -\$50,000 / \$200,000 \times (-100) \\
 &= 25\%
 \end{aligned}$$

- Government share.

$$\begin{aligned}
 S_{GU} &= 100\% - S_{CU} \\
 &= 100\% - 25\% \\
 &= 75\%
 \end{aligned}$$

- Write the under-target share ratio as 75/25.

Step 8. Calculate the over-target share ratio.

- Contractor Share.

$$\begin{aligned}
 S_{CO} &= (P_T - P_P) / (C_T - C_P) \times (-100) \\
 &= (\$100,000 - \$25,000) / (\$1,000,000 - \$1,300,000) \times (-100) \\
 &= \$75,000 / -\$300,000 \times (-100) \\
 &= 25\%
 \end{aligned}$$

- Government Share.

$$\begin{aligned}
 S_{GO} &= 100\% - S_{CO} \\
 &= 100\% - 25\% \\
 &= 75\%
 \end{aligned}$$

- Write the over-target share ratio as 75/25.

Note that for this contract, the over-target and under-target share ratios happen to be the same, but the range of dollars between target cost and the pessimistic estimate of probable cost is much larger than the range of dollars between the target cost and the optimistic estimate of probable cost.

Step 9. Set Ceiling Price. No matter what profit you calculate using the share ratio, the actual price cannot exceed the ceiling price stated in the contract. The ceiling price should be structured so that the ceiling price is reached when contract cost reaches the pessimistic cost estimate. Accordingly, the ceiling price is equal to the pessimistic cost estimate (\$1,300,000) plus the estimated \$25,000 profit at that cost. Accordingly, the ceiling price is \$1,325,000.

FPIF Point of Total Assumption. Whenever you discuss a FPIF pricing arrangement, assure that you identify the point of total assumption (PTA). The PTA is the cost at which the contractor assumes total responsibility for each additional dollar of contract cost. This point is not identified in the contract, but it is defined by the target price, target cost, over-target share ratio, and ceiling price. The PTA can be found mathematically using the following formula:

$PTA = K_C - K_T / S_G + C_T$, Where:

K_C = Ceiling price

K_T = Target price

C_T = Target cost

S_G = Government percentage share of cost risk

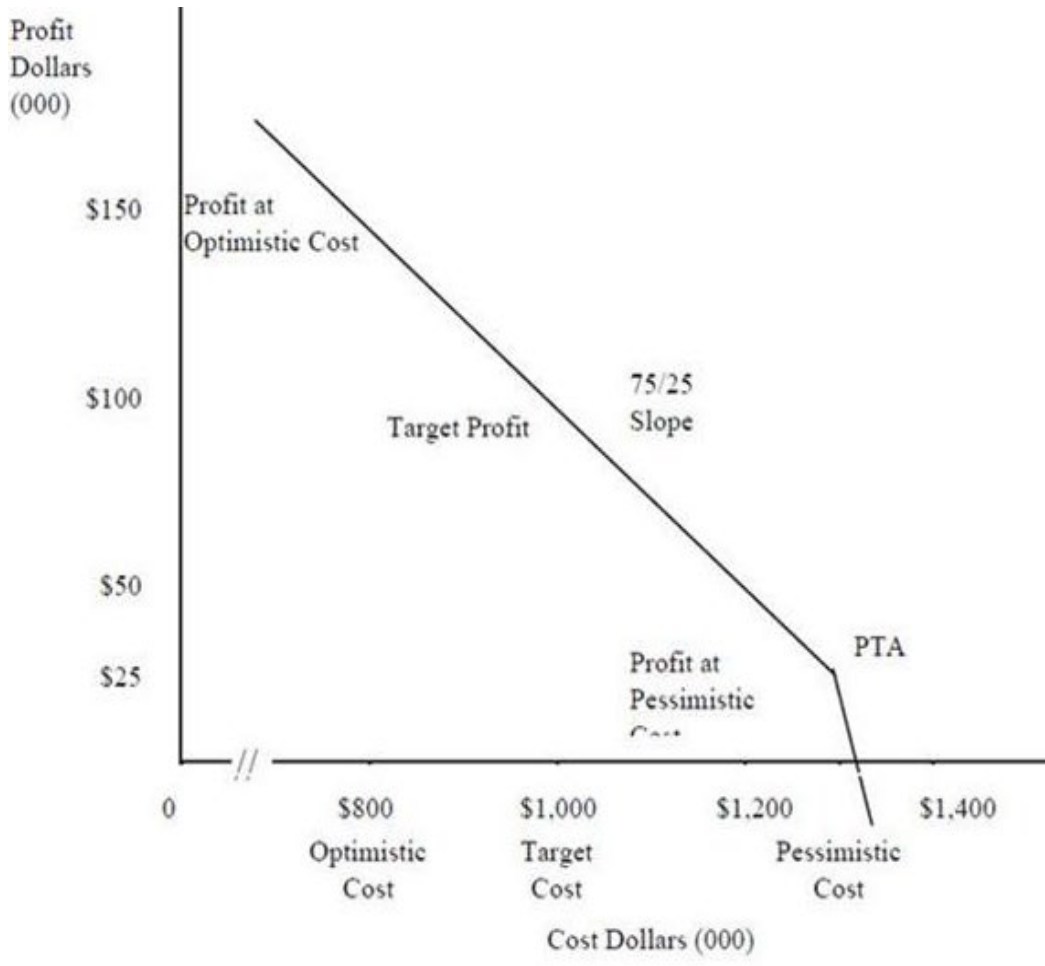
For the example above, the calculations would be:

$$\begin{aligned} PTA &= \$1,325,000 - \$1,100,000 / 75\% + \$1,000,000 \\ &= \$225,000 / 75\% + \$1,000,000 \\ &= \$300,000 + \$1,000,000 \\ &= \$1,300,000 \end{aligned}$$

Note that the PTA is equal to the cost at the pessimistic cost estimate. After the contract cost reaches \$1,300,000, each additional dollar of cost comes from profit. When cost exceeds the \$1,325,000 ceiling price, each additional dollar of cost increases the loss (negative profit) on the contract.

Final Steps for Developing a FPIF Arrangement. The FPIF contract does not have a maximum profit, the share ratio remains in effect throughout the range of under-target costs. Instead of a minimum profit, the FPIF contract must include a ceiling price. If costs exceed the ceiling price, the contractor assumes full cost risk for each additional dollar spent. Accordingly, the final step in developing a FPIF pricing arrangement is:

The figure below depicts the FPIF pricing arrangement developed above, including the PTA:



1.3.2 Applying A Cost Incentive Pricing Arrangement

Incentive Contracts and Final Pricing. With incentive contracts, contract pricing does not end with establishing the incentive pricing arrangement. This section will examine the application of the incentive pricing arrangement to calculate final contract price.

Final Steps for Developing a FPIF Arrangement. The FPIF contract does not have a maximum profit, the share ratio remains in effect throughout the range of under-target contractor's share of any costs over or under target as calculated in Step 3.

Steps for CPIF Contract Final Pricing (FAR 52.216-10(e)). Cost-reimbursement contracts provide for payment of allowable incurred costs, to the extent prescribed in the contract. In a CPIF contract, final fee will depend on the allowable cost incurred.

Follow the steps below in calculating final contract price.

Step 1. Calculate final allowable contract cost. Base calculations on the contractor's final vouchers, Government audit results, and other available information. Exclude all costs specifically identified as unallowable.

Step 2. Determine final cost for fee adjustment purposes. For the purposes of fee adjustment, do not include costs arising from:

- Any of the causes covered by the contract Excusable Delays clause to the extent that the costs are beyond the control and without the fault or negligence of the contractor or any subcontractor.
- The taking effect, after target cost negotiation, of a statute, court decision, written ruling, or regulation that results in the contractor's being required to pay or bear the burden of any tax or duty or rate increase in a tax or duty;
- Any direct cost attributed to the contractor's involvement in litigation as required by the contracting officer pursuant to contract requirements, including furnishing evidence and information requested pursuant to the contract Notice and Assistance Regarding Patent and Copyright Infringement clause;
- The purchase and maintenance of additional insurance not in the target cost and required by the contracting officer, or claims for reimbursement for liabilities to third persons pursuant to the contract Insurance Liability and Third Persons clause; Establishing And Monitoring Contract Type
- Any claim, loss, or damage resulting from a risk for which the contractor has been relieved of liability by the contract Government property clause;
- Any claim, loss, or damage resulting from a risk identified in the contract as unusually hazardous or as a nuclear risk and against which the Government has expressly agreed to indemnify the contractor; or
- Any other costs specifically excluded from fee calculations by the contract.

Step 3. Calculate the contractor's share of any costs over or under target. Use the final contract cost calculated in Step 2, target cost, and the appropriate share ratio.'

$P_A = S_C (C_T - C_F)$, where:

P_A = Fee Adjustment

S_C = Contractor percentage share of cost risk

C_T = Target cost

C_F = Final cost

Step 4. Adjust contract fee considering the contractor's share of any costs over or under target as calculated in Step 3.

$P_F = P_T + P_A$, where:

P_F = Final fee amount

P_T = Target fee

P_A = Fee adjustment (Remember that the fee adjustment may be positive or negative.)

Step 5. If the fee calculated in Step 4 is more than the maximum fee or less than the minimum fee, adjust it to the appropriate fee.

Step 6. Add the final fee to final cost to determine final contract price.

$K_F = C_F + P_F$, where:

K_F = Final price

C_F = Final cost

P_F = Final fee amount

Step 7. Modify the contract, using a bilateral contract modification, to incorporate agreement on final cost and fee.

Example of CPIF Contract Final Pricing.

You and the contractor agree that the final cost on a CPIF contract is \$1,100,000. Contract target cost is \$1,000,000; target fee is \$70,000; minimum fee is \$20,000; and the over-target share ratio is 87.5/12.5.

Step 1. Calculate final allowable contract cost. Final contract cost is \$1,100,000

Step 2. Determine final cost for fee adjustment purposes. In this contract no costs are excluded from fee calculations, so the final cost for fee calculations is \$1,100,000

Step 3. Calculate the contractor's share of any costs over or under target. Calculate contractor's share of the cost over-target.

$$\begin{aligned} P_A &= S_C (C_T - C_F) \\ &= 12.5\% (\$1,000,000 - \$1,100,000) \\ &= 12.5\% (-\$100,000) \\ &= \$12,500 \end{aligned}$$

Step 4. Adjust contract fee considering the contractor's share of any costs over or under target as calculated in Step 3.

$$\begin{aligned} P_F &= P_T + P_A \\ &= \$70,000 + (-\$12,500) \\ &= \$57,500 \end{aligned}$$

Step 5. If the fee calculated in Step 4 is more than the maximum fee or less than the minimum fee, adjust it to the appropriate fee.

No adjustment is required.

Step 6. Add the final fee to final cost to determine final contract price.

$$\begin{aligned} K_F &= C_F + P_F \\ &= \$1,100,000 + \$57,500 \\ &= \$1,157,500 \end{aligned}$$

Step 7. Modify the contract, using a bilateral contract modification, to incorporate agreement on final cost and fee.

The final contract price is \$1,157,500.

Steps for FPIF Contract Final Pricing (FAR 52.216-16(d)). Computation of the final price under an FPIF contract is very similar to computation of final price under a CPIF contract. The major differences are that there are no limits on profit and total price cannot exceed the contract ceiling price.

Follow the steps below in calculating final FPIF contract price.

Step 1. Review the contractor's final cost proposal to develop a position on final contract cost.

- Assure that the contractor's final cost proposal includes all data required by the contract.
- Develop a negotiation position based on Government audit recommendations and other available information

Step 2. Calculate the contractor's share of any costs over or under target. Use the final contract cost calculated in Step 1, target cost, and the appropriate share ratio.

$P_A = S_C (C_T - C_F)$, where:

P_A = Profit Adjustment

S_C = Contractor percentage share of cost risk

C_T = Target cost

C_F = Final cost

Step 3. Adjust contract profit considering the contractor's share of any costs over or under target as calculated in Step 2.

$P_F = P_T + P_A$, where:

P_F = Final Profit

P_T = Target Profit

P_A = Profit Adjustment (Remember that the profit adjustment may be positive or negative.)

Step 4. Add the final profit to final cost to determine final contract price.

$K_F = C_F + P_F$, where:

K_F = Final price

C_F = Final cost

P_F = Final profit

Step 5. If the price calculated in Step 4 exceeds the contract ceiling price, the final contract price will be the ceiling price.

Step 6. Negotiate final contract price.

- Use the results of Steps 1 through 5 as your objective in negotiating contract final cost. If the contractor provides additional support that leads you to modify your position on final cost, modify your position on final profit and price accordingly.
- When you reach a agreement on final contract price, modify the contract, using a bilateral contract modification, to incorporate agreement on final cost and profit.
- If you cannot reach a final price agreement, it may be necessary for you to issue a final decision under the contract Disputes clause

Step 7. Obtain a final invoice. Apply any deductions or withholdings and process the invoice for final payment.

Example of FPIF Contract Final Pricing. You and the contractor agree that the final cost on a FPIF contract is \$1,310,000. Contract target cost is \$1,000,000; target profit is \$100,000; ceiling price is \$1,325,000; and the over-target share ratio is 75/25.

Step 1. Review the contractor's final cost proposal to develop a position on final contract cost.

The contractor proposed a final contract cost of \$1,310,000. Government review and your analysis did not identify any deficiencies.

Step 2. Calculate the contractor's share of any costs over or under target.

$$\begin{aligned} P_A &= S_C (C_T - C_F) \\ &= 25\% (\$1,000,000 - \$1,310,000) \\ &= 25\% (-\$310,000) \\ &= -\$77,500 \end{aligned}$$

Step 3. Adjust contract profit considering the contractor's share of any costs over or under target as calculated in Step 2.

$$\begin{aligned} P_F &= P_T + P_A \\ &= \$100,000 - \$77,500 \\ &= \$22,500 \end{aligned}$$

Step 4. Add the final profit to final cost to determine final contract price.

$$\begin{aligned} K_F &= C_F + P_F \\ &= \$1,310,000 + \$22,500 \\ &= \$1,332,500 \end{aligned}$$

Step 5. If the price calculated in Step 4 exceeds the contract ceiling price, the final contract price will be the ceiling price. Since the price in Step 4 exceeds the contract ceiling price, the final contract price is the ceiling price of \$1,325,000.

Step 6. Negotiate final contract price. In this example, negotiation should result in acceptance of the contractor's proposed cost to the extent that the proposed cost has been determined to be allowable.

Step 7. Obtain a final invoice.

Obtain a final invoice and process it for final payment.

1.4 Structuring And Applying Award-Fee Pricing Arrangements

In this section, we examine factors to consider in structuring and applying award-fee pricing arrangements.

- 1.4.1 - Structuring An Award-Fee Pricing Arrangement
- 1.4.2 - Applying An Award-Fee Pricing Arrangement

Award-Fee Concept ([FAR 16.401\(e\)](#) & [DFARS 216.405-2](#)). An award-fee contract is a form of incentive contract. Unlike the FPIF or CPIF contract, the award-fee contract does not include predetermined targets and automatic fee adjustment formulas. Contractor performance is motivated by fee adjustments based on a subjective evaluation of contractor performance in areas such as quality, timeliness, technical ingenuity, and cost-effective management.

CPAF Contract Features ([FAR 16.401\(e\)](#) & [DFARS 216.405-2](#)). The most common award-fee contract is the cost-plus-award-fee (CPAF) contract.

- A CPAF contract provides for a fee consisting of:
 - A base fee that is fixed at the time of contract award, and
 - An award-fee that the contractor may earn in whole or in part during contract performance. The award-fee must be large enough to motivate the contractor to excel in such areas as quality, timeliness, technical ingenuity, and cost-effective management.
- At established points during contract performance, the Government Fee Determining Official will evaluate contractor performance and determine the amount of award-fee that the contractor will receive from the available award-fee pool in accordance with criteria established in the contract. The determination is made unilaterally by the Fee Determining Official.

Situations for CPAF Contract Use ([FAR 16.401\(e\)](#) & [DFARS 216.405-2](#)). Consider a CPAF contract when the following conditions exist:

- It is neither feasible nor effective to devise predetermined objective incentive targets applicable to cost, technical performance, or schedule.
- The likelihood of meeting acquisition objectives will be enhanced by using a contract that effectively motivates the contractor toward exceptional performance and provides the Government with the flexibility to evaluate both actual performance and the conditions under which it was achieved.
- Any additional administrative effort and cost required to monitor and evaluate performance are justified by the expected benefits.

Restrictions on CPAF Contract Use ([FAR 16.401\(e\)](#) and [DFARS 216.405-2](#)). In addition to restrictions applicable to all cost-reimbursement contracts, FAR directs that CPAF contracts not be used unless the expected benefits are sufficient to warrant the additional administrative effort and cost involved.

Your agency may provide additional restrictions. For example, DoD personnel must not use a CPAF contract:

- To avoid establishing a CPFF contract when the criteria for a CPFF contract apply or developing objective targets so that a CPIF contract can be used.
- For either engineering development or operational development acquisitions which have specifications suitable for simultaneous research and development and production. But, you may use a CPAF contract for individual engineering development or operational system development acquisitions in support of the development of a major weapon system or equipment, where:
 - It is more advantageous to the Government, and
 - The purpose of the acquisition is clearly to determine or solve specific problems associated with the major weapon system or equipment.

Situations for FPAF Contract Use ([FAR 16.401\(e\)](#) and [DFARS PGI 216.470](#)). You may use award-fee provisions in fixed-price contracts when the Government wishes to motivate a contractor and other incentives cannot be used because contractor performance cannot be measured objectively. Such contracts must:

- Establish a fixed price (including normal profit) for the effort. This price will be paid for satisfactory contract performance. Award fee earned (if any) will be paid in addition to that fixed price; and
- Provide for periodic evaluation of the contractor's performance against an award-fee plan.

Restrictions on FPAF Contract Use ([FAR 16.404\(b\)](#) and [DFARS 216.470](#)). Do not consider an FPAF unless the following conditions exist:

- The administrative costs of conducting award-fee evaluations are not expected to exceed the expected benefits;
- Procedures have been established for conducting the award-fee evaluation;
- The award-fee board has been established; and
- An individual above the level of the contracting officer approved the fixed-price-award-fee incentive.

1.4.1 Structuring An Award-Fee Pricing Arrangement

Base Fee Objective for CPAF Contracts ([FAR 15.404-4\(b\)\(1\)\(ii\)](#), [DFARS 215.404-74](#), and [DFARS PGI 216.404-2](#)).

Most agencies (including the DoD) exempt CPAF contracts from the requirement for application of the agency's structured approach to fee analysis.

Accordingly, you must subjectively develop your base fee objective for each contract considering the following guidelines:

- The base fee must not exceed prescribed agency limits (e.g., three percent of contract cost for DoD contracts).
- The base fee should be large enough to provide the contractor with an adequate fee for rendering minimum acceptable performance, but small enough to provide an award-fee pool that will provide the contractor with an adequate incentive to improve performance above minimum requirements.

Award-Fee Objective. The award-fee pool is meant to provide the contractor with an incentive to provide more than the minimum level of performance required by the contract. Based on contract performance, the contractor may earn all, part, or none of the available award-fee pool.

As with base fee, you must subjectively develop your award-fee objective. The award-fee pool should be sufficient to motivate or reward the contractor at any level of performance above the minimum designated in the evaluation criteria. Normally, you should expect the sum of the base fee and the award-fee pool to exceed the fee objectives that would be provided under a CPFF contract.

Contract Award-Fee Clauses ([FAR 16.302\(a\)](#), [FAR 16.406\(c\)](#), [FAR 16.406\(e\)](#) and [FAR 52.216-7](#)).

FAR does not prescribe specific award-fee clauses, instead it requires you to insert an appropriate award-fee clause in solicitations and contracts when a CPAF contract is contemplated.

- FAR requires that the clause:
 - Be prescribed by or approved under agency acquisition regulations;
 - Be compatible with the Allowable Cost and Payment clause; and
 - Expressly exclude from the operation of the Disputes clause any disagreement by the contractor concerning the amount of the award fee. (However, this wording does not negate the authority of Courts and Boards to overturn a decision that is arbitrary or

capricious (see *Burnside-Ott Aviation Training Center v. John H. Dalton, Secretary of the Navy*, US-CT-APP-FC, 41 CCF 77,043)).

- In preparing the clause, also consider the following:
- **Base Fee:**
 - State the agreed-to amount.
 - State how the base fee will be paid (e.g., equal monthly installments).
 - Award-fee:
 - State the total agreed-to amount.
 - Include a provision for the prompt payment of contractor-earned award-fee after each determination.
 - Award-fee Determination Process:
 - The award-fee determination process need not be spelled out in the contract or in an appendix to the contract. Normally, it is preferable to delineate the award-fee determination process in a comprehensive Award-Fee Plan that is identified in the contract.
 - State that the Fee Determining Official has the unilateral right to change the Award-Fee Plan, except for conditions that otherwise require mutual agreement under the contract.
 - State that the contractor must receive notice of any change to the Plan by a specified number of work or calendar days prior to the beginning of the evaluation period to which the change will apply.
- **Award-Fee Evaluations.** Award-fee evaluations should be timed so that the contractor will be periodically informed about performance quality and the areas in which improvement is expected ([FAR 16.401\(e\)\(3\)](#)). Tie partial payment of fee to the evaluations.
 - If a program or project is involved, the award-fee evaluation points should be tied to key program decision points.
 - If the contract is for a continuing effort (e.g., facility operation and maintenance), the award-fee evaluation points should be established periodically throughout the contract.

Award-Fee Plan. The Award-Fee Plan should comprehensively delineate the award-fee determination process.

- **Organizational Structure for Award-fee Determination.** The plan should identify and define the responsibilities of personnel involved in the award-fee process. The structure should be tailored to fit the contract situation. However, a three-tier structure is common.
 - **Fee Determining Official.** The Fee Determining Official is responsible for:
 - Determining the award-fee earned and payable for each evaluation period.
 - Changing the matters covered by the Award-Fee Plan, as necessary.
 - **Performance Evaluation Board.** The Board is responsible for:
 - Conducting ongoing evaluations of contractor performance and making recommendations to the Fee Determining Official concerning award-fee.
 - Considering proposed changes in the Award-Fee Plan and recommending those that it determines are appropriate.
 - **Performance Monitor.** Assign a performance monitor to each performance area which will be evaluated as part of the Award-Fee Plan.

- Performance Evaluation Criteria ([FAR 16.401\(e\)\(3\)](#)). The plan should identify areas that will be evaluated and how they will be evaluated.
 - The number of evaluation criteria and requirements that they represent will differ widely among contracts.
 - The criteria and the rating plan should motivate the contractor to improve performance in the areas rated, but not at the expense of at least minimum acceptable performance in all other areas. Appendix A presents an example for a contract for shipyard support from [DFARS PGI 216.470, Table 16-1](#), Performance Evaluation Criteria.
- Performance Evaluation Report Format. The plan should include a format for Performance Monitor evaluation of contractor performance. Appendix B presents an example for shipyard support from [DFARS PGI 216.470, Table 16-1](#), Contractor Performance Evaluation Report.

1.4.2 Applying An Award-Fee Pricing Arrangement

Award-Fee Determination Process. The award-fee determination is a subjective process that requires effective communication between all the parties involved. The process begins with the Award-Fee Plan and the individual Performance Monitors and follows the general process described below. The overall flow should be modified as necessary to meet agency requirements and the needs of each contracting situation.

Step 1. Performance Monitor orientation.

- Each Performance Monitor should be provided with the following documents:
 - A copy of the contract award-fee provisions.
 - A copy of the Award-Fee Plan.
 - A copy of specific instructions applicable to Performance Monitor assigned areas of evaluation cognizance.
- The Performance Evaluation Board Chairperson should conduct a discussion of the award-fee determination process in general and the Performance Monitor's responsibilities in particular.
- The Performance Evaluation Board Chairperson should consider scheduling periodic meetings with Performance Monitors to discuss ongoing contractor performance, general problems and solutions, and other contractual issues.

Step 2. Performance Monitors assess contractor performance throughout the performance period.

Step 3. At the end of each evaluation period, Performance Monitors submit Performance Management Reports to the Performance Evaluation Board. Each report should conform to the requirements of the Award-Fee Plan.

Step 4. The Performance Evaluation Board evaluates information obtained from the Performance Monitors and other available sources of information.

- The Board may request contractor input concerning the reports provided by the Performance Monitors.
- The Board may discuss any questions about the Performance Monitor Reports with the Performance Monitors. For example, a contractor's shortcoming identified in a Performance Monitor Report may have been occasioned by Government influences and decisions to which the contractor responded at the expense of certain aspects of otherwise prescribed contract work. Board members may be in a better position than the Performance Monitor to evaluate the contractor's response.

Step 5. The Board meets and summarizes preliminary findings and positions.

Step 6. After it reaches its preliminary decision, the Board meets with contractor top-management to provide a summary of its preliminary findings and position regarding the performance levels achieved in the areas evaluated.

Step 7. After the conference with the contractor, the Board should consider contractor input and, if appropriate, modify its preliminary findings and recommendations accordingly.

Step 8. The Board Chairperson submits the Performance Evaluation Board Report to the Fee Determining Official.

The Performance Evaluation Board Report should consider such matters as:

- Recommended range of dollars within which the award-fee should fall.
- Performance points assigned by the Board to each performance area and evaluation criterion, if applicable.
- Bases of the performance points assigned.
- Rationale for selecting the recommended award-fee range.

Step 9. The Fee Determining Official considers the recommendation of the Performance Evaluation Board and makes a decision regarding award-fee.

That decision may or may not be in accord with the Performance Evaluation Board recommendation. If it is not in accord with the Board recommendation, the Fee Determining Official must assure that reasons for any differences are fully documented.

Step 10. The Fee Determining Official sends the award-fee decision to the contractor.

1.5 Structuring Fixed-Price Redeterminable Pricing Arrangements

Redeterminable Contract Types ([FAR 16.205](#) and [FAR 16.206](#)). There are two types of fixed-price contracts that provide for price redetermination without an incentive arrangement, the fixed-price contract with prospective price redetermination (FPPR) and the fixed-ceiling-price contract with retroactive price redetermination (FPRR).

FPPR Description ([FAR 16.205-1](#)). An FPPR contract provides for a firm fixed-price for an initial period of contract deliveries or performance and prospective price redetermination at a stated time or times during contract performance for subsequent periods. It can probably be best described as a series of firm fixed-price contracts negotiated at stated times during performance.

Situations for FPPR Contract Use ([FAR 16.205-2](#)). You should consider an FPPR contract for acquisitions of quantity production or services for which you can negotiate a fair and reasonable firm fixed-price for the initial period, but not for subsequent periods of contract performance. In the DoD, FPPR contracts are frequently used for aircraft engine acquisition, where the nature of manufacture and resulting methods of accounting for costs lend themselves to periodic, plant-wide pricing on a prospective basis.

FPPR Elements ([FAR 16.205-2](#)). The FPPR contracts have two key elements:

- Firm fixed-price for an initial period of contract deliveries or performance.
- Stated time or times for price redetermination.

They generally also have a third element, a ceiling price. In negotiating a ceiling price you should consider the uncertainties involved in contract performance and their cost impact. This ceiling should provide for assumption of a reasonable proportion of the risk by the contractor and, once established, may be adjusted only by operation of contract clauses providing for equitable price adjustment or other revision of the contract price under stated circumstances.

FPPR Negotiation and Administration ([FAR 16.205-2](#), [FAR 16.205-3](#), and [FAR 52.216-5](#)). Consider the following points when you negotiate and administer an FPRP contract.

- The initial period for which the price is fixed at the time of contract negotiation should be the longest period for which it is possible to establish a fair and reasonable firm fixed-price.
- The length of the prospective pricing periods will depend on the circumstances of each contract but generally should be at least 12 months.
- The prospective pricing period(s) should conform with the operation of the contractor's accounting system. They can be described in terms of units delivered, or as calendar periods, but generally are defined to end on the last day of a month. The first day of the succeeding period must be the effective date for the price redetermination.
- At a specified time before the end of each redetermination period prior to the last, the contractor is required to submit:
 - Proposed prices for supplies or services to be delivered during the next succeeding period, and:
 - An estimate and breakdown of the costs of these supplies or services in a format that meets the requirements of the law and applicable regulations.
 - Sufficient data to support the accuracy and reliability of this estimate, and
 - An explanation of the differences between this estimate and the original (or last preceding) estimate for the same supplies or services.
 - A statement of all contract costs incurred through the end of the first month (or second if necessary to achieve compatibility with the contractor's accounting system) before submission of the proposed prices.

- The data must be sufficient to disclose unit cost and cost trends for:
 - Supplies delivered and services performed, and
 - Inventories of work in process and undelivered contract supplies on hand (estimated to the extent necessary).
- The data format must meet the requirements of the contract, the law, and applicable regulations.
- The contractor must also submit (to the extent that it becomes available before negotiations on price redetermination are concluded):
 - Supplemental statements of costs incurred after proposal submission, and
 - Any other relevant data that you may reasonably require.
- If the contractor fails to submit the data required within the time periods specified, the contracting officer may suspend contract payments until the data are submitted. If it is later determined that the Government overpaid the contractor, the contractor must repay the Government immediately. Unless repaid within 30 days after the end of the data submittal period, the amount of the excess must bear interest - computed from the date the data were due to the date of repayment - at the rate established in accordance with the Interest clause of the contract.
- Upon receipt of the data required, negotiate to re-determine fair and reasonable prices for the supplies and services that may be delivered in the period following the effective date of the price redetermination.
- Formalize each price redetermination in a bilateral contract modification.
- Pending execution of the bilateral contract modification, the contractor will submit invoices or vouchers in accordance with the billing prices established in the contract.
 - If at any time it appears that the then-current billing prices will be substantially different than the estimated prices, negotiate an appropriate change in the billing price.
 - Any billing rate adjustment must be reflected in a contract modification, but it must not affect price redetermination.
 - After price redetermination, adjust the total amount paid or to be paid on all invoices or vouchers to the agreed-upon price. Assure that any required payments or refunds are made promptly.
- If you and the Contractor fail to agree on re-determined prices for any price redetermination period within 60 days (or within such other period as the parties agree) after the date on which the above data are to be submitted, the contracting officer must promptly issue a decision in accordance with the Disputes clause. If the contractor fails to appeal, this decision must be treated as an executed contract modification, unless modified by agreement with the contractor.
- Quarterly -- during periods for which prices have not been established, costs have been incurred, and adjusted billing prices exceed the existing contract price -- the contractor must submit cumulative data showing:
 - Total contract price for all supplies and services delivered and accepted by the Government for which final prices have been established.
 - Total costs (estimated to the extent necessary) for supplies and services delivered and accepted by the Government for which prices have not been established.
 - Interim profit for supplies and services delivered and accepted by the Government for which prices have not been established.
 - The total amount of all invoices or vouchers for supplies or services delivered and accepted by the Government.

FPRR Description ([FAR 16.206-1](#)). An FPRR contract provides for a fixed ceiling price and retroactive price redetermination within the ceiling price after contract completion.

Situations for FPRR Contract Use ([FAR 16.206-2](#) and [FAR 16.206-3](#)). A FPRR contract is appropriate for research and development contracts estimated at the simplified acquisition threshold or less when you establish at the outset that a fair and reasonable contract cannot be negotiated and that the amount involved and short performance period make the use of any other fixed-price contract impractical. Before use, obtain approval from the head of the contracting activity (or the higher level official designed by your agency).

FPRR Elements ([FAR 16.206-2](#) and [FAR 16.206-3](#)). The FPRR contract has three key elements:

- Ceiling price negotiated for the contract at a level that reflects a reasonable sharing of risk by the contractor. The established ceiling price may be adjusted only if required by the operation of contract clauses providing for equitable price adjustment or other revision of the contract price under stated circumstances.
- Billing price that is fair and reasonable as circumstances permit. The billing price may be adjusted during contract performance if circumstances warrant. Any billing price adjustment must be reflected in a contract modification and must not be the final price redetermination.
- Agreement to promptly negotiate a fair and reasonable price after contract completion.

FPRR Negotiation and Administration ([FAR 16.206-3](#) and [FAR 52.216-6](#)). Contract requirements are similar to those for an FPRP contract except that price is not re-determined until all items are delivered. However, you should consider two additional points as you negotiate and administer an FPRR contract.

When you negotiate the contract, you should emphasize the importance of management effectiveness and ingenuity in contract performance will be considered during final pricing. This emphasis is important because this contract type does not provide the contractor with a calculable incentive for effective cost control, aside from the cost ceiling.

- Within a specified number of days after delivery of supplies or services, the contractor is required to submit:
 - Proposed prices.
 - A statement of all costs incurred during contract performance. The data format must meet the requirements of the contract, the law, and applicable regulations.
 - Any other relevant data that you may reasonably require.
- When you negotiate the re-determined contract price, you should give weight to the management effectiveness and ingenuity exhibited by the contractor during performance.

Appendix 1A: Award Fee Contract for Shipyard Support Example Performance Evaluation Criteria						
		Submarginal	Marginal	Good	Very Good	Excellent
A	A-1 Time of Delivery Adherence to Plan Schedule	Consistently late on 20% of plans	Late on 10% plans w/o prior agreement	Occasional plan late without justification	Meets plan schedule	Delivers all plans on schedule & meets production. change requirements on schedule
A	A-2 Time of Delivery Action on Anticipated Delays	Does not expose changes or resolve them as soon as recognized	Exposes changes but is dilatory in resolution on plans	Anticipates changes, advises Shipyard but misses completion of design plans 10%	Keeps Shipyard posted on delays, resolves independently on plans	Anticipates in good time, advises Shipyard, resolves independently and meets production schedule
A	A-3 Time of Delivery Plan Maintenance	Does not complete interrelated systems studies concurrently	Systems studies completed but constr. plan changes delayed	Major work plans coordinated in time to meet product schedules	Design changes from studies and inter-related plans issued in time to meet product schedules	Design changes, studies resolved and test data issued ahead of production requirements
B	B-1 Quality of Work Work Appearance	25% of drawings. not compatible with Shipyard reproduction processes and use	20% not compatible with Shipyard repro. processes and use	10% not compatible with Shipyard repro. processes and use	0% dwgs. prepared by design agent not compatible with Shipyard repro. processes and use	0% drawings. presented include. design agent, vendors, subcontractor. not compatible with Shipyard reproduction. processes and use
B	B-2 Quality of Work Thoroughness and Accuracy of Work	Is brief on plans tending to leave questionable situations for Shipyard to resolve	Has followed guidance, type, and standard dwgs.	Has followed guidance, type, and standard dwgs. questioning and resolving doubtful areas	Work complete with notes and thorough explanations for anticipated questionable areas	Work of highest caliber incorporating all pertinent data required including related activities
B	B-3 Quality of Engineering	Tendency to follow past	Adequate engineering to use	Engineered to satisfy	Displays excellent	Exceptional knowledge of Naval

Appendix 1A: Award Fee Contract for Shipyard Support Example Performance Evaluation Criteria						
		Submarginal	Marginal	Good	Very Good	Excellent
Work	Competence	practice with no variation to meet requirements job in hand	and adapt existing designs to suit job on hand for routine work	specs., guidance plans and material provided	knowledge of constr. reqmts. considering systems aspect, cost, shop capabilities and procurement problems	ship work & adaptability to work process incorporating knowledge of future planning in Design
B Quality of Work	B-4 Liaison Effectiveness	Indifferent to requirements of associated activities, related systems, and Shipyard advice	Satisfactory but dependent on Shipyard to force resolution of problems without constructive recommendations to subcontractors. or vendors	Maintains normal contact with associated activities depending on Shipyard for problems requiring military resolution	Maintains independent contact with all associated activities, keeping them informed to produce compatible design with little assistance for Yard	Maintain expert contact, keeping Shipyard informed, obtaining info. from equip., supplies w/o prompting by Shipyard
B Quality of Work (cont'd)	B-5 Independence and Initiative	Constant surveillance required to keep job from slipping	Requires occasional prodding to stay on schedule & expects Shipyard resolution of most problems	Normal interest and desire to provide workable plans with average assistance & direction by Shipyard	Complete & accurate job. Free of incompatibilities with little or no direction by Shipyard	Develops complete and accurate plans, seeks and resolves with associated actions. ahead of schedule
C Effectiveness in Controlling and/or Reducing Costs	C-1 Utilization of Personnel	Planning of work left to designers on drafting boards	Supervision sets & reviews goals for designers	System planning by supervisory personnel, studies, checked by engineers	Design parameters established by system engineers & held in design plans	Mods. to design plans limited to less than 5% as result lack engineering system correlation
C Effectiveness in Controlling and/or Reducing	C-2 Control Direct Charges (except Labor)	Expenditures not controlled for services	Expenditures reviewed occasionally by supervision	Direct charges set & accounted for on each work	Provides services as part of normal design function w/ extra	No cost overruns on original estimates absorbs service demands by Shipyard

Appendix 1A: Award Fee Contract for Shipyard Support Example Performance Evaluation Criteria						
		Submarginal	Marginal	Good	Very Good	Excellent
Costs				package	charges	
C Effectiveness in Controlling and/or Reducing Costs	C-3 Performance to Cost Estimate	Does not meet cost estimate for original work or changes 30% of the time	Does not meet cost estimate for original work or changes 20% of the time	Exceeds original est. on change orders 5% time	Exceeds original est. on change orders 5% time	Never exceeds estimates of original package or change orders

Appendix 1B Contractor Performance Evaluation Report (Shipyard Support Example)						
Ratings Excellent Very Good Good Marginal Submarginal			Period of _____ 19 [20] _____ Contract Number _____ Contractor _____ Date of Report _____ PNS Technical Monitor/s _____ _____			
Category	Criteria	Rating	Item Factor	Evaluation Rating	Category Factor	Efficiency Rating
A	Time of Delivery					
A	A-1 Adherence to Plan Schedule	_____ x	.40	= _____ -		
A	A-2 Action on Anticipated Delays	_____ x	.30	= _____ -		
A	A-3 Plan Maintenance	_____ x	.30	= _____ -		
	Total Item Weighted Rating			_____ x	.30	= _____
Category	Criteria	Rating	Item	Evaluation	Category	Efficiency

Appendix 1B Contractor Performance Evaluation Report (Shipyard Support Example)						
			Factor	Rating	Factor	Rating
B	Quality of Work					
B	B-1 Work Appearance	_____ x	.15	= _____		
B	B-2 Thoroughness and Accuracy of Work	_____ x	.30	= _____		
B	B-3 Engineering Competence	_____ x	.20	= _____		
B	B-4 Liaison Effectiveness	_____ x	.15	= _____		
B	B-5 Independence and Initiative	_____ x	.20	= _____		
	Total Item Weighted Rating			_____ x	x .40	= _____ -
C	Effectiveness in Controlling and/or Reducing Costs					
C	C-1 Utilization of Personnel	_____ x	.30	= _____ -		
C	C-2 Control of All Direct Charges Other than Labor	_____ x	.30	= _____		
C	C-3 Performance to Cost Estimate	_____ x	.40	= _____		
	Total Item Weighted Rating			_____ x	x .30	= _____ -

Appendix 1B Contractor Performance Evaluation Report (Shipyard Support Example)			
		Total Weighted Rating _____	
		Rated by: _____	
		Signature: _____	
Note: Provide supporting data and/or justification for below average or outstanding item ratings.			

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Chapter 2

Evaluating Indirect Costs

- 2.0 - [Chapter Introduction](#)
- 2.1 - [Examining Indirect Cost Importance, Composition, and Allowability](#)
 - 2.1.1 - [Examining Indirect Cost Importance and Composition](#)
 - 2.1.2 - [Examining the Allowability of Indirect Costs](#)
- 2.2 - [Identifying Pools And Bases For Rate Development](#)
 - 2.2.1 - [Identifying Indirect Cost Pools](#)
 - 2.2.1 - [Identifying Indirect Cost Allocation Bases](#)
- 2.3 - [Identifying Inconsistencies And Weaknesses In Rate Development](#)
 - 2.3.1 - [Identifying Cost Allocation Cycle Inconsistencies](#)
 - 2.3.2 - [Identifying Apparent Rate Development Process Weaknesses](#)
- 2.4 - [Analyzing Estimated Rates](#)
- 2.5 - [Contract Forward Pricing](#)
- 2.6 - [Contract Billing](#)
 - 2.6.1 - [Establishing Billing Rates](#)
 - 2.6.2 - [Adjusting Billing Rates](#)
 - 2.6.3 - [Disallowing Contractor Costs](#)
- 2.7 - [Establishing Final Indirect Costs](#)
 - 2.7.1 - [Establishing Final Rates](#)
- 2.7.2 - [Establishing Quick Closeout Rates](#)
- 2.7.3 - [Obtaining And Reviewing Completion Invoices/Vouchers](#)
- 2.7.4 - [Assessing Penalties For Unallowable Costs In Final Rate Proposals](#)

2.0 Chapter Introduction

This chapter identifies points that you should consider as you evaluate the allocation of indirect costs to various cost objectives.

Analysis Responsibility ([FAR 15.402](#), [FAR 15.404-2](#), and [FAR 15.407-3](#)). Because indirect costs affect more than one contract, support from the cognizant auditor and administrative contracting officer (ACO) (when one is assigned) can be particularly important to your analysis. The auditor is the only Government Acquisition Team member with general access to the offeror's accounting records. The ACO is responsible for negotiating Forward Pricing Rate Agreements (FPRAs), including indirect cost rate agreements. The ACO may unilaterally set rates (forward pricing rate recommendation) for use by the Government in negotiations or other contract actions when forward pricing rate agreement negotiations have not been completed or when the contractor will not agree to a forward pricing rate agreement (FAR 2.101).

However, you must always remember that the contracting officer is ultimately responsible for determining contract price reasonableness.

Note that Sections 2.1 through 2.5 of this chapter review material presented in [Chapter 9](#) of *Cost Analysis* (Volume III). That material is presented in this chapter to facilitate understanding of unique issues related to contract billing and final indirect costs.

2.1 Examining Indirect Cost Importance, Composition, And Allowability

This section presents a brief review of indirect cost composition and the importance of indirect costs in contract pricing.

- 2.1.1 - Examining Indirect Cost Composition And Importance
- 2.1.2 - Examining The Allowability Of Indirect Costs

2.1.1 Examining Indirect Cost Composition And Importance

Indirect Cost Relationship to Cost Objectives ([FAR 31.202\(b\)](#) and [FAR 31.203](#)). Indirect costs are known by many names. Generally, they are referred to as overhead or burden expense. Two types of cost are typically included in the category:

- Costs that cannot be specifically identified with the production or sale of a particular product or completion of a single contract. In accounting terms, these costs cannot be identified with a single final cost objective. Instead they are identified with two or more final cost objectives or an intermediate cost objective.

For example: The firm rents the plant where hundreds of different products are produced. The rent for that plant cannot be traced to any single product or contract, but none of the products could be made efficiently without the plant. The cost accountants, who maintain the general accounting ledgers of the firm support every operation of the firm, but their efforts cannot be traced directly to any single product or contract.

- Costs of minor dollar amounts that can be specifically identified with the production or sale of a particular product but are not because it is more practical to allocate them as indirect costs. In accounting terms, these direct costs of minor dollar value may be treated as indirect costs if the accounting treatment:
 - Is consistently applied to all cost objectives; and
 - Produces substantially the same results as treating the cost as a direct cost.

For example: This type of cost includes common hardware items, such as washers, rivets, and sandpaper. It would be possible to track the cost of these small-dollar items to specific products, but there is no reason to, as long as the cost allocation method is reasonable and consistently applied to all related cost objectives.

Composition of Indirect Costs. The term "indirect costs" covers a wide variety of cost categories and the costs involved are not all incurred for the same reasons. The number of indirect cost accounts in a single

firm can range from one to hundreds. In general, indirect cost accounts fall into two broad categories:

- **Overhead.** These are indirect costs related to support of specific operations. Examples include:
 - Material overhead;
 - Manufacturing overhead;
 - Engineering overhead;
 - Field Service overhead; and
 - Site overhead.
 - **General and Administrative (G&A) Expenses.** These are management, financial, and other expenses related to the general management and administration of the business unit as a whole. To be considered a G&A Expense of a business unit, the expenditure must be incurred by, or allocated to, the general business unit. Examples of G&A Expense include:
 - Salary and other costs of the executive staff of the corporate or home office;
 - Salary and other costs of such staff services as legal, accounting, public relations, and financial offices; and
 - Selling and marketing expenses.

Indirect Cost Importance. While indirect costs are an important consideration in the analysis of most cost proposals, the share of total cost that they represent will vary from firm to firm and industry to industry. For example, expect indirect costs to represent a larger share of a cost proposal for industrial production than for contract services.

- Manufacturing operations typically require substantial investment in plant and equipment—the very type of spending that, in general, cannot be directly charged to any one product.
- Services typically do not require a similar level of investment in plant and equipment.

A previous study of large Defense contractors by the Institute for Defense Analysis (D-764, 1990) provides insight into the growing importance of indirect costs in large manufacturing firms. The data presented in the table below for 1974 and 1987 are actual data collected during the study. The figures for the year 2020 are extensions of the trends identified between 1974 and 1987 and are presented to highlight the implications of the identified trends for the future of Government contract pricing.

Category of Cost	Percent of Business		
	1974	1987	2020 ¹
Direct Labor			
Manufacturing Labor	14	10	3
Engineering-Related ²	11	14	20
Direct Material	32	26	15
Plant-wide Indirect Cost	43	50	62
Total Cost	100	100	100
¹ Projected data			
² Engineering-related cost includes both engineering and other direct costs			

The magnitude of indirect costs in a typical cost proposal emphasizes the importance of careful analysis of indirect costs in contract pricing. Furthermore, the above data indicate that thorough analysis of indirect costs can be expected to be even more important in the future.

2.1.2 Examining The Allowability Of Indirect Costs

Factors Affecting Cost Allowability ([FAR 31.201-2](#)). Because they cannot be identified with a single, final cost objective, indirect costs are particularly susceptible to charges that they are not allowable. For that reason, this section will present a brief review of the general criteria governing cost allowability. Remember, Government auditors and other specialists will make recommendations on cost allowability, but the ultimate decision rests with the contracting officer.

The factors that you must consider in determining whether a particular cost is allowable include:

- Cost reasonableness;
- Cost allocability to the contract;
- Requirements of cost accounting principles, practices, and standards;
- Limitations of applicable cost principles; and
- Terms of the contract.

Determining Cost Reasonableness ([FAR 31.201-3](#)). A cost is reasonable if, in its nature and amount, it does not exceed what a prudent person would pay in the conduct of competitive business.

Do not assume that a cost is reasonable just because the contractor has already incurred the cost. If you challenge the reasonableness of an incurred cost, the burden of proof shall be on the contractor to establish that the cost is reasonable.

If the answer to any of the following questions is "no", the cost involved is probably not reasonable:

- Is the type of cost generally recognized as necessary in conducting the contractor's business?
- Is the cost consistent with sound business practice, law, regulation, and the principles of "arm's-length" bargaining?
- Does the contractor's action reflect a responsible attitude toward the Government, other customers, the owners of the business, the employees, and the public-at-large?
- Are the contractor's actions consistent with the contractor's established practices?

Determining Cost Allocability ([FAR 31.201-4](#)). A cost is allocable if it is assignable or chargeable to one or more cost objectives on the basis of relative benefits received or other equitable relationship. Typically, we think of cost objectives as individual contracts or jobs. However, cost objectives can include other objectives, such as contractor independent research and development.

If you can answer "yes" to any of the following questions, the cost involved is probably allocable to the related cost objective:

- Was the cost specifically incurred for that cost objective?
- If the cost benefits both the contract and other work, was the cost allocated to the cost objective in reasonable proportion to the benefits received?
- Is the cost necessary for overall operation of the business even though a relationship any particular cost objectives cannot be shown?

Accounting Principles, Practices, and Standards ([FAR 31.201-2\(a\)\(3\)](#), [FAR Subpart 42.7](#), and [48 CFR Chapter, CAS](#)).

Three sources provide overall guidance on cost allowability. In order of precedence, they are:

- Cost Accounting Standards. The 19 Cost Accounting Standards (CAS) identified in the table below have been promulgated by the Cost Accounting Standards Board (CASB). When applicable, these Standards take precedence over all other forms of accounting guidance.

Compliance is required for all Government contracts unless an exemption applies. Exemptions include contracts awarded:

- Using sealed bidding;
- At a price of \$2,000,000 or less;
- To a small business;
- For a commercial item; or
- For a firm-fixed price without submission of cost or pricing data.

Even when no exemption applies, contractors with less than \$50 million in CAS-covered contracts may elect modified coverage that only requires compliance with CAS 401, 402, 405, and 406.

COST ACCOUNTING STANDARDS	
Accounting Concepts and Principles	
CAS 401	Consistency in Estimating, Accumulating, and Reporting Costs
CAS 402	Consistency in Allocating, Costs Incurred for the Same Purpose
CAS 405	Accounting for Unallowable Costs
CAS 406	Cost Accounting Period
Allocation of Costs to Contracts	
CAS 403	Allocation of Home Office Expenses to Segments
CAS 407	Use of Standard Costs for Direct Material and Direct Labor
CAS 410	Allocation of Business Unit G&A
CAS 418	Allocation of Direct and Indirect Costs
Identification and Assignment of Costs	
CAS 404	Capitalization of Tangible Assets
CAS 409	Depreciation of Tangible Capital Assets
CAS 408	Accounting for Compensated Personal Absence
CAS 412	Composition & Measurement of Pension Costs
CAS 413	Adjustment & Allocation of Pension Costs
CAS 415	Accounting for Deferred Compensation

COST ACCOUNTING STANDARDS	
CAS 416	Accounting for Insurance Costs
CAS 411	Accounting for Acquisition Costs of Materials
CAS 420	Accounting for IR&D/B&P
Cost of Money	
CAS 414	Cost of Money as an Element of the Cost of Facilities Capital
CAS 417	Cost of Money as an Element of the Cost of Capital Assets under Construction

- **Federal Acquisition Regulation.** Many parts of the FAR provide accounting guidance that applies to all Government contracts. For example, [FAR Subpart 42.7](#) prescribes policies and procedures for establishing indirect cost billing rates and final indirect cost rates. In some cases, FAR guidance requires all Government contractors to comply with the same accounting standards defined for CAS-covered contracts.
- **Generally Accepted Accounting Practices.** Generally Accepted Accounting Practices ([GAAP](#)) are non-regulatory accounting guidelines developed by Certified Public Accountants (CPAs). Accountants use GAAP in preparing and managing all business accounting records. As a result, they serve as the basis for the accounting systems used by Government contractors.

Guidance in the FAR and CAS generally build on GAAP. For example, the GAAP require accountants to maintain records by accounting period. CAS 406, Cost Accounting Period, prescribes that the accounting period will be one year, except in certain specific situations.

If the contractor is in compliance with applicable GAAP, FAR, and CAS requirements, you should be able to answer "yes" to the following questions:

- Does the cognizant Government auditor consider the offeror's accounting system adequate?
- If the proposed contract is to be subject to modified CAS coverage, is the offeror in compliance with applicable Standards?
- If the proposed contract is to be subject to full CAS coverage, is the offeror in compliance with applicable Standards and the firm's Disclosure Statement?

Cost Principles. [FAR 31.205](#) provides fifty cost principles for contracts with commercial organizations. Each cost principle defines a particular type of cost and establishes whether it is generally allowable, unallowable, or allowable with some restrictions.

- **Allowable Cost.** Costs are expressly identified as allowable as long as they meet the requirements of the other four tests of allowability (e.g., reasonableness). NOTE: Costs not addressed in the cost principles are also allowable if they meet the requirements of the other four tests of allowability.
- **Unallowable Cost.** Costs are expressly identified as unallowable. These costs cannot be included in cost estimates or contract cost reimbursements.
- **Allowable with Restrictions.** Costs are expressly identified as allowable (subject to the other four tests of allowability) but with some restriction (e.g., on the amount allowable).

The following table identifies the current cost principles in [FAR 31.205](#), and summarizes the allowability of costs identified in the cost principle. Note that within the same general cost category, some costs may be

allowable (A), others unallowable (UA), and still others allowable with restrictions (AWR). In addition, a particular principle may identify a cost as generally unallowable, but refer the reader to another principle that makes a particular element of that cost allowable.

Under FAR 31.205, are the following selected costs allowable?				
Selected Costs	FAR Ref.	A	UA	AWR
Alcoholic Beverages	31.205-51		X	
Asset Valuations Resulting from Business Combinations	31.205-52			X
Bad Debts	31.205-3		X	
Bonding Costs	31.205-4	X		
Compensation for Personal Services	31.205-6	X	X	X
Contingencies	31.205-7	X	X	
Contributions or Donations	31.205-8		X	
Cost of Money	31.205-10			X
Research & Development Costs	31.205-48		X	X
Depreciation	31.205-11			X
Economic Planning Costs	31.205-12	X	X	
Employee Morale, Health, Welfare, Food Service, & Dormitory Costs & Credits	31.205-13	X		X
Entertainment Costs	31.205-14		X	
Fines, Penalties, & Mischarging	31.205-15		X	X
Gains & Losses on Disposition or Impairment of Depreciable Property or Other Capital Assets	31.205-16			X
Goodwill	31.205-49		X	
Idle Facilities & Idle Capacity Costs	31.205-17		X	X
Insurance & Indemnification	31.205-19	X	X	X
Interest & Other Financial Cost	31.205-20		X	X
IR&D/B&P Costs	31.205-18		X	X
Labor Relations Costs	31.205-21	X		
Legal & Other Proceedings Costs	31.205-47		X	X

Under FAR 31.205, are the following selected costs allowable?				
Lobbying Costs and Political Activity Cost	31.205-22	X	X	
Losses on Other Contracts	31.205-23		X	
Manufacturing & Production Engineering Cost	31.205-25	X		
Material Costs	31.205-26	X		
Organization Costs	31.205-27		X	
Other Business Expenses	31.205-28	X		
Plant Protection	31.205-29	X		
Patent Costs	31.205-30	X	X	X
Plant Reconversion Costs	31.205-31		X	X
Precontract Costs	31.205-32			X
Professional & Consultant Service Costs	31.205-33	X	X	X
Public Relations & Advertising	31.205-1		X	X
Recruitment Costs	31.205-34	X	X	X
Relocation Costs	31.205-35	X	X	X
Rental Costs	31.205-36	X		X
Royalties & Other Costs for Use of Patents	31.205-37			X
Selling Costs	31.205-38	X	X	
Service & Warranty Costs	31.205-39	X		
Special Tooling & Special Test Equipment Cost	31.205-40			X
Taxes	31.205-41	X	X	
Termination Costs	31.205-42	X		X
Trade, Business, Technical, and Professional Activity Costs	31.205-43	X		X
Training & Education Costs	31.205-44	X	X	X
Travel Costs	31.205-46			X

If the contractor is in compliance with the requirements of the FAR specific cost principles, you should be able to answer "yes" to the following questions:

- ***Are costs allowable under FAR Subpart 31.205?***
- ***Are questionable costs correctly classified using FAR Subpart 31.205 definitions?***
- ***Could the questionable cost be defined under more than one cost principle?***

Contract Terms ([FAR 31.201-2\(a\)\(4\)](#)). Specific types of cost are often addressed in the solicitation and contract. For example, while transportation costs are generally allowable, the contract could limit costs to the rates for a specific mode (e.g., 3rd class mail). **Contract terms can only be more restrictive than the other four tests of allowability, not less.** Contract terms **cannot** make an otherwise unallowable cost allowable.

If the contractor is in compliance with specific contract terms, you should be able to answer "yes" to the following question:

Is the contractor complying with any specific contract language that dictates the treatment of certain costs?

2.2 Identifying Pools And Bases For Rate Development

This section identifies points that you should consider as you identify the bases and pools needed to calculate the rates used to allocate indirect costs to various cost objectives.

- 2.2.1 - [Identifying Indirect Cost Pools](#)
- 2.2.2 - [Identifying Indirect Cost Allocation Bases](#)

Indirect Cost Allocation Rates. Since indirect costs are not directly related to a single cost objective, how do you know when they should be charged to a particular product? We use indirect cost rates. As a larger share of a contractor's direct effort (e.g., manufacturing) is required to produce a particular product, use of an indirect cost rate will assure that a larger share of the indirect costs that the contractor incurs in support of that direct effort (e.g., costs such as supervision, utilities, and maintenance) is charged to the contract.

Indirect Cost Rate Formula. The amount of indirect cost that is charged to a particular product is determined by the appropriate indirect cost rates (also known as overhead or burden rates). Indirect cost rates are expressed in terms such as dollars per hour or percentage of cost. Indirect cost rates are calculated for each accounting period by dividing a pool of indirect cost for the period by the allocation base (e.g. direct labor hours or direct labor cost) for the same period.

$$\text{Indirect Cost Rate} = \frac{\text{Indirect Cost Pool}}{\text{Indirect Cost Allocation Base}}$$

Once a rate is established, you can use it to determine the amount of indirect cost that should be allocated to the contract. Simply multiply the rate by the estimated or actual amount of the allocation base in the contract for that period. Contracts with a greater share of the allocation base (e.g., direct labor dollars) will be charged a greater share of the related indirect cost pool (e.g., manufacturing overhead). Contracts with a smaller share of the base will be charged a smaller share of the related indirect cost pool.

2.2.1 Identifying Indirect Cost Pools

Indirect Cost Pool Definition ([FAR 31.203\(c\)](#)). For each indirect cost rate, identify the **INDIRECT COST POOL**.

$$\text{Indirect Cost Rate} = \frac{\text{INDIRECT COST POOL}}{\text{Indirect Cost Allocation Base}}$$

An indirect cost pool is a logical grouping of indirect costs with a similar relationship to the cost objectives. For example, engineering overhead pools include indirect costs that are associated with engineering effort. Likewise, manufacturing overhead pools include indirect costs associated with manufacturing effort.

A properly developed indirect cost pool, should permit allocation of the included indirect costs in a manner similar to the allocation that would occur if the firm allocated each indirect cost separately.

For example: The firm could allocate the labor for maintenance of the building housing the firm's engineers and the electricity for the same building using two different indirect cost rates. Logically, both would be allocated based on the use of engineering services. Since both would use the same or similar allocation base, combining them into a pool (along with other engineering-related indirect costs) simplifies and clarifies the allocation process.

Primary Indirect Cost Pools. The indirect cost pools used to make the final allocation of indirect costs to cost objectives are known as primary pools. The table on the next page lists some of the more common primary pools and types of costs often found in each pool. A typical cost identified in the table with a particular pool (e.g., inbound transportation is identified with material overhead) could be:

- Combined with the related indirect costs into a single indirect cost pool (e.g., a single material overhead pool);

- Combined with some of the related indirect costs into one of several related indirect cost pools (e.g., indirect labor could be combined with one or two related expenses into a single pool).
- Allocated individually.

Remember that every firm's accounting system is different. The following list is only typical; do not regard it as the only correct way to group costs.

Common Primary Cost Pools and Typical Costs Found in Each	
Common Pools	Typical Costs Found in the Pool
Material Overhead	<ul style="list-style-type: none"> • Acquisition (Purchasing) • Inbound transportation • Indirect labor • Employee related expenses (shift & overtime premiums, employee taxes, fringe benefits) • Receiving and inspection • Material handling and storage • Vendor quality assurance • Scrap sales credits • Inventory adjustments
Operations Overhead (e.g., Manufacturing, Engineering, Field Service, and Site Operations)	<ul style="list-style-type: none"> • Indirect labor and supervision • Perishable tooling (primarily in manufacturing overhead) • Employees related expenses (shift & overtime premiums, employee taxes, fringe benefits) • Indirect material & supplies (small tools, grinding wheels, lubricating oils) • Fixed charges (e.g., depreciation, insurance, rent, property taxes) • Downtime of direct employees (training, vacation pay, regular pay) when not working on a specific contract/job
General & Administrative Expense	<ul style="list-style-type: none"> • General & executive office • Staff services (legal, accounting, public relations, financial) • Selling and marketing • Corporate or home office • Independent research and development (IR&D) • Bid and proposal (B&P) • Other miscellaneous activities related to overall business operation

Secondary Indirect Cost Pools. A secondary pool is an intermediate pool that is used to allocate indirect costs to primary pools.

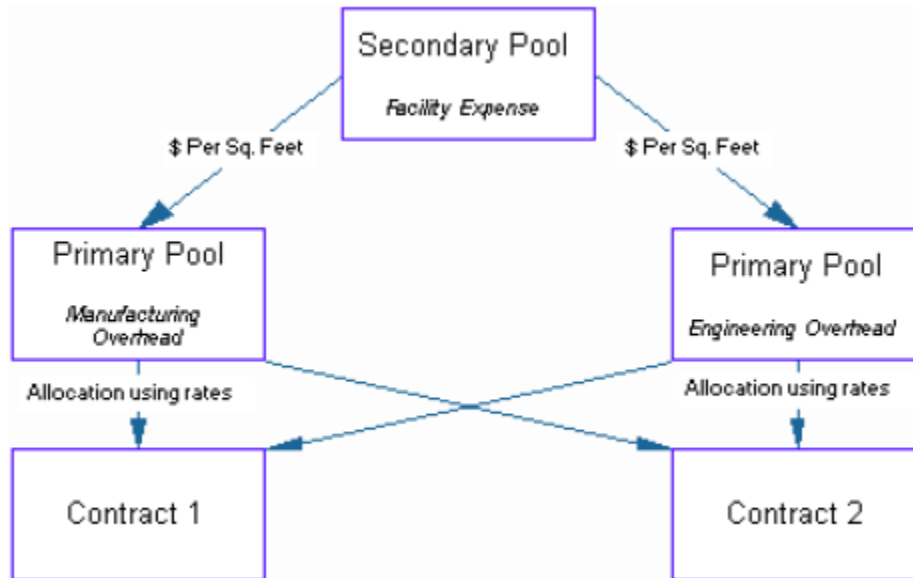
Some indirect costs obviously belong to one specific primary pool. For example, the salary of a manufacturing manager would logically be charged as part of a manufacturing overhead pool. The company president's salary would be part of the general and administrative cost pool. These costs therefore would appear only in the appropriate primary pool.

The proper account for other indirect costs may not be so obvious. For example, manufacturing and engineering share a building. Should facility expenses (e.g., building depreciation, utilities, and maintenance) be charged to engineering or manufacturing? The answer is that both should share the cost based on a causal or beneficial relationship with the cost involved. For example, facilities expenses could

be allocated based on the share of available floor space occupied.

A reasonable share of each cost could be separately allocated to the appropriate primary pool, or the related costs could be grouped and allocated together. If the costs are grouped for allocation, the cost grouping is known as a secondary pool.

The figure below depicts the allocation of the expenses related to a shared facility based on the number of square feet occupied by each occupant. If engineering occupies 60 percent of the building, 60 percent of the facility-related expenses will be allocated to the engineering overhead pool. Forty percent will be allocated to the manufacturing overhead pool.

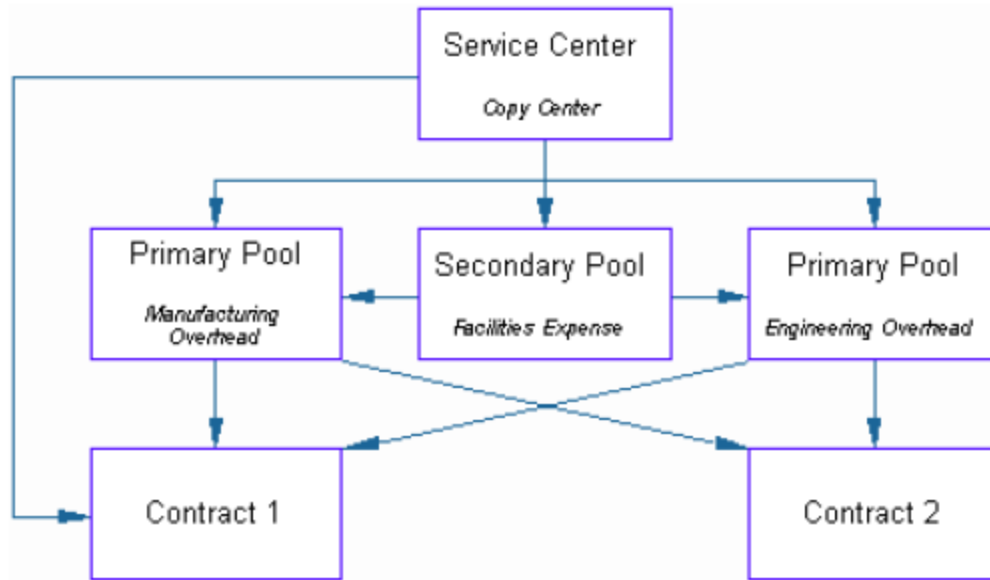


Service Centers. Service centers are unique in that they include costs that can be allocated as a direct cost or an indirect cost depending on the particular circumstances. Primary allocation concerns include identification of:

- The user of the service and
- The purpose of that use.

For example: Copy center costs may be allocated based on the number of copies reproduced.

- A copy of a manufacturing drawing might be charged to manufacturing overhead.
- A copy of an engineering report might be charged to engineering overhead.
- A copy of the facility manager's weekly calendar might be charged to the facilities secondary pool.
- A deliverable copy of a research report prepared for the Government might be charged as a direct cost.



Remember that the firm must clearly define how service center costs will be allocated. Definition of the circumstances related to each different type of accounting treatment is particularly important. Clear definition will help avoid erroneous double charges that occur when the firm charges a service center cost as a direct cost while charging the same or similar cost as an indirect cost.

Service Center Examples	
<ul style="list-style-type: none"> • Copy center • Business data processing • Photographic services • Reproduction services • Art services • Technical data processing services 	<ul style="list-style-type: none"> • Communication services • Facility services • Motor pool services • Company aircraft services • Wind tunnels • Scientific computer operations

2.2.2 Identifying Indirect Cost Allocation Bases

Indirect Cost Allocation Base Definition ([FAR 31.203](#)). For each indirect cost rate, identify the **INDIRECT COST ALLOCATION BASE**.

$$\text{Indirect Cost Rate} = \frac{\text{Indirect Cost Pool}}{\text{INDIRECT COST ALLOCATION BASE}}$$

An indirect cost allocation base is some measure of direct contractor effort that can be used to allocate pool costs based on benefits accrued by the several cost objectives. Examples of typical bases:

- Direct labor hours
- Direct labor dollars
- Number of units produced
- Number of machine hours.

The type of base determines whether the indirect cost rate will take the form of a percentage or a dollar rate per unit of measure. The following are some common bases that could be used in manufacturing indirect cost allocation:

$$\text{Dollars per Direct Labor Hour} = \frac{\text{Pool Dollars}}{\text{Direct Labor Hours}}$$

$$\text{Percent of Direct Labor Dollars} = \frac{\text{Pool Dollars}}{\text{Direct Labor Hours}} \times 100$$

$$\text{Dollars per Unit of Production} = \frac{\text{Pool Dollars}}{\text{\# of Production Units}}$$

$$\text{Dollars per Machine Hour} = \frac{\text{Pool Dollars}}{\text{Machine Hours}}$$

Whatever the allocation base, the larger a contract's share of the allocation base for the accounting period, the larger the contract's share of the related indirect cost.

Selecting an Allocation Base. When selecting an allocation base for the indirect cost pool, firms consider the type of indirect costs in the pool and whether the base will provide a reasonable representation of the relative consumption of pooled indirect costs by direct cost activities. Each allocation base should be representative of the breadth of activities supported by the pooled indirect costs.

For example: If the firm's manufacturing operation is labor intensive and the pool is predominantly labor related (e.g., fringe benefit costs) the contractor will probably select a base related to labor effort for allocating manufacturing overhead costs. If the manufacturing operation is automated with little labor effort, the contractor will probably select a base related to the machinery use (e.g., machine hours).

Common Allocation Bases. The following table represents some of the more common bases and the type of pools that they are typically used to allocate:

	Types of Indirect Cost Pools									
Allocation Bases	Manufacturing	Engineering	Field Service	Material	General & Administrative	Secondary Pools				
Total Cost Input ¹					.					
Cost of Value-Added ²					.					
Direct Labor Dollars					
Direct Labor Hours					
Machine Hours	.									
Units of Product ³	.									
# of Purchase Orders				.						
Direct Material Cost				.						
Total Payroll Dollars						.				
Head Count						.				
Square Footage						.				

¹ Also referred to as the "Cost of Goods Manufactured" or "Production Cost" during the accounting period. It typically includes all costs except general and administrative expense.

² Also referred to as "Conversion Cost." It is the sum of direct labor costs, other direct costs, and associated indirect costs.

³ Units of Product refers to units of final product produced. It is only an acceptable base when final products are relatively homogeneous and represent a reasonable measure of benefit from the appropriate pool.

2.3 Identifying Inconsistencies And Weaknesses In Rate Development

This section identifies points that you should consider as you evaluate the estimating process used by the contractor in indirect cost rate development.

- 2.3.1 - [Identifying Cost Allocation Cycle Inconsistencies](#)
- 2.3.2 - [Identifying Apparent Rate Development Process Weaknesses](#)

Importance of Accurate Indirect Cost Rate Estimates. Accurate indirect cost rate estimates are essential for effective cost analysis, because actual indirect cost rates will not be known until after the end of the accounting period. By that time, part or all of the contract effort will be complete.

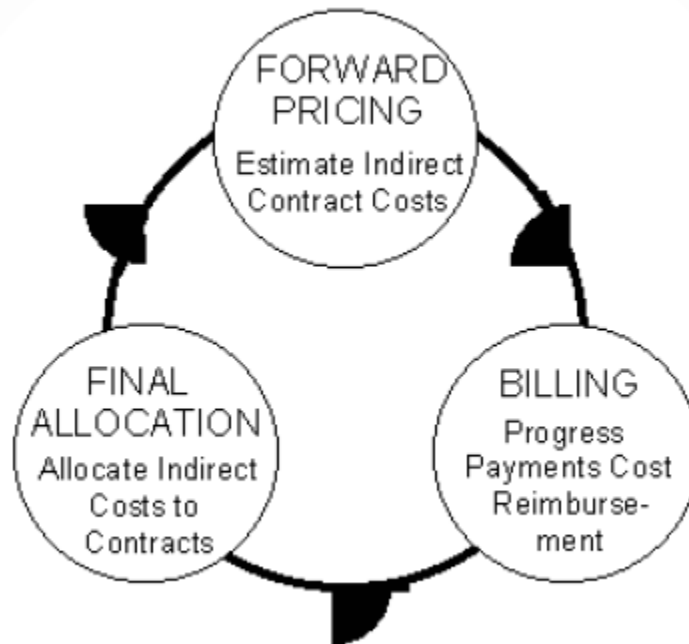
Rate estimates are used for forward pricing, as well as progress payments or cost-reimbursement. You and the contractor may even agree to use estimated quick-closeout indirect cost rates for final pricing of flexibly-priced contracts, before actual rates are known for certain.

Points to Consider. As you review the estimating process used by the contractor in indirect cost rate development:

- Identify apparent inconsistencies in the indirect cost allocation cycle.
- Identify apparent weaknesses in the indirect cost rate estimating process.
- Assure that concerns about the estimating process are well documented.

2.3.1 Identifying Cost Allocation Cycle Inconsistencies

Indirect Cost Allocation Cycle ([FAR 15.407-3](#), [FAR 42.701](#), [FAR 42.704](#), and [FAR 42.705](#)). Indirect cost allocation typically follows the cycle depicted in the following figure:



- **Forward Pricing.** During this phase, the contractor proposes forward pricing rates and uses those rates in contract proposal pricing. Initial estimates are often developed several years before the accounting period even begins. However, estimates should be updated as more accurate cost data become available. As part of your cost analysis, you must assure that all forward pricing rates used in contract pricing are reasonable.
- **Contract Billing.** When a contract involves progress payments or cost reimbursement, Government personnel must monitor contract billing rates to assure that payments or reimbursements based on those rates are reasonable. During each cost accounting period, rates should become increasingly accurate as more actual cost data become available. The contracting officer or auditor responsible for determining final indirect cost rates is also responsible for determining contract the billing rates.
- **Final Pricing.** After the cost accounting period is completed, contractors can calculate actual indirect cost rates to determine actual contract cost. For contracts that require final pricing (e.g., fixed-price incentive and cost-reimbursement contracts), the responsible contracting officer or auditor must determine final overhead rates for the contract. This determination will be based on the Government's evaluation of the final overhead rate proposal submitted by the contractor.

Unfortunately, months or years may be required to complete this process. Under certain conditions set forth in the FAR, you and the contractor may agree to use estimated quick-closeout indirect cost rates for final pricing of flexibly-priced contracts, before actual rates are known for certain ([FAR 42.708\(a\)](#)).

Rates Are Part of a Continuing Allocation Cycle. Remember that forward-pricing rates, billing rates, and final rates are all part of a continuing indirect cost allocation cycle.

- Forward pricing rates will affect budget decisions and the rates used in contract billing.
- Billing rate estimates will affect the need for cost adjustment during final contract pricing.
- Final rates can be used to measure the actual allocation of direct cost to a particular cost objective. In addition, the data used to support final rates will become part of the data available for estimating forward pricing and billing rates for subsequent accounting periods.

Identifying Inconsistencies in Cost Allocation Cycle Information. As you review the estimating process used in rate development, identify any inconsistencies regarding the relationship between the proposed rates and related rates in the indirect cost allocation cycle. Ask questions such as the following:

- ***How does the proposed rate compare with other rates in the indirect cost allocation cycle?***

For example, proposed forward pricing rates and billing rates for the same accounting period should be identical or very similar.

- ***Has rate accuracy consistently improved throughout the allocation cycle?***

The relationship between past forward pricing rates and actual rates should provide information on the firm's past estimating accuracy. Billing rates near the end of the accounting period should be close to the actual rates experienced for the period. Quick closeout rates should be comparable to actual rates.

- ***Does the contractor update rate estimates as more information becomes available?***

Indirect cost rates for each accounting period are estimates until actual costs are determined after the end of the period. However, the rates should be updated as more information becomes available.

2.3.2 Identifying Apparent Rate Development Process Weaknesses

Review Information on the Steps Used to Estimate Indirect Cost Rates. Initial indirect cost rate estimates for a particular accounting period are generally developed before the period begins. In fact, contractors pricing long-term contracts are frequently required to forecast rates three to five years into the future. Rate estimates should be updated as more information becomes available, both before and during the accounting period to which the rate applies.

Review information submitted by the offeror regarding the steps used to estimate indirect cost rates for each accounting period. While the exact process will vary from firm to firm, the general process should follow four steps:

- **Estimate Sales Volume for the Period** -- the total goods and services that the firm expects to sell to ALL customers during each forecast period (e.g., fiscal year of the firm).
- **Estimate Indirect Cost Allocation Bases for the Period** -- the measures of direct contractor activity that will be used to allocate pool costs based on the benefits accrued by the several cost objectives. Measures can take the form of dollars, hours, or any other appropriate measure.
- **Estimate Indirect Cost Pools for the Period** -- logical groupings of indirect costs with a similar relationship to the cost objectives.
- **Estimate Indirect Cost Rates for the Period** -- divide each indirect cost pool by the appropriate allocation base.

Review Information on Estimated Sales Volume for the Period. The starting point for any indirect cost rate estimate should be a sales forecast for the accounting period. An accurate estimate of volume is essential to estimating indirect cost rates, because indirect cost pools are typically composed primarily of fixed and semi variable costs. As fixed costs and the fixed component of semi variable costs are spread over more and more direct effort, indirect cost rates will decline. As a result, lower sales volume estimates will result in higher rates, and higher volume estimates will result in lower rates. Logically, contractors normally prefer to conservatively estimate business volume, so as not to under estimate cost. However if the contractor is too conservative, the result may be overly high indirect cost rates.

For a manufacturer, estimators will consider the production and sales for each product line. For services, estimators will consider the number of contracts that the firm expects to be awarded and the effort required to complete each contract. Separate forecasts are developed for each accounting period (normally one year).

As you review the offeror's sales estimate, ask questions such as the following:

- ***Is the sales forecast used for estimating indirect cost rates based on the best information available?***

Estimates made prior to the beginning of the accounting period may be based on relatively speculative data. However, estimates should become firmer as more detailed plans are formulated for the period. Estimates should become firmer still as actual sales data for the period become available.

- ***Does the sales forecast consider all work likely to benefit from the indirect cost pool?***

To produce accurate rates, forecasts **must** include **all** work projected to benefit from the indirect cost pool during the accounting period. Estimates should include all work that is on contract, options that may be exercised, proposals with a high probability of success, solicitations in hand, and other anticipated customer requirements.

Review Information on Estimated Indirect Cost Allocation Bases for the Period ([FAR Table 15-2](#)).
[Located just under subparagraph FAR 15.408(n)(iii)]

Next, the firm should translate the sales volume forecast into production or contract performance schedules. Given the projected schedules, the estimator can forecast total direct effort associated with operations during each forecast period. Estimates of the direct effort will include estimates of the direct labor and material requirements for the period. Estimates will also include the allocation base for each indirect cost rate.

For cost or pricing data submissions, FAR Table 15-2 requires that the proposal state how the offeror computed and applied indirect costs, including cost breakdowns, and showing trends and budget data, to provide a basis for evaluating the reasonableness of proposed rates.

That information should include:

- An estimate of the size of the allocation base.
- An explanation of how the allocation base was estimated.
- The date that the allocation base estimate was developed.
- Data on the historical trends in the allocation base.
- An explanation of any significant differences between the historical, proposed, and budgeted dollar values of the allocation base.

As you review the contractor's indirect cost allocation base estimate, ask questions such as the following:

- What is the relationship between the estimated indirect cost allocation base and the estimated sales volume?

Make sure that you understand the relationship as described by the contractor. Document any unexplained differences between the relationship described by the contractor and observed historical relationships for further analysis.

- Are there any differences between the proposed indirect cost allocation base and related budget estimates?

Many times the estimated indirect cost allocation base is different than the internal budget for the same category of cost. The firm may state that it wants to challenge managers and hold the difference in reserve. Make sure that you understand the contractor's rationale, as well as the realism of any differences between current estimates and historical trends.

- Have past differences between allocation base estimates and actual allocation bases for the same period been adequately explained?

Look for patterns such as consistent under estimation of the allocation base. Document any unexplained differences for further analysis.

- Are the data used to develop the allocation base estimates accurate, complete, and current?

By law, all cost or pricing data must be accurate, complete, and current. Information other than cost or pricing data should also be up to date. In particular, you should carefully review any allocation base involved in any allegations of defective pricing.

- Did the cognizant auditor or administrative contracting officer question any of the indirect cost allocation base estimates prepared by the contractor?

Because indirect cost pools apply across a broad spectrum of contracts, the cognizant auditor and administrative contracting officer (when one is assigned) are normally most familiar with the factors affecting estimates.

Review Information on Estimated Indirect Cost Pools for the Period. Given the estimated volume of work to be performed, the firm should next estimate the likely size of each indirect cost pool. As described above, indirect cost pools are typically composed primarily of fixed and semivariable costs. As volume increases, variable indirect costs will increase. However, the indirect cost rate will normally decrease because the fixed portion of the pool will be spread over a larger volume.

As with the allocation base, the offeror must provide adequate supporting documentation. That documentation should include the following information:

- The estimated dollar value of the pool.
- An explanation of how the pool was estimated.

- The date that the pool estimate was developed.
- Data on historical trends in the pool.
- An explanation of any significant differences between the historical, proposed, and budgeted dollar values of the pool.

As you review the contractor's indirect cost pool estimate, ask questions such as the following:

- What is the relationship between the estimated indirect cost pool and the estimated sales volume?

Make sure that you understand the relationship as described by the contractor. Document any unexplained differences between the relationship described by the contractor and observed historical relationships for further analysis.

- What is the relationship between the estimated indirect cost pool and the estimated allocation base?

Make sure that you understand the historical trends in the relationship between the indirect cost allocation base and the indirect cost pool. You can use this relationship to identify significant changes in the estimated rate structure. Document any unexplained differences between the historical relationship and the proposed rates for further analysis.

- Are there any differences between the proposed indirect cost pool and related budget estimates?

Make sure that you understand the contractor's rationale, as well as the realism of any differences between current estimates and historical trends.

- Have past differences between indirect cost pool estimates and actual pools for the same period been adequately explained?

Look for patterns such as consistent over estimation of the pool. Document any unexplained differences for further analysis.

- Are the data used to develop the indirect cost pool estimates accurate, complete, and current?

By law, all cost or pricing data must be accurate, complete, and current. Information other than cost or pricing data should also be up to date. In particular, you should carefully review any allocation base involved in any allegations of defective pricing.

- Did the cognizant auditor or administrative contracting officer question any of the indirect cost pool estimates prepared by the contractor?

Because indirect cost pools apply across a broad spectrum of contracts, the cognizant auditor and administrative contracting officer (when one is assigned) are normally most familiar with the factors affecting estimates.

Review Information on Indirect Cost Rate Estimates for the Period. When the indirect cost allocation base and the indirect cost pool estimates have been completed, the only task remaining is to divide the estimated pool by the estimated allocation base to establish the indirect cost rate.

The table below presents rate forecasts for the next three years. Note that the base and pool estimates for material, engineering, and manufacturing, become the estimate of total cost input, the base for the G&A expense rate.

3-Year Indirect Cost Rate Estimates			
Estimate	19X7	19X8	19X9
Sales Estimate	1,000 Units	1,500 Units	1,300 Units
Direct Material	\$14,145,921	\$17,857,300	\$14,762,049
Material Overhead	\$1,361,000	\$1,562,358	\$1,564,992
Engineering Direct Labor	\$1,582,300	\$1,596,105	\$1,669,141
Engineering Overhead	\$1,023,500	\$1,002,525	\$1,060,045
Manufacturing Direct Labor	\$1,467,200	\$1,910,450	\$1,811,992
Manufacturing Overhead	\$3,679,850	\$4,250,150	\$4,292,500
Total Cost Input	\$23,259,771	\$28,178,888	\$25,160,719
G&A Expense	\$4,426,381	\$4,875,614	\$4,566,581
Total Cost	\$27,686,152	\$33,054,502	\$29,727,300
Material Overhead Rate (With Direct Material Cost Base)	9.6%	8.7%	10.6 %
Engineering Overhead Rate (With Engineering Direct Labor Cost Base)	64.7%	62.8%	63.5%
Manufacturing Overhead Rate (With Manufacturing Direct Labor Cost Base)	250.8%	222.5%	236.9%
G&A Expense Rate (With Total Cost Input Base)	19.0%	17.3%	18.1%

Normally, you should expect more detail in support of rate calculations. Consider the requirements of [FAR Table 15-2](#) whenever you establish requirements for cost or pricing data or information other than cost or pricing data in support of indirect costs rates.

Any contractor should be able to provide you with this level of data along with detailed rationale for rate projections. Most contractors will provide you with substantially more detailed data. Assure that any data submitted meet solicitation requirements.

As you review the contractor's rate calculation and the overall data submission, ask questions such as the following:

- **Has the contractor's estimating system been refused approval by the cognizant auditor?**

An inadequate estimating system increases the risk that the system will not provide an adequate cost estimate.

- **Does the overall data submission comply with the requirements of FAR and the solicitation?**

Any data submission that does not meet FAR or solicitation requirements deserves special attention during cost analysis.

2.4 Analyzing Estimated Rates

Caution for Indirect Cost Rate Analysis. When you analyze indirect cost rates, do not fall into the trap of looking at a rate and immediately determining that it is too high or too low without analysis of the indirect cost allocation base and indirect cost pool. A rate of 400 percent can be reasonable and a rate of 10 percent can be unreasonable depending on the base, types of costs in the pool, reasonableness of the costs in the pool, and the overall effect on total cost and the operations of the firm. Also avoid the trap of assuming that a rate for one firm is necessarily a good yardstick for evaluating the rates of other firms in the same industry and/or of the same size.

Steps for Indirect Cost Rate Analysis. There are six general steps that you should follow as you analyze indirect cost rate estimates:

1. Develop an analysis plan.
2. Identify unallowable costs.
3. Analyze the indirect cost allocation base estimate.
4. Convert the indirect cost allocation base and the indirect cost pool to constant-year dollars.
5. Analyze the base/pool relationship.
6. Develop and document your pricing position.

Develop an Analysis Plan (FAR 15.404-2(c)). Develop a plan that tailors your in-depth indirect cost analysis efforts to areas that demonstrate the greatest cost risk to the Government. Unless required by agency or local procedures, the plan need not be in writing, but it should consider the risk to Government in terms of dollars involved and probability that the rates developed by the contractor are reasonable estimates of actual indirect cost rates.

As you prepare your plan, your analysis of risk to the Government should include questions such as the following:

- ***Is there an existing Forward Pricing Rate Agreement (FPRA) or Forward Pricing Rate Recommendation (FPRR)?***

If there is an administrative contracting officer (ACO) assigned to the offeror, contact the ACO to determine if there is an FPRA or FPRR in place. If there is, the need for further rate analysis will be greatly reduced.

- ***Can you obtain information from a recent indirect cost rate audit?***

Audit information can greatly simplify the process of rate analysis when there is no FPRA or FPRR. However, an audit recommendation does not relieve the contracting officer from the responsibility to evaluate indirect cost rates. Contact the cognizant auditor to obtain information on any indirect cost rate audit performed within the last 12 months. When an audit is available, do not request a new indirect cost rate audit unless the contracting officer considers the previous audit inadequate for pricing the current contract. Reasons for requesting a new audit include:

- Substantial changes in the offeror's rate structure.
- Audit-identified weaknesses in the offeror's rate development and tracking procedures.
- Recent changes in the offeror's business volume.
- Recent changes in the offeror's production methods.
- ***Did your review of the indirect cost allocation cycle identify any inconsistencies in the relationship between related rates in the indirect cost allocation cycle?***

Inconsistencies in the relationship between the proposed rates and related rates in the indirect cost allocation cycle may indicate that the offeror is not properly updating and reevaluating rates throughout the cycle.

- **Did your review identify any apparent weaknesses in the indirect cost rate estimating process?**

Any apparent weaknesses in the estimating process increases the cost risk to the Government. Normally, you should increase your analysis efforts in any areas with identified weaknesses.

- **Have the offeror's estimates been accurate in the past?**

Any contractor can incorrectly estimate an indirect cost rate. However, if past rates have been poor estimates of actual indirect costs, the risk to the Government is greater than it is in situations where past estimates have been quite accurate. As you plan, consider both the size and the consistency of the overestimates.

For example: The following table examines the accuracy of historical rate estimates made in the year prior to the rate period:

Year Rate Projection Made	Rate Projected For	Projected Rate	Actual Rate	Subtract Actual Rate From the Projected Rate
19X5	19X6	259.1%	254.8%	4.3%
19X4	19X5	256.3%	251.8%	4.5%
19X3	19X4	260.0%	254.8%	5.2%

Note that the company overestimated this indirect cost rate in every year. The average overestimate was 1.8 percent, calculated as follows:

If all company contracts during those three years were priced using the company estimated rate, customers would have been charged an average of \$101.80 for every \$100 in actual costs.

- **How many dollars are at risk?**

Consider the cost of analysis and potential cost savings from the analysis. For example, it would make little sense to invest \$30,000 in the analysis of a \$20,000 indirect cost estimate.

- **Does the indirect cost pool include a substantial amount of fixed cost?**

As the percentage of fixed indirect costs increases, the risk associated with inaccurate allocation base estimates also increases. When a relatively high percentage of indirect costs are fixed, the indirect cost rate can change dramatically with any change in the allocation base. When most indirect costs are variable, changes in the allocation base will have a less dramatic affect on the indirect cost rate.

Identify Unallowable Costs ([FAR 31.201-6](#)). Costs that are expressly unallowable or mutually agreed to be unallowable must be identified and excluded from any proposal, billing, or claim related to a Government contract. When an unallowable cost is incurred, any cost related to its incidence is also unallowable.

Contractors must identify unallowable indirect costs whenever indirect cost rates are proposed, established, revised, or adjusted. The detail and depth of records required as rate support must be adequate to establish and maintain visibility of the indirect cost.

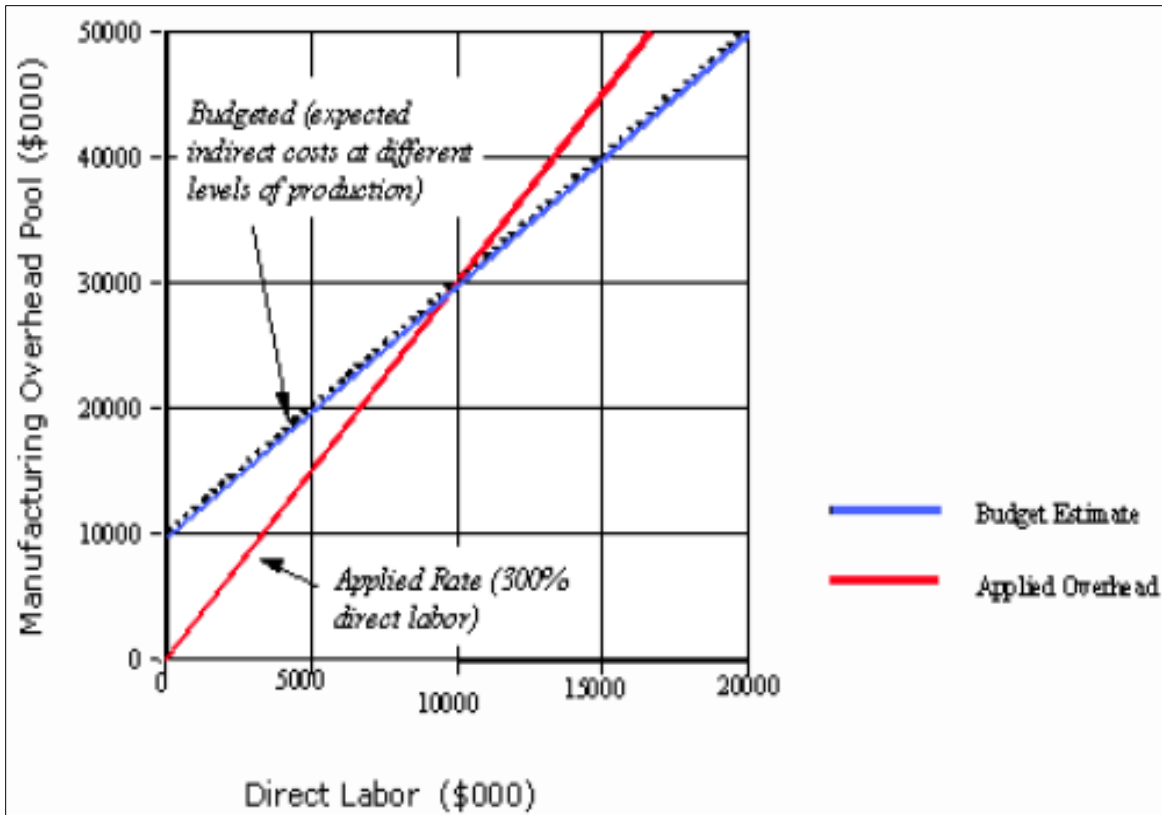
Any indirect cost analysis should specifically identify unallowable costs to assure proper treatment in indirect cost rate development:

- Unallowable costs must be removed from any indirect cost pool estimate, because Government contracts cannot include unallowable costs.
- When allocation base estimates include unallowable costs, the unallowable costs must be considered in Government rate projections to assure proper allocation of costs across all cost objectives.

Consider the following tests for cost allowability identified in the following table as you perform your analysis ([FAR 31.205](#)):

Points to Consider When Analyzing Indirect Cost Allowability	
If:	Then:
The proposed indirect cost pool dollar amount is not reasonable	Reduce the dollar amount of the indirect cost pool to reflect a more reasonable dollar value for that item.
The proposed cost should have been treated as a direct cost (either against the proposed contract or another contract)	Subtract that cost from the total dollar value of the indirect cost pool, and ensure the cost is directly charged to the proper contract.
This cost belongs in a different indirect cost pool.	Subtract that cost from the proposed indirect cost pool and add it to the dollar value of the correct pool.
The same cost is also represented in another indirect pool, or as a direct cost, or as part of an estimating factor (e.g., a packaging or obsolescence factor)	Develop your pricing position recognizing the proposed cost in the area where the cost should be recognized and deleting it in the area where it should not be included in the proposal.
The proposed cost is not properly allocable, in part or in whole, to the pool under CAS or GAAP	Reallocate the cost in a manner that is consistent with appropriate CAS or GAAP requirements.
The proposed cost is not allowable, in part or in whole, under the FAR cost principles	Reduce the dollar amount of the indirect cost pool commensurably.
The proposed cost is not allowable, in whole or in part, under the terms and conditions of the contract	

Analyze the Allocation Base Estimate ([FAR 31.203\(b\)](#)). The rate allocation base should be selected so as to permit allocation of the indirect cost pool to the various cost objectives on the basis of benefits accruing to each cost objective. The size of the estimate is important because most indirect cost pools include fixed costs. As the size of the base increases, the rate will decrease because the fixed expenses are being spread over a larger base. As the size of the base decreases, the rate will increase because the fixed expenses are being spread over a smaller base. The result of an inaccurate estimate can be demonstrated through the use of the following figure:



The Applied Overhead line represents the negotiated indirect cost forward pricing rate (300% of direct labor dollars). The Budget Estimate line represents the firm's forecast of the pool at different levels of production. Note the following characteristics of the two lines:

- The Applied Overhead line passes through the origin, because indirect costs can only be charged if product is produced and sold. (300% of nothing equals nothing.)
- The Budget Estimate line has a positive intercept at \$10 million. In other words, Manufacturing Overhead includes \$10 million in fixed costs.
- The two lines intersect at the direct labor estimate of \$10,000,000 for the year—the point at which a 300% rate would recover the budgeted \$30,000,000 in indirect costs.

Note that, if the base is anything other than \$10 million, use of the 300 percent rate will not equal the budgeted indirect cost.

If the base were actually \$5 million at the end of the period, the actual indirect cost should be \$20 million (according to budget estimates). If indirect costs for all contracts had been estimated using the 300 percent rate, only \$15 million would be applied (charged) to the contracts. Indirect cost would be **under-applied** by \$5 million (\$20 million - \$15 million). If the contracts were all firm fixed-price, that \$5 million would come out of the contractor's profits.

If the base were actually \$15 million at the end of the period, the actual indirect cost should be \$40 million (according to budget estimates). If indirect costs for all contracts had been estimated using the 300 percent rate, \$45 million would be applied to the contracts. Indirect cost would be **over-applied** by \$5 million (\$45 million - \$40 million). If the contracts were all firm fixed-price, the result would be \$5 million in additional profit.

Consider questions such as the following as you analyze indirect cost allocation bases ([FAR 31.203\(e\)](#) and [48 CFR Chapter 9, 9904.406-40](#)):

- ***Did the offeror use the correct base period (e.g., one year)?***

The base period for allocating indirect costs is the cost accounting period during which such costs are incurred and accumulated for distribution to work performed during that period. Generally the base period is the contractor's fiscal year. A shorter period may be appropriate:

- For contracts in which performance involves only a minor portion of the fiscal year,
- When it is general practice in the industry to use a shorter period, or
- During a transitional cost accounting period as part of a change in fiscal year.

When a contract is performed over several accounting periods, analyze the indirect cost allocation base for each rate for each accounting period covered by the contract.

- ***Does the indirect cost allocation base include all costs associated with that base during the accounting period, whether allowable or not?***

Remember that unallowable costs must be excluded from any proposed indirect cost pool. However, all costs are part of the base—even the unallowables. For example, unallowable costs must be excluded from a manufacturing overhead pool. However, if manufacturing overhead is part of the allocation base for another indirect cost account (e.g., G&A expense) the unallowable costs must be added back into the base.

- ***Will the base result in a fair allocation of the costs in the indirect cost pool?***

Indirect costs must be accumulated by logical cost groupings with due consideration of the reasons for incurring such costs. The base should be selected so as to permit allocation of the grouping on the basis of benefits accruing to the several cost objectives.

For example, if the pool is largely labor related (such as fringe benefits), the base should be a measure of labor effort, such as direct labor hours or dollars. If the pool is largely machinery related (such as depreciation and maintenance), the base should relate to machinery use, such as direct machine hours.

- ***When was the base estimate made?***

If the offeror is estimating a base for the fiscal year, an estimate made mid-way through the fiscal year is likely to be more accurate than an estimate made at the beginning of the year. Likewise, an estimate made for the next fiscal year should normally be more reliable than an estimate for a period three years in the future.

- ***Does the sales volume used to estimate the allocation base appear reasonable?***

The offeror does not have perfect knowledge of what is going to happen in the future. Estimators must consider more than known sales volume for the period in estimate development. Typically, the offeror will consider the following business forecast elements:

- Contracts in hand;
- Options that may be exercised;
- Proposals with a high probability of success [e.g., final proposal revisions (FPR)];
- Solicitations in hand; and
- Sales forecasts of future customer requirements;

Each element of the sales volume forecast should be assigned a probability of actual sale. Contracts in hand would be 100 percent. Other estimates would be assigned a lower "win" probability, based on an analysis of the probability of actually making the sale.

If the firm's sales consist of only a few large Government contracts, place less faith in contractor statistical estimates, and more faith on the best expressions of Government plans. When the total business activity of the firm includes a large number of relatively small orders, give greater credence to statistical projections that appear reasonable, given the available data.

- **Does the allocation base estimate appear reasonable for the projected sales volume?**

Using historical data and other available information, determine if the proposed allocation base appears reasonable for the estimated sales volume. If you have any questions, seek information from the cognizant auditor or ACO.

- **How stable has the allocation base been over time?**

Particularly with respect to small businesses that are heavily dependent on a few contracts, the base may be quite unstable. If such a firm loses only one contract, indirect rates on its remaining contracts might skyrocket. That would be particularly significant for proposed cost-reimbursement contracts. You may need to consider contract terms to protect the Government from the risk of unexpected, substantial changes in burden rates.

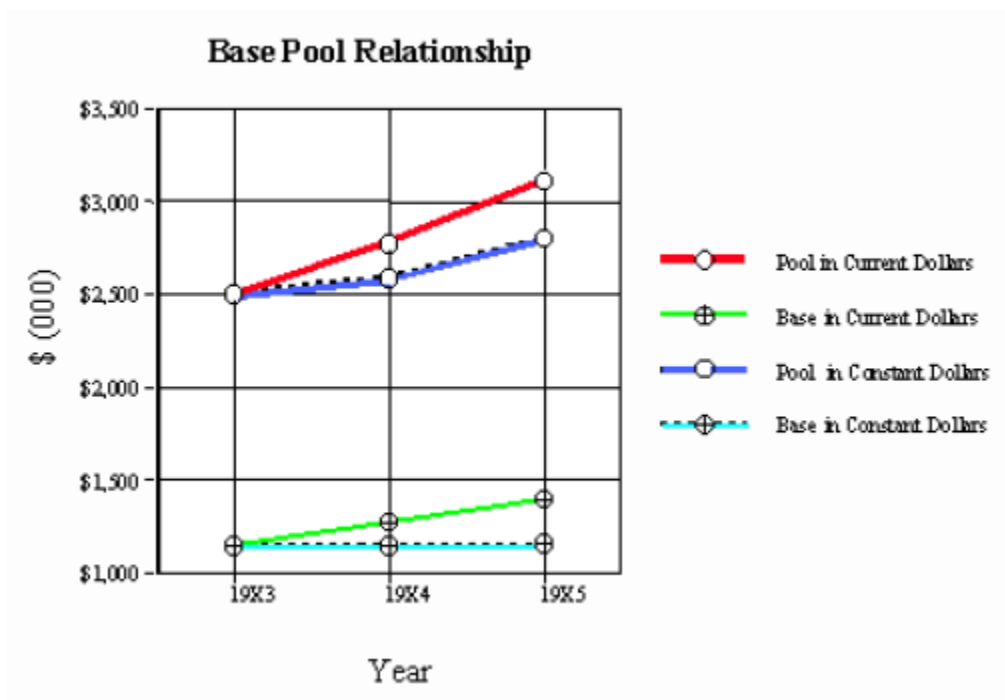
Convert the Base and Pool to Constant-Year Dollars. To analyze the historical relationship between the indirect cost allocation base and the indirect cost pool, you need to consider the changing value of the dollar. Unfortunately, it may be impossible for you to adjust for inflation when you are performing a summary level analysis, because there is rarely a single price index that you can use to adjust an entire indirect cost pool for inflation/deflation. There are typically too many different types of cost and cost behaviors included in indirect cost pools. For example, during a period of general inflation, depreciation will decline unless the contractor acquires new depreciable assets. The price of gasoline for company cars may rise rapidly as the cost of office supplies is declining.

On the other hand, if you are performing a detailed analysis of individual elements of an indirect cost account, you should be able to identify one or more indexes to use in adjusting for the changing value of the dollar. If the contractor has adjusted costs for inflation and the contractor's index number selection is reasonable, use it. If you have any concerns about the contractor's adjustments for inflation, deal with them before proceeding with further analysis.

For example: The following actual costs for 19X3, 19X4, and 19X5 along with projected costs for 19X6 were taken from a contractor's proposal for an indirect pool:

		19X3 (Actual)	19X4 (Actual)	19X5 (Actual)	19X6 (Projected)
Current-Year Dollars	Pool	\$2,502,490	\$2,768,851	\$3,110,004	\$3,510,141
	Base	\$1,154,650	\$1,270,115	\$1,397,115	\$1,536,839
	Rate	216.7%	218.0%	222.6%	228.4%
Constant-Year Dollars (Adjusted For Inflation)	Pool	\$2,502,490	\$2,590,650	\$2,799,804	\$2,996,000
	Base	\$1,154,650	\$1,153,900	\$1,156,500	\$1,155,000
	Rate	216.7%	224.5%	242.1%	259.4%

The following graph depicts the data presented in the above table. The solid lines depict independently the base and pool in current-year (unadjusted for inflation) dollars. The dotted lines depict the same information in constant-year (19X3) dollars.

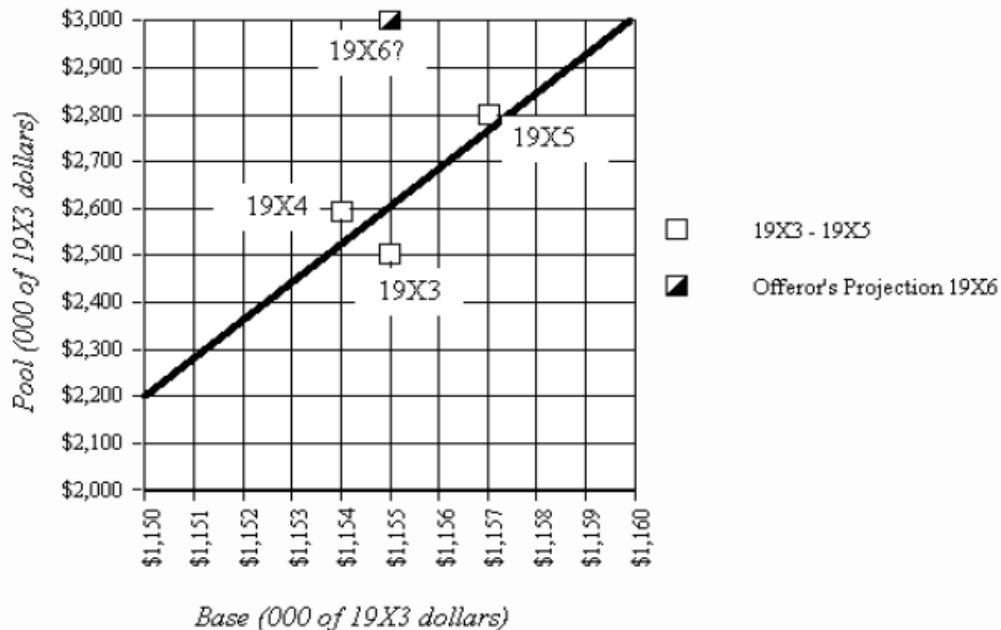


Both the table and the graph show fluctuating base and pool dollars. However, inflation-adjusted data indicate that the inflation-adjusted indirect cost pool is increasing, while the inflation-adjusted allocation base is remaining relatively constant. Based on this analysis, it appears that inflation is masking real substantial growth in the rate.

Analyze the Pool/Base Relationship. Both the allocation base and indirect costs will normally change with increases or decreases in business activity. If you can determine the historic relationship between the allocation base and indirect costs, you can use that information to predict what the rate will be at various levels of the allocation base. If you can use regression analysis to quantify the relationship, you will be able to easily predict the indirect cost pool for any allocation base value.

You can analyze the overall relationship between the allocation base and the indirect cost pool, or examine the relationship between individual indirect cost accounts (e.g., office supplies) and the indirect cost allocation base. The following graph demonstrates application of this technique to the data on constant year dollars from the example on the previous page.

Line-Of-Best-Fit For Historical Data (19X3 - 19X5)



As you review the above graph, note that the proposed rate for 19X6 falls well above the value that you would project based on the historical base/pool relationship. When the contractor's estimate is substantially above or below the line, you should challenge the estimate. If the contractor refuses to reduce its rate and cannot explain the reasons for the difference, consider performing a more in-depth analysis.

As you examine the base/pool relationship, ask questions such as the following:

- **Has the composition of the pool or base changed over time?**

Be alert to any changes in the composition of either the base or pool. The offeror may have automated. Automation would increase depreciation expense in the indirect cost pool while decreasing any base related to direct labor. Indirect cost rates could increase while combined direct and indirect costs decline.

- **Has the indirect cost rate structure changed from the structure used for past contracts?**

A change in rate structure could result in costs being moved from one indirect cost pool to another. If your analysis indicates that changes have taken place ask the offeror for more information on the changes.

- **Are changes in the rate consistent with the mix of fixed and variable costs in the indirect cost pool?**

If the indirect cost pool is primarily composed of variable costs, the rate should be relatively insensitive to changes in the allocation base that result from changes in sales volume. If the indirect cost pool is primarily composed of fixed costs, the rate should be more sensitive to changes to such changes.

Develop and Document Your Pricing Position. Develop and document your prenegotiation position, using the results of your analysis:

- If you accept the offeror's indirect cost rate estimate, document that acceptance.
- If you do not accept the indirect cost rate estimate, document your concerns with the estimate and develop your own prenegotiation position for costs covered by the estimate.
- If you can identify information that would permit you to perform a more accurate analysis of indirect cost rates, use the available information. Your analysis is not bound by the estimating methods used by the offeror.

2.5 Contract Forward Pricing

Indirect Cost Rates and Forward Pricing. One important use for indirect cost rate estimates is contract forward pricing. Contract pricing estimates of indirect costs for specific contracts and contract line items are developed by applying the estimated rate to the appropriate contract-related base. The indirect cost estimate will depend on both the rate and the size of the base related to contract performance.

Forward Pricing Rates ([FAR 15.404-1\(c\)](#), [FAR 15.404-2\(a\)](#), and [FAR 15.404-2\(d\)](#)). An indirect cost forward pricing rate is a rate that is used in prospective contract pricing. Actually you may encounter several different forward pricing rates as you develop your contract pricing position.

- **Proposed Forward Pricing Rates.** These are the indirect cost pricing rates proposed by the contractor. Depending on the contractor's participation in negotiated Government contracts, the firm may prepare a separate rate proposal or include all data supporting the proposed rate as part of the contract pricing proposal. These rates are the starting point for indirect cost rate analysis and contract pricing.
- **Audit Recommended Rates.** These are rates developed by Government audit personnel as a result of their review of the contractor's indirect cost rate proposal. The recommendation may result from the audit of the current contract proposal, a recent (within the last 12 months) contract proposal, or a separate indirect cost rate proposal. These are important recommendations, because auditors are the only members of the Government Acquisition Team that have general access to the contractor's accounting records. However, they are recommendations. You are still responsible for evaluating contract price reasonableness.
- **Forward Pricing Rate Recommendations.** Forward Pricing Rate Recommendations (FPRRs) are formal rate recommendations developed by the cognizant ACO for all Government buying activities. FPRRs are generally developed with assistance from the cognizant Government auditor.

When a contractor has a high volume of Government pricing actions, ACOs should consider establishing an FPRR:

- When the contractor refuses to submit a forward pricing rate agreement (FPRA) proposal or enter into an FPRA;
- During the period between cancellation of one FPRA and the establishment of a replacement FPRA; or
- During the period between agreement on an FPRA by Government/contractor negotiators and formal execution of the agreement.

Although FPRRs are only recommendations, you should not develop an independent position without first contacting the contract administration office that issued the FPRR. The contract administration office should be able to supply information supporting the reasonableness of the recommended rate. When negotiating a contract or contract modification for which cost or pricing data are required, consider inviting the ACO that issued the FPRR and cognizant auditor to attend negotiations concerning indirect cost rates.

- **Forward Pricing Rate Agreements** ([FAR 15.407-3](#)). Negotiating indirect rates tends to be time consuming and contentious. At contractor locations with significant Government business, the cognizant administrative contracting officer (ACO) should attempt to negotiate an FPRA.
 - An FPRA is a formal bilateral agreement that binds the contractor to propose the negotiated rates and the Government to accept them in pricing individual contracts. Each agreement includes provisions for canceling all or a portion of the agreement if circumstances change and the rate(s) are no longer valid representations of future costs.

The following process was used to develop the contract cost estimate presented above using the proposed 19X7 indirect cost rates:

- Estimate direct material and direct labor costs to perform the proposed contract, using appropriate estimating techniques.

- Multiply the proposed Material Dollar base by the Material Overhead Rate (9.6%), resulting in a contract Material Overhead estimate of \$19,200.
- Multiply the proposed Engineering Labor Dollar base by the Engineering Overhead Rate (64.7%), resulting in a contract Engineering Overhead estimate of \$3,235.
- Multiply the proposed Manufacturing Labor Dollar base by the Manufacturing Overhead Rate (250.8%), resulting in a contract Manufacturing Overhead estimate of \$188,100.
- Total the proposed production input costs (\$490,535).
- Multiply Total Cost Input by the proposed G&A Expense rate (19.0%), resulting in a contract G&A Expense estimate of \$93,202.
- Add the estimated G&A Expense dollars to the Total Cost Input, resulting in a total proposed cost of \$583,737.

Caution -- Assure that the Indirect Cost Rate Is Applied to the Appropriate Base

Apply each indirect cost rate to the appropriate allocation base. For example, if the direct labor costs from three departments-machining, fabricating, and assembly - are the base for the manufacturing overhead rate, you must multiply the sum total of **all** machining, fabricating, and assembly direct labor costs by the manufacturing overhead rate to estimate manufacturing overhead dollars.

On the other hand, do not apply the manufacturing overhead rate to cost categories not included in the base. You would not apply manufacturing overhead to field service labor cost if field service labor costs were not part of the allocation base used in developing the rate. **Only apply overhead rates to those elements included in the appropriate indirect cost allocation base.**

Sources of Estimate Differences. Differences between the contractor's estimate of indirect costs and your estimate can come from two sources-rate differences and proposed contract allocation base differences. You need to be aware of the sources of cost differences as you prepare for contract negotiations. Remember that even if you accept the contractor's proposed rate, your indirect cost objective will be lower than the costs proposed, if the base you are using is lower than the contractor's proposed base.

2.6 Contract Billing

This section examines factors that you should consider when establishing billing rates, adjusting billing rates, or evaluating costs related to contractor requests for progress payments or cost reimbursement.

- 2.6.1 - [Establishing Billing Rates](#)
- 2.6.2 - [Adjusting Billing Rates](#)
- 2.6.3 - [Disallowing Contractor Costs](#)

Need for Billing Rates. Analysis of indirect costs during contract pricing provides a snapshot of the indirect cost rate structure at one point in time during the Indirect Cost Cycle. However, that snapshot is only one estimate of indirect cost rates. That estimate could change at any time, as new information becomes available, until the accounting period is complete and rates are final.

For firm fixed-price contracts without progress payments, the contract price is fixed and it will not be affected by changes in the indirect cost rates. As a result, the responsibility for monitoring rates during contract performance rests with the contractor.

For firm fixed-price contracts with progress payments based on cost, the contract price is fixed but the amount of individual progress payments will depend in part on the indirect cost rates used for progress payment billing. For fixed-price incentive contracts and cost-reimbursement contracts, the amount paid during contract performance (progress payments and cost-reimbursement) will depend in part on the indirect cost rates used for billing. In these cases, the Government must establish and monitor billing rates.

2.6.1 Establishing Billing Rates

Billing Rate Definition ([FAR 42.701](#) and [FAR 42.704\(a\)](#)). The contracting officer (other cognizant Federal agency official) or auditor responsible for determining final indirect cost rates is responsible for determining the contract billing rate. A billing rate is an indirect cost rate established temporarily for interim reimbursement of incurred indirect costs and adjusted as necessary pending the establishment of final indirect cost rates.

Importance of a Reasonable Billing Rate. A billing rate that is too high will result in increased progress payments and cost reimbursement. The contractor will have the use of the Government's money interest-free until final contract pricing. For contracts that provide for price adjustment based on contract costs, estimates of final contract price will be inflated. That inflation could lead to poor management decisions to control costs or assure performance within available funds.

A billing rate that is too low will result in decreased progress payments and cost reimbursement. Contract performance may be affected by funds shortages. Contractor profits may be affected by the need to borrow to cover funds shortages and low profitability may drive firms away from Government contracting.

Basis for Rate Development ([FAR 42.704\(b\)](#)). If you are responsible for establishing interim billing rates, you may establish rates based on information resulting from recent review, previous rate audits or experience, or similar reliable data or experience or other contracting activities.

If you determine that the dollar value of contracts requiring the use of billing rates does not warrant submission of a detailed billing rate proposal, you may establish rates by making appropriate adjustments from the prior year's indirect cost rate experience to:

- Eliminate unallowable and non-recurring costs, and
- Reflect new or changed conditions.

Billing Rate Development ([FAR 42.704\(b\)](#)). The billing rate should be as close as possible to your projection of the contractor's final indirect cost rate for the period, adjusted for any unallowable costs.

- If the proposal is based on detailed data, complete a detailed proposal analysis following the steps previously outlined in this chapter. In fact, you should normally consider billing rates and forward pricing rates at the same time.
- As you determine the billing rate, consider:
 - Information resulting from recent review of contractor indirect cost rates;
 - The results of previous audits;
 - Your office's experience with the contractor; and
 - Similar reliable data or experience of other contracting activities.
- In making any required adjustments, consider all available data and apply appropriate quantitative techniques. Indirect cost experience from at least three accounting years and the use of regression analysis can be particularly useful in identifying non-recurring costs and making adjustments related to projected changes in production volume.
- Typically, billing rates should be the same as or slightly lower than current forward pricing rates.
 - When your analysis indicates a high probability that forward pricing rates are accurate estimates of final indirect costs, billing rates should normally be the same as current forward pricing rates.
 - When market or company uncertainty increase the risk that final indirect cost rates will be lower than current forward pricing rates, billing rates should normally be slightly lower than forward pricing rates. That will reduce the probability that the contractor will owe the Government money, when final indirect cost rates are determined.

2.6.2 Adjusting Billing Rates

Adjusting Rates When Forecasts Change ([FAR 42.704\(c\)](#)). Once billing rates are established, they may be prospectively or retroactively revised by mutual agreement of the responsible Government official and the contractor at either party's request, to prevent substantial overpayment or underpayment. Either the Government or the contractor may initiate a rate revision to prevent substantial overpayment or underpayment.

- If you are the contracting officer (or other cognizant Federal agency official) responsible for rate determination, consider initiating action to change billing rates whenever there is a change in final indirect cost rate forecasts. Initiate action when it appears that the projected rate change will have a substantial affect on final Government contract cost. When you cannot reach agreement with the contractor, you may unilaterally determine billing rates
- When the contractor provides a certified final indirect cost rate proposal, you and the contractor may agree to revise billing rates to reflect the proposed indirect cost rates, as approved by the Government to reflect historically disallowed amount from prior year's audits, until the proposal has been audited and settled. The historical decrement will be determined by the cognizant contracting officer or the cognizant auditor.

Variances Causing Rate Changes. Remember that an indirect cost rate is the result of a simple calculation:

$$\text{Indirect Cost Rate} = \frac{\text{Indirect Cost Pool}}{\text{Indirect Cost Allocation Base}}$$

Using this equation, you can see that the rate will change if the indirect cost pool or the base change. Changes typically result from spending variances (e.g., an unexpected insurance rate increase) not related to changes in volume and volume variances (i.e. a decrease in electricity use related to a decrease in production).

- **Spending Variances.** An in-depth analysis of contractor accounting data is normally needed to identify all but the largest spending variances. For example, monthly costs (the prime indicator of spending variances) may need to be seasonalized to reflect normal cost patterns (e.g., direct hours down and paid absence up during December when most people are off for the holidays).
- Because of the need for accounting expertise, cognizant Government auditor (as the Government's accounting expert) normally assume a lead role in identifying and analyzing spending variances.
- Multifunctional support is often required from other members of the Government Acquisition Team, because a single contractor management decision can affect spending across a broad range of contractor operations.

For example: A substantial change in capital improvement spending could reasonably be expected to affect:

- Projected depreciation expense (an indirect cost element);
- Facilities Capital Cost of Money Factors calculated under Cost Accounting Standard 414; and
- Contractor operations (e.g., worker productivity, make-or-buy decisions).
- **Volume Variances.** Any substantial differences between estimated rate base and actual base will result in a change in indirect cost rates, no matter how accurately costs have been predicted for the estimated volume.
 - Because day-to-day contracting activities (e.g. contract awards, changes, or terminations) provide the data essential for identification of volume variances, your observation and analysis of volume changes are particularly important.

- Consider any variances from volume estimates used in developing billing rates, including changes in:
 - Contracts in hand;
 - Options that may be exercised;
 - Proposals with a high probability of success;
 - Solicitations in hand;
 - Sales forecasts of future customer requirements; or
 - Projected increases or decreases in inventory.

Adjusted Billing Rate Development (FAR 42.704(b)). When adjusting billing rates, consider how identified spending and volume variances will affect your estimates of final indirect cost rates. Remember that the billing rate should be as close as possible to your projection of the contractor's final indirect cost rate for the period, adjusted for any unallowable costs.

Recalculate Contract Costs Using the Adjusted Rates (FAR 42.704). When it is necessary to adjust billing rates to prevent substantial overpayment or underpayment, you should adjust contract costs using the following procedure as depicted in the table below.

- **Determine The Amounts Paid Under The Contract.** Determine the costs previously reimbursed or paid as progress payments.
- **Calculate Total Amounts Due Using The Adjusted Rates.** Calculate the total reimbursement or progress payment amount due the contractor using the adjusted billing rates for the entire accounting period. If total contract costs include costs from other accounting periods, assure that you only adjust costs for the period affected by the rate adjustment.
- **Calculate The Net Amount Due The Contractor.** Subtract the costs previously reimbursed or paid as progress payments from the total amount calculated using the adjusted rates. The net difference is the amount currently due the contractor. If the net difference is positive, reimburse the contractor accordingly. If the net difference is negative, the contractor has been over-reimbursed and you should take appropriate action in accordance with agency procedures.

Contract Cost Reimbursement			
Costs Previously Reimbursed		Costs To Date Using Current Billing Rates	
Direct Material Cost	\$100,000	Direct Material Cost	\$120,000
Material Overhead @ 8.6%	\$8,600	Material Overhead @ 8.2%	\$9,840
Direct Labor Cost	\$200,000	Direct Labor Cost	\$275,000
Labor Overhead @ 130.0%	\$260,000	Labor Overhead @ 132.0%	\$363,000
Subtotal	\$568,600	Subtotal:	\$767,840
G&A Expense @ 14.0%	\$79,604	G&A Expense @ 12.5%	\$95,980
Total Cost	\$648,204	Total Cost:	\$863,820
Subtract Costs Previously Reimbursed from Costs to Date			\$648,204
Balance Due the Contractor			\$215,616

2.6.3 Disallowing Contractor Costs

Allowability of Contractor Costs ([FAR 42.803](#)). To be properly invoiced to a Government contract, a cost must be allowable. Remember that a cost is considered allowable under a specific contract if it is:

- Reasonable,
- Allocable to the contract,
- Properly accounted for under applicable accounting principles and standards,
- Not identified as unallowable under specific cost principles, and
- Not identified as unallowable under the terms of the contract.

Situations for Using a Notice of Intent to Disallow Costs ([FAR 42.801](#), and [FAR 42.802](#)).

Include the FAR clause [FAR 52.242-1](#), Notice Of Intent To Disallow Costs, in any solicitation or contract whenever you contemplate using a cost-reimbursement contract, a fixed-price incentive contract, or a contract providing for price redetermination.

Under that clause, you, as the contracting officer responsible for contract administration, may issue a Notice Of Intent To Disallow Costs incurred or planned for incurrence at any time during contract performance. However, before issuing the notice, you must make every reasonable effort to reach a satisfactory agreement through discussions with the contractor.

Do not use a Notice Of Intent To Disallow Costs to disallow invoiced costs. Only use the notice to advise the contractor as early as practicable during contract performance that a specific cost or type of cost is considered unallowable under the contract terms and to provide for timely resolution of any resulting disagreement.

Process for Using a Notice of Intent to Disallow Costs ([FAR 42.801](#) and [FAR 52.242-1](#)). Normally, the process of cost review and disallowance involves seven steps. However, your objective should be to obtain satisfactory resolution without actually completing all seven steps.

- **Identify Any Unallowable Cost.** The unallowable cost is usually identified through routine audit or cost monitoring activities of the contract administration team.
 - If the cognizant auditor identifies a cost as unallowable, assure that you understand the reason before proceeding further.
 - If you identify the cost as unallowable, you should coordinate your findings with the cognizant auditor before taking further action.
- **Attempt To Negotiate A Satisfactory Settlement.** Attempt to negotiate a satisfactory settlement through discussions with the contractor. To the extent practicable, coordinate with the cognizant auditor throughout the negotiation process.
- **Prepare a Notice Of Intent To Disallow Costs.** If you cannot reach agreement with the contractor, prepare the notice. As a minimum, the notice must:
 - Refer to the contract's Notice Of Intent To Disallow Costs clause;
 - State the contractor's name and list the numbers of the affected contracts;
 - Describe the costs to be disallowed, including estimated dollar value by item and applicable time periods, and state the reasons for the intended disallowance;
 - Describe the potential impact on billing rates and forward pricing rate agreements (FPRAs);
 - State the notice's effective date and the date by which written response must be received;
 - List the recipients of copies of the notice; and
 - Request the contractor to acknowledge receipt of the Notice.

- **Obtain Necessary Coordination.** Prior to issuing a notice affecting elements of indirect cost, coordinate the notice with the contracting officer responsible or auditor responsible for final indirect cost settlement. A corporate administrative contracting officer does not need to obtain the approval of individual ACOs to disallow items of corporate expense ([FAR 42.603\(a\)](#)).
- **Distribute The Notice Of Intent To Disallow Costs.** Send the notice to the contractor and obtain acknowledgment of receipt. In addition, provide copies of the notice to all contracting officers cognizant for any segment of the contractor's organization.
- **Act On Any Contractor Response.** If the contractor accepts the notice, no further action is necessary. If the contractor believes that the cost is allowable, it may submit a written response. You must act on that response within 60 days.
 - If the contractor provides convincing evidence that the cost is allowable, withdraw the Notice in writing.
 - If the contractor fails to provide convincing evidence that the cost is allowable, issue a written decision under the contract Disputes clause disallowing the cost.
 - If the contractor provides convincing evidence that part of the cost is allowable, issue a decision under the contract Disputes clause that a portion of the cost is not allowable.
- **Distribute Resulting Documents.**
 - Distribute the original copy of your action to withdraw a Notice Of Intent To Disallow Costs or a final decision to disallow costs to the contractor.
 - Distribute copies to all contracting officers cognizant of any segment of the contractor's organization.

Situations for Disallowing Incurred Costs ([FAR 42.803](#)). Cost-reimbursement contracts, the cost-reimbursement portion of fixed-price contracts, letter contracts that provide for reimbursement of costs, time-and-material contracts, and labor-hour contracts provide for disallowing costs during the course of performance after costs have been incurred.

Contracting Officer Procedures for Disallowing Incurred Costs ([FAR 42.803\(a\)](#), [DFARS PGI 225.870-5](#), and [DFARS 242.803](#)).

When you, as a contracting officer, receive vouchers directly from the contractor and, with or without auditor assistance, approve or disapprove them, conduct the process of disallowing costs in accordance with normal agency procedures. The following are two examples of agency procedures:

- In the DoD, contracting officer receipt of cost vouchers is only authorized for cost-reimbursement contracts with the Canadian Commercial Corporation (CCC).
 - Audits are automatically arranged by the Department of Supplies and Services (DSS), Canada.
 - Based on advice from DSS, the CCC will certify the invoice and forward it with the SF 1034, Public Voucher, to the ACO for further processing and transmittal to the disbursing office.
- In DOE, all vouchers and invoices are submitted to the contracting officer (or designee) for review and approval. If the examination raises a question concerning allowability of cost, the contracting officer must:
 - Hold informal discussions with the contractor as appropriate.
 - Issue a notice (e.g., letter or memo) to the contractor advising of the cost disallowed or to be disallowed and advising the contractor that it may:
 - Submit a written claim as to why the cost should be reimbursed, if it does not concur with the disallowance.
 - File a claim under the contract Disputes clause, which will be processed in accordance with disputes procedures if agreement cannot be reached.
 - Process the invoice or voucher for payment and advise the finance office to deduct the disallowed cost when scheduling the voucher for payment.

When authorized by agency regulations, the cognizant auditor may be authorized to ([FAR 42.803\(b\)](#)) and ([DCAM 6-902c](#)):

- Receive cost-reimbursement vouchers.
- Approve for payment those vouchers found to acceptable and forward them to the cognizant contracting, finance, or disbursing officer for payment, following agency procedures.
- Suspend payment of questionable costs.

If the auditor's examination of a voucher raises a question regarding the allowability of an invoiced cost, the auditor will follow agency procedures for disallowing that cost. Those procedures will generally include steps such as the following:

- **Withhold Payment Processing Pending Resolution.** The auditor will not process an invoice or voucher which includes a questioned cost until the issue of allowability is resolved.
- **Advise Cognizant Contracting Officer Of Pending Action.** The auditor will normally keep the cognizant contracting officer apprised of the issues affecting cost allowability. If you are the cognizant contracting officer, provide the auditor with any available information which might support, refute, or modify the auditor's findings.
- **Conduct Informal Discussions With The Contractor.** The auditor may conduct informal discussions with the contractor to ensure that the auditor's conclusion is based on a proper understanding of the facts.
 - If the contractor convinces the auditor that the cost is allowable, the auditor will process the invoice or voucher for payment.
 - If the auditor convinces the contractor that the cost is unallowable, the auditor will normally permit the contractor to resubmit the invoice or voucher without the questioned cost.
 - If the auditor remains convinced that the cost is unallowable, but the contractor does not agree, the auditor should proceed to the next step below.
- **Issue Notice of Contract Costs Suspended and/or Disapproved.** If the auditor still believes that the cost is unallowable and is authorized to take this step under agency procedures, the auditor will issue a Notice of Contract Costs Suspended and/or Disapproved (e.g., a DCAA Form 1). The notice should identify claimed costs that are not considered reimbursable.
- **Distribute Notice of Contract Costs Suspended and/or Disapproved.** The auditor should distribute the notice simultaneously:
 - To the contractor (with a request for acknowledgment of contractor receipt)
 - To the disbursing officer, with a copy
 - To the cognizant contracting officer.
- **Review Contractor Response.** If the contractor disagrees with the deduction from current payments, the contractor may:
 - Submit a written request for you, as the cognizant contracting officer, to consider whether the unreimbursed cost should be paid and to discuss the finding with contractor personnel.
 - File a claim under the Disputes clause.
 - Do both of the above.
- **Act On Any Contractor Claim.** When the contractor submits a claim under the Disputes clause of the contract, the contracting officer must issue a written decision as soon as practicable within the 60-day period required by the Disputes clause. If the contractor still disagrees, the firm may appeal to the appropriate Board of Contract Appeals or the Claims Court.

2.7 Determining Final Indirect Costs

This section examines factors that you should consider when establishing and applying final indirect cost rates.

- 2.7.1 - [Establishing Final Rates](#)
- 2.7.2 - [Establishing Quick Closeout Rates](#)
- 2.7.3 - [Obtaining And Reviewing Completion Invoices/Vouchers](#)
- 2.7.4 - [Assessing Penalties For Unallowable Costs In Final Rate Proposals](#)

2.7.1 Establishing Final Rates

Final Indirect Cost Rates ([FAR 42.705](#)). A final indirect cost rate is a rate established and agreed upon by the Government and the contractor. It is not subject to change. It is usually established after the close of the contractor's fiscal year (unless the parties decide on a different period) to which it applies. In the case of cost-reimbursement contracts with educational institutions, the rate may be predetermined (i.e., established for a future period) on the basis of cost experience with similar contracts, together with supporting data.

Indirect Cost Rate Proposal ([FAR 42.703-2](#), [FAR 52.216-7\(d\)](#), and [FAR 52.242-4](#)). Each flexibly priced contract requires the contractor to submit proposed final indirect cost rates for each fiscal year, within six months after the expiration of its fiscal year (or by a later date under exceptional circumstances approved in writing by the contracting officer). The proposal must:

- Be submitted to the cognizant contracting officer (or cognizant Federal agency official) and auditor;
- Be based on the Contractor's actual cost experience for the period;
- Include adequate supporting data; and
- Include the Certificate of Final Indirect Costs described below unless the requirement is waived by the agency head (or designee).

Format for Certificate of Final Indirect Costs ([FAR 52.242-4](#)). To be acceptable, the completed certificate must read as shown below and be signed by an individual in the contractor's organization at a level no lower than vice president or chief financial officer of the business segment that submits the proposal:

<p style="text-align: center;">CERTIFICATE OF FINAL INDIRECT COSTS</p> <p>This is to certify that I have reviewed this proposal to establish final indirect cost rates and to the best of my knowledge and belief:</p> <p>1. All costs included in this proposal ___(identify proposal and date)___ to establish final indirect cost rates for ___(identify period covered by rate)___ are allowable in accordance with the Federal Acquisition Regulation (FAR) and its supplements applicable to the contracts to which the final cost rates will apply; and</p> <p>2. This proposal does not include any costs which are expressly unallowable under applicable cost principles of the FAR or its supplements.</p> <p>Firm: _____</p> <p>Signature: _____</p> <p>Name of Corporation Official: _____</p> <p>Title: _____</p> <p>Date of Execution: _____</p>
--

Failure to Submit a Certificate of Final Indirect Costs ([FAR 42.703-2\(c\)](#)). If the contractor has not certified its proposal for final indirect cost rates and a waiver is not appropriate, the contracting officer may unilaterally establish the final indirect cost rates.

In such situations, the responsible contracting officer should:

- Base the unilaterally-determined final indirect cost rate on audited historical data or other available data after excluding unallowable costs; and
- Set the unilaterally-determined rate low enough to ensure that unallowable costs will not be reimbursed.

False Certification ([FAR 42.703-2\(d\)](#)). Consult with Government legal counsel to determine appropriate action if you think that a contractor's Certificate of Final Indirect Costs is false.

Waiver of Final Indirect Cost Proposal Certification Requirement ([FAR 42.703-2\(b\)](#)). The agency head (or designee) may waive the indirect cost certification requirement when:

- A waiver is determined to be in the best interest of the United States, and
- The reasons for the determination are put in writing and made available to the public.

A waiver may be appropriate for a contract with a:

- Foreign government or international organization, such as subsidiary bodies of the North Atlantic Treaty Organization;
- State or local government that is subject to [OMB Circular A-87](#); *Cost Principles for State and Local Governments*;
- Educational institution subject to [OMB Circular A-21](#), *Cost Principles for Educational Institutions*; or
- Nonprofit organization subject to [OMB Circular A-122](#), *Cost Principles for Nonprofit Organizations*.

Responsibility for Determining Final Indirect Cost Rates ([FAR 42.705](#)).

Final indirect costs must be established by using either the:

- Contracting officer determination procedure; or
- Auditor determination procedure.

Select the appropriate procedure following the guidelines below and applicable agency requirements. For example, the Department of Energy Acquisition Regulation (DEAR) directs the use of the contracting officer determination procedure for all final rates set by the Department of Energy.

Situations for Contracting Officer Determination ([FAR 42.705-1\(a\)](#)). Use the contracting officer determination procedure for business units:

- Of a multidivisional corporation under the cognizance of a corporate administrative contracting officer (CACO).
 - The CACO will be responsible for the rate determination.
 - Administrative contracting officers (ACOs) assigned to the individual business units will assist the CACO (as required).
 - Negotiations may be conducted on a coordinated or centralized basis, depending on the degree of centralization within the contractor's organization.
- Not under the cognizance of a CACO, but having a resident ACO. The resident ACO will be responsible for the determination. For this purpose, a nonresident ACO is considered as resident if at least 75 percent of the ACO's time is devoted to a single contractor.
- Not included above, when the contracting officer (or cognizant Federal agency official) determines that a contracting officer determination is appropriate under FAR and agency procedures.

Procedure for Contracting Officer Rate Determination ([FAR 42.705-1\(b\)](#), [FAR 52.216-7\(d\)\(2\)](#), [DCAAP 7641.90](#), and [DCAM 6-603a](#)).

As a contracting officer determining final overhead rates for business units, follow the steps identified below. For other contractors, see the appropriate FAR sections identified above.

- **Obtain The Contractor's Proposal.** Each flexibly priced contract requires the contractor to submit proposed final indirect cost rates for each fiscal year, six months after the expiration of its

fiscal year. The contracting officer may grant a reasonable written extension for exceptional circumstances when requested by the contractor. Assure that the contractor submits a separate copy of the proposal to the cognizant auditor. [Chapter 6](#) of DCAA Pamphlet 7641.90, Information for Contractors, provides a model incurred cost proposal.

- **Obtain A Proposal Audit.** Follow your agency procedures to obtain an audit of the contractor's indirect cost rate proposal from the cognizant auditor. Your request for audit support should identify any areas where you believe audit input is necessary to support final rate determination.
 - FAR requires the cognizant auditor to identification of any relevant advance agreements or restrictive terms affecting final indirect cost rates. The auditor should provide an analysis of other areas affecting final rate determination.
 - The audit should also include:
 - A review and evaluation of the contractor's system of internal control, including the means by which all echelons of management control the level of indirect cost;
 - A review of the composition and suitability of the allocation bases;
 - A review of the composition of the various indirect cost pools to ascertain whether they are logical and bear a reasonable relationship to the bases used for apportioning expenses to operations;
 - A review of selected indirect cost accounts;
 - A verification to the financial records; and
 - A verification of the mathematical accuracy of the rate computation.
- **Form A Government Negotiating Team.**
 - Include the:
 - Cognizant contracting officer (Team Head);
 - Cognizant auditor; and
 - Technical or functional personnel as required.
 - Invite contracting offices with significant dollar interest in the negotiations to participate in the negotiation and in the preliminary discussion of critical issues.
 - You should also invite individuals or offices that have provided significant input to the Government position.
- **Develop A Negotiation Position For Each Rate.** As you develop your negotiation position, seek relevant input from other members of the Government Negotiating Team. Do not resolve any questioned cost until you obtain:
 - Adequate documentation on the cost, and
 - The contract auditor's opinion on the allowability of the cost.
- **Conduct Negotiations With The Contractor.** Whenever possible, invite the contract auditor to serve as an advisor at any negotiation or meeting with the contractor. Request participation by other Government Negotiating Team members when needed to support negotiations.
- **Execute A Bilateral Final Indirect Cost Rate Agreement. The bilateral agreement:**
 - Should specify:
 - The agreed-upon final annual indirect cost rates,
 - The bases to which the rates apply,
 - The periods for which the rates apply,
 - Any specific indirect cost items treated as direct costs in the settlement, and
 - The affected contract(s) and/or subcontract(s), identifying any with advance agreements or special terms and the applicable rates.
 - Must not change any monetary ceiling, contract obligation, or specific cost allowance or disallowance provided for in any contract.

- Is incorporated into each applicable contract upon execution.
- Is binding on all agencies, unless otherwise specifically permitted by statute.
- **Prepare, Sign, And File A Negotiation Memorandum.** The memorandum must cover the following points:
 - The disposition of significant matters in the advisory audit report;
 - Reconciliation of all costs questioned, with identification of items and amounts allowed or disallowed in the final settlement, as well as period costing or allocation issues;
 - Reasons why any recommendations of the auditor or other Government advisors were not followed; and
 - Identification of cost or pricing data submitted during the negotiations and relied upon in reaching a settlement.
- **Distribute Resulting Documents ([FAR 42.706](#)).**
 - Distribute the executed copies of the agreement to:
 - The contractor;
 - Each affected contracting agency; and
 - The affected contract files.
 - Distribute copies of the negotiation memorandum (as appropriate) to:
 - The affected contracting office(s); and
 - Cognizant Government audit office(s).

Situations for Auditor Determination ([FAR 42.705-2\(a\)](#)). The cognizant Government auditor must establish final indirect cost rates in situations other than those identified above for contracting officer determination.

Audit determination may also be used in the situations designated for contracting officer (or cognizant Federal agency official) determination when the cognizant contracting officer and auditor agree that the indirect costs can be settled with little difficulty and any of the following circumstances apply:

- The business unit has primarily fixed-price contracts, with only minor involvement in cost-reimbursement contracts.
- The administrative cost of making a contracting officer determination would exceed the expected benefits.
- The business unit does not have a history of disputes and there are few cost problems.
- The contracting officer (or cognizant Federal agency official) and auditor agree that special circumstances require audit determination.

Procedure for Auditor Determination ([FAR 42.705-2\(b\)](#)). Under the auditor determination procedure assure that the contractor submits a final indirect cost rate proposal to both the cognizant auditor and the contracting officer.

The auditor will:

- Audit the proposal and seek agreement on indirect costs with the contractor.
- Prepare a bilateral indirect cost rate agreement between the auditor and the contractor that conforms to the requirements of the contracts involved.
- Execute the bilateral agreement with the contractor.
- Distribute executed copies of the agreement to the contractor and to each affected contracting agency. The auditor will also provide copies of the audit report to the affected contracting offices and Government audit offices.

Auditor and Contractor Fail to Agree ([FAR 42.705-2\(b\)\(2\)\(iii\)](#) and [DFARS 242.705-2\(b\)\(2\)\(iii\)](#)).

If the auditor cannot reach agreement with the contractor, the auditor will forward the audit report to the contracting officer (or Federal agency official) designated in the Directory of Contract Administration Services Components for final indirect rate determination.

Defense Contract Audit Agency Auditors will also issue a DCAA Form 1, Notice of Contract Costs Suspended and/or Disapproved. On the form, the auditor will detail the items of exception and advise the contractor that requests for reconsideration should be submitted in writing to the contracting officer.

Government and Contractor Fail to Agree ([FAR 52.216-7\(d\)\(4\)](#)). If the contracting officer and the contractor fail to agree on a final indirect cost rate determination, that failure will be considered a dispute within the meaning of the contract Disputes clause. The dispute will be resolved under the provisions of that clause.

2.7.2 Establishing Quick Closeout Rates

Rationale for Quick Closeout. Final indirect cost rates cannot be determined until after the close of the cost accounting period. In fact, it may take years to establish final indirect cost rates. To speed contract closeout, the contracting officer responsible for contract closeout may use the quick-closeout procedure to negotiate the settlement of indirect costs for a specific contract in advance of the determination of final contract cost.

Criteria for Quick Closeout (FAR 42.708). The table below delineates the criteria that you must consider in determining when and how to use the quick-closeout procedure to establish final contract indirect cost.

Criteria For Use Of Quick Closeout Procedure	
Requirements For Procedure Use	Remarks
Contract must be physically complete.	All deliverables under the contract have been received and accepted. Only administrative contract closeout remains.
Unsettled direct and indirect costs to be allocated to any one contract, task order, or delivery order must be relatively insignificant.	Cost amounts will be considered relatively insignificant when the total unsettled direct costs and indirect costs to be allocated does not exceed the lesser of: <ul style="list-style-type: none"> • Total unsettled indirect cost cannot exceed \$1,000,000 on any one contract, and • (ii) 10 percent of the total contract, task order, or delivery order amount.
Agreement must be reached on a reasonable estimate of allocable dollars.	Both the contracting officer responsible for contract closeout and the contractor must agree to the indirect costs to be allocated to the contract.
Determination of final indirect costs under the quick closeout procedure must be final for the contract it covers.	Use of the rates is final for covered contracts and no adjustment shall be made to other contracts for over/under recovery of costs applicable to a contract covered by the agreement.
Quick closeout rates shall not be considered a binding precedent for other contracts.	While the rates are binding for any contract covered, they are not considered a binding precedent affecting the establishment of final indirect cost rates for other contracts.

Procedure for Quick Closeout Rate Development. There is no guidance presented in the FAR as to how you should go about reaching reasonable quick closeout rates. However, the steps below present a framework that you can follow in negotiating a reasonable rate.

- **Obtain Contractor Final Rate Proposal.** While there is no FAR requirement to obtain a final rate proposal before negotiating quick closeout rates, the practical reality is that the only sound way to begin negotiations is with a contractor proposal, for several reasons:
 - It is difficult to negotiate rates without knowing the contractor's position.
 - The proposal summarizes the contractor's records on final indirect costs.
 - Requiring the proposal for quick closeout incentivizes timely submission of a proposal that can be used for final rate negotiations.

- **Develop Negotiation Objective.** Based on the contractor's proposal, develop a negotiation objective.
 - Normally, you will develop the objective without detailed audit or technical analysis. However, you should contact the cognizant auditor to determine if the auditor is currently aware of any substantial exceptions to the contractor's proposed rates.
 - Assuming that no substantial exceptions are noted, you can develop your objective using any reasonable approach including the following:
 - Adjust the proposed final settlement rate using a decrement factor developed from analysis of forward pricing and billing rates. It is reasonable to assume that the final audit will identify reductions similar to reductions noted in forward pricing and billing rate proposals.
 - Adjust the proposed final settlement rate using a decrement factor based on prior-year reductions from proposed settlement rates. The adjustment can be based on audit-recommended reductions, negotiated reductions, or some combination of the two.
- **Negotiate a Reasonable Rate.** Remember the goal is to obtain a reasonable rate.
 - The contractor may be willing to settle for a rate slightly lower than it might otherwise negotiate to obtain its money immediately.
 - On the other hand, it may be advantageous to the Government to settle for a rate slightly higher than it might otherwise negotiate to reduce the administrative costs of retaining an active contract that is physically complete.
- **Sign a Bilateral Agreement.** Sign a bilateral agreement with the contractor documenting:
 - The rates.
 - The contracts to which the rates apply.
 - That the use of the quick closeout rate is final for the contracts involved, and that differences between the quick closeout rates and final settlement rates cannot be shifted to other contracts.
 - That agreement on quick closeout rates does not set a binding precedent affecting the establishment of final indirect cost rates for other contracts.
- **Distribute the Agreement.** Promptly distribute the agreement to the contractor and each contracting officer affected.
- **Prepare a Negotiation Memorandum.** Prepare a memorandum documenting data considered during negotiations and the basis for your objective and the rates negotiated.

2.7.3 Obtaining And Reviewing Completion Invoices/Vouchers

Obtaining Completion Invoices/Vouchers ([FAR 42.705\(b\)](#), [FAR 52.216-7](#), and [FAR 52.216-13](#)). Within 120 days after settlement of the final indirect cost rates or quick closeout rates covering the year in which a contract is physically complete (or longer, if approved in writing by the contracting officer), the contractor must submit a completion invoice or voucher to reflect the settled amounts and rates.

Typically, the data supporting the updated invoice or voucher will identify the:

- Total contract cost;
- Total previously billed; and
- Balance due or credit due.

The following example illustrates what the support for an updated cost-reimbursement voucher might look like.

Costs Reimbursed Using Interim Billing Rates		Final Costs Using Final Indirect Rates	
Direct Material Cost	\$800,000	Direct Material Cost	\$800,000
Material Overhead @ 8.2%	\$65,600	Material Overhead @ 8.4%	\$67,200
Direct Labor cost	\$1,000,000	Direct Labor cost	\$1,000,000
Labor Overhead @ 132.0%	\$1,320,000	Labor Overhead @ 133.0%	\$1,330,000
Subtotal	\$3,185,600	Subtotal	\$3,197,200
G&A Expense @ 12.4%	\$395,014	G&A Expense @ 14.5%	\$463,594
Total Cost	\$3,580,614	Total Cost	\$3,660,794
Less Costs Previously Reimbursed			\$3,580,614
Balance Due the Contractor			\$80,180

Completion Invoice/Voucher Review ([FAR 42.803](#)). Follow agency procedures in reviewing completion invoices/vouchers.

Auditor assistance in your review may be appropriate to assure that all costs are allowable and in accordance with the appropriate final indirect cost rate determination or quick closeout rate agreement.

2.7.4 Assessing Penalties For Unallowable Costs In Final Rate Proposals

Contracts Where Penalty Requirements Apply ([FAR 42.709](#)). The contracting officer has the general authority to assess a financial penalty against a contractor that includes unallowable indirect costs in:

- A final indirect cost rate proposal; or
- The final statement of costs incurred or to be incurred under a fixed-price incentive contract.

However, this authority does not apply to:

- Contracts that do not exceed \$800,000;
- Fixed-price contracts without cost incentives; or
- Firm fixed-price contracts for the purchase of commercial items.

Contracting Officer Responsibilities ([FAR 42.709-2\(a\)](#)). The cognizant contracting officer is responsible for:

- Determining whether penalties should be waived;
- Determining whether a penalty should be assessed;
- Assessing the appropriate penalty;
- Referring the matter to the appropriate criminal investigative organization for review and for appropriate coordination of remedies, if there is evidence that the contractor knowingly submitted unallowable costs.

Auditor Responsibilities ([FAR 42.709-2\(b\)](#)). The cognizant contract auditor, is responsible for:

- Recommending to the contracting officer which costs may be unallowable and subject to the penalties;
- Providing rationale and supporting documentation for any recommendation; and
- Referring the matter to the appropriate criminal investigative organization for review and for appropriate coordination of remedies, if there is evidence that the contractor knowingly submitted unallowable costs.

Penalty Amount ([FAR 42.709-1\(c\)](#)). It is not necessary for unallowable costs to have been paid to the contractor in order for the contracting officer to assess a penalty.

The penalties summarized in the table below may be applied in addition to other administrative, civil, and criminal penalties provided by law.

If the indirect cost...	The penalty is equal to:
Is expressly unallowable under a cost principle in the FAR, or an executive agency supplement to the FAR, that defines the allowability of specific selected costs	<ul style="list-style-type: none"> • The amount of the disallowed costs allocated to applicable contracts based on the indirect cost proposal; plus • Interest on the paid portion (if any) of the disallowance.
Was determined to be unallowable for that contractor before proposal submission	<ul style="list-style-type: none"> • Two times the amount of the disallowed costs allocated to applicable contracts based on the indirect cost proposal; plus • Interest on the paid portion (if any) of the disallowance

Evidence That a Cost Was Determined to Be Unallowable Before Proposal Submission ([FAR 42.709-3\(b\)](#)).

A prior determination of unallowability may be evidenced by any of the following:

- A DCAA Form 1, Notice of Contract Costs Suspended and/or Disapproved, or any similar notice which the contractor elected not to appeal and was not withdrawn by the cognizant Government agency;
- A contracting officer's final decision which was not appealed by the contractor;
- An executive agency Board of Contract Appeals or court decision involving the contractor, which upheld the cost disallowance; or
- A contracting officer determination or Government-contractor agreement of unallowability.

Computing Interest Due the Government ([FAR 42.709-4](#)). Compute interest on any portion of the unallowable cost already paid by the Government as follows:

- Consider the overpayment to have occurred, and interest to have begun accumulating, from the midpoint of the contractor fiscal year covered by the indirect cost proposal. Use an alternate equitable method if the cost was not paid evenly over the fiscal year.
- Use the interest rate specified by the Secretary of the Treasury pursuant to Public Law 92-41 (85 Stat. 97), available online at the Treasury Department's [Bureau of Public Debt website](#).
- Compute interest from the date of overpayment to the date of the demand letter for payment of the penalty.
- Determine the paid portion of the disallowed costs in consultation with the cognizant contract auditor.

Demand for Payment ([FAR 42.709-3](#)). Unless the penalty requirements outlined above are waived, the cognizant contracting officer must issue a demand for payment of the appropriate penalty amount plus interest on the overpayment. This demand for payment is a final decision under the Disputes clause of the contract.

The demand for payment of the penalty is separate from and in addition to any demand for repayment of a disallowed cost previously paid by the Government.

Waiver of the Penalty ([FAR 42.709-5](#)). Waive the penalties above when:

- The contractor withdraws the proposal before the Government formally initiates an audit of the proposal and the contractor submits a revised proposal (an audit will be deemed to be formally initiated when the Government provides the contractor with written notice, or holds an entrance conference, indicating that audit work on a specific final indirect cost proposal has begun);
- The amount of the unallowable costs under the proposal which are subject to the penalty is \$10,000 or less (i.e., if the amount of expressly or previously determined unallowable costs which would be allocated to the contracts specified is \$10,000 or less); or
- The contractor demonstrates, to the contracting officer's satisfaction, that:
 - It has established policies and personnel training and an internal control and review system that provide assurance that unallowable costs subject to penalties are precluded from being included in the contractor's final indirect cost rate proposals. Evidence of such controls include:
 - The types of controls required for satisfactory participation in the Department of Defense sponsored self-governance programs,
 - Specific accounting controls over indirect costs,
 - Compliance tests which demonstrate that the controls are effective, and
 - Government audits which have not disclosed recurring instances of expressly unallowable costs); and
 - The unallowable costs subject to the penalty were inadvertently incorporated into the proposal (i.e., their inclusion resulted from an unintentional error, notwithstanding the exercise of due care.

Chapter 3

Reviewing the Contractor's Pricing and Accounting Practices

3.1 - Reviewing Accounting Systems

3.2 - Establishing The Government's Position On CAS Cost Impact Adjustments

3.3 - Reviewing Cost Estimating Systems

3.4 - Recognizing Potential Indicators Of Fraud And Other Wrongdoing

3.1 Reviewing Accounting Systems

Accounting System Importance. The accounting system is the source of most of the cost or pricing data and cost information other than cost or pricing data a firm provides to the Government. For that reason, you should be concerned about the firm's accounting system whenever you make any decisions involving the use of these data, such as:

- Contract pricing;
- Contractor responsibility, particularly for other than firm fixed-price contracts; or
- Initiation of progress payments.

Accounting System Review ([FAR 31.201-6](#) and [DCAM 5-202](#)). The objective of the accounting system review is to determine the adequacy and suitability of a firm's accounting system and practices for accumulating costs under a prospective or existing Government contract. There are three sources of accounting principles and standards which are applicable to contractor accounting systems. In order of precedence, these are:

Cost Accounting Standards (CAS) promulgated by the Cost Accounting Standards Board. Whenever a contractor is required to comply with CAS, the requirements of those Standards take precedence over all other accounting guidance.

Federal Acquisition Regulation (FAR). All contractors must comply with applicable FAR requirements. For example, FAR establishes basic guidelines regarding contractor accounting for unallowable costs.

Generally Accepted Accounting Principles (GAAP). Accounting treatment not specifically covered by CAS or FAR requirements must be treated in accordance with GAAP and the associated Financial Accounting Standards (FAS).

When contractor accounting practices are inconsistent with the applicable requirements, costs resulting from such inconsistent practices must not be allowed in excess of the amount that would have resulted using consistent practices.

Situations Requiring an Accounting System Review. You should contact the cognizant auditor any time that you suspect that the Government's interests may be at risk because of the contractor's accounting practices.

In particular, you should normally obtain an accounting system review as part of the following:

- Field pricing support;
- Preaward survey; or
- Review prior to initiation of progress payments.

Requesting Field Pricing Support ([FAR 15.404-2](#)). The contracting officer should request field pricing assistance when the information available at the buying activity is inadequate to determine a fair and reasonable price. When information is already available from an existing audit completed within the previous 12 months, never request a separate preaward audit of indirect costs unless the contracting officer considers the information inadequate for determining the reasonableness of the proposed indirect costs.

If you need a consolidated ACO/audit proposal analysis, request audit support through the ACO so the ACO can organize a coordinated review. If you only need an audit analysis, you may request the audit directly from the cognizant audit office using appropriate agency channels.

Agency procedures may provide additional guidance on when to request audit support. For example, DFARS directs DoD contracting officers to request field pricing support for:

- Fixed-price proposals exceeding the cost or pricing data threshold;
- Cost-reimbursement proposals exceeding the cost or pricing data threshold from offerors with significant estimating system deficiencies; or

- Cost-reimbursement proposals exceeding \$10 million from offerors without significant estimating system deficiencies.

Field Pricing Support Information ([DCAM 10-306 and 10-308](#)). Auditors providing field pricing support should notify you if they believe that the offeror's accounting system is inadequate to support the proposal or to permit satisfactory administration of the contract contemplated. Audit manuals provide specific notification procedures. For example, the Defense Contract Audit Agency (DCAA) Contract Audit Manual (DCAM) encourages auditors to highlight accounting system deficiencies in three ways.

The Scope of the Audit section of the audit report should identify the audit impact of any outstanding deficiencies.

The Contractor's Organization and Systems section of the audit report should describe the contractor's accounting system including:

A brief description of the accounting system or reference to a prior audit report that provides a description. If the auditor references another report and that report has not been previously distributed to you, the auditor is encouraged to attach a copy of that report to the current report for your information.

An opinion on the overall system (adequate, inadequate, or inadequate in part).

An opinion on the control risk (low, moderate, or high) and the impact of the risk on the area being audited.

A list of outstanding internal control deficiencies including a brief description of each deficiency and the status of contractor corrective actions.

Notes on any questioned costs should explain if the questioned cost is related to an accounting system deficiency.

Requesting Preaward Survey Information ([FAR 9.106](#)). Normally, you should request a preaward survey when the information on hand or readily available is not sufficient to make a determination on contractor responsibility. However, unless you can justify the cost, you should not request a preaward survey for any:

- Commercial item acquisition or
- Fixed-price contract action at or below the simplified acquisition threshold.

As part of the preaward survey request, you may request an accounting system review. Simply indicate the need for a review on the [Standard Form \(SF\) 1403](#) (PDF file), Preaward Survey of Prospective Contractor.

Preaward Survey Information ([FAR 9.106-4](#)). The person responding to the request, normally the cognizant auditor, will complete a [Standard Form \(SF\) 1408](#), Preaward Survey of Prospective Contractor Accounting System. That person will make a general recommendation on the adequacy of the contractor's accounting system. As a minimum, the reviewer should also answer the following questions in making the recommendation:

Is the accounting system in accord with generally accepted accounting principles that are applicable to the contractor?

Does the accounting system provide for:

- Proper segregation of direct costs and indirect costs?
- Identification and accumulation of direct costs by contract?
- A logical and consistent method for the allocation of indirect costs to intermediate and final cost objectives?
- Accumulation of costs under general ledger control?
- A time keeping system that identifies employee's labor by intermediate and final cost objectives?

- A labor distribution system that charges direct and indirect labor to the appropriate cost objectives?
- Interim (at least monthly) determination of costs charged to a contract through routine posting of books of account?
- Exclusion from costs charged to Government contracts of amounts which are not allowable under FAR Part 31 and other contract clauses?
- Identification of costs by contract line item and by units if required by the contract?
- Segregation of preproduction costs from production costs?

Does the accounting system provide financial information:

- Required by contract clauses concerning limitation of cost and limitation of payments?
- Required to support progress payments?
- Is the accounting system designed and are the records maintained in such a manner that adequate, reliable data are developed for use in pricing follow-on acquisitions?
- Is the accounting system currently in full operation?

Requesting a Review Prior to Initiation of Progress Payments ([FAR 32.503-3](#) and [FAR 32.503-4](#)). An adequate accounting system is essential for effective administration of progress payments. Progress payments in the amounts requested should be approved as a matter of course when the ACO has found from previous experience or recent (within the last 12 months) audit review that a contractor is:

- Reliable, competent, and capable of satisfactory performance,
- Possessed of an adequate accounting system and controls, and
- In sound financial condition.

For all other contractors, the ACO must not approve progress payments before determining that the:

- Contractor will be capable of liquidating any progress payments, or the Government is otherwise protected against loss by additional protective clauses, and
- Contractor's accounting system and controls are adequate for proper administration of progress payments.

The ACO should use the services of the cognizant Government auditor to the greatest extent practicable in making these determinations. However a complete audit may not be necessary.

Information from A Review Prior to Initiation of Progress Payments ([DCAM 14-202.1](#)).

Audit report comments on the accounting system will generally be brief unless controls are found to be unacceptable. A standard comment might read: "The audit disclosed no weaknesses in the contractor's internal control procedures that would necessitate a restriction of contract financing through progress payments." If controls are found to be unacceptable, the report should detail specific weaknesses.

Preparing an Initial Position on Adequacy ([FAR 30.202-7](#)). A contractor has only one cost accounting system. There should never be a situation where one contracting officer determines that the system is adequate while another contracting officer determines that the system is not adequate.

When one is assigned, the ACO should play the key role in determining accounting system acceptability. Under CAS, the ACO is responsible for determining the adequacy of the contractor's Disclosure Statement and for any action needed to require contractor correction of noncompliant accounting practices.

Before taking any action related to the adequacy of the contractor's accounting system, review the available information and ask any questions necessary to assure that you understand the position taken by the auditor, the ACO (if one is assigned), and any other experts involved in reviewing the accounting system. Consider the following:

- Facts found during the accounting system review.
- Missing or insufficiently documented findings.
- Apparent fallacies (quantitative or logical).
- Inconsistencies between the findings and other available information.

Based on the available information, establish an initial judgment on the adequacy of the system as the basis for discussions with the contractor. That position will depend on the reason for the review.

If the system review was part of a proposal analysis, your position may be that the proposal is not adequate for negotiation.

If the review was part of a preaward survey, your position may be that the contractor is not responsible or that the accounting system is not acceptable for the proposed contract type (e.g., cost-reimbursement).

If the review involved progress payments, your position may be that the system is not adequate to support progress payments.

As most audit reports will caution you, audit results should not be used for purposes other than the purpose for which the audit was accomplished without consulting the auditor.

Discussing the Accounting System Review ([FAR 15.303\(c\)](#), [FAR 15.404-2\(a\)\(5\)](#), and [FAR 15.404-2\(c\)\(1\)](#)).

In general, the results should not be discussed with anyone not directly involved in the contracting process. The contracting officer is responsible for determining who should have information from the accounting system review (ASR) and how much data should be provided. If the ASR uncovers weaknesses or deficiencies, consider discussing them with the contractor prior to making a decision on adequacy.

In conducting discussions with the contractor, consider the following guidelines:

- The contracting officer should control all discussions.
- Other personnel such as the cognizant auditor should be invited to support the contracting officer as required, including participation in discussions.
- During discussions, the contractor should be advised of specific accounting system weaknesses or deficiencies.
- The contractor should be given an opportunity to provide additional information and take other action necessary to correct any possible misunderstandings.

If further contractor action is required to resolve weaknesses or deficiencies, specific areas of action should be identified and a corrective action plan established. Any plan proposed by the contractor should include target completion dates for identified action. Request comments from the cognizant auditor on any proposed corrective action plan.

Findings on System Adequacy ([FAR 9.106-4](#) and [FAR 42.302\(a\)\(12\)](#) and [DCAM 9-302](#)). You may find an accounting system to be:

- Adequate.
- Adequate with exceptions covered by a corrective action plan.
- Inadequate.

In making the decision on system adequacy, you should place heavy reliance on the recommendation of the cognizant auditor and the ACO if one is assigned. Remember, auditors are the accounting experts who have general access to the contractor's accounting records, and the ACO is responsible for overall contract administration. To facilitate up to date audit support assure that the cognizant auditor receives a copy of any additional information presented by the contractor that may significantly affect audit findings. You may request the auditor to immediately review the disclosed information and report orally on the

findings, followed by a supplemental report when necessary.

If you take any position on system adequacy other than the position recommended by the auditor, clearly document the rationale that led you to that position.

Protecting the Government's Interests ([FAR 32.503-3\(b\)](#)).

If you find that the contractor's accounting system is not adequate, you must take appropriate action to protect the Government's interests. The action that you take should depend on the situation.

If you requested the review as part of Government field pricing support, you may have rely exclusively on available price information to determine price reasonableness.

If you requested a preaward survey to determine if the firm's accounting system is adequate to support award and administration of a cost-reimbursement contract, you may decide to:

Eliminate the firm from consideration as nonresponsible¹ or

Consider withholding award until the contractor agrees to remedy any identified deficiencies.

If you requested a review prior to initiating progress payments based on cost, you may refuse to make progress payments based on cost until the accounting system is made acceptable. If the Government is already making progress payments based on cost, you should reduce or suspend progress payments until the accounting system is made acceptable. As an alternative to progress payments based on cost, you may consider performance-based payments.

¹ Before rejecting a small business offer that you consider to be nonresponsible, refer the matter to the Small Business Administration, which will decide whether or not to issue a Certificate of Competency.

3.2 Establishing The Government's Position On CAS Cost Impact Adjustments

CAS Coverage ([CFR Title 48 Chapter 99, 9904](#)). When a contract is CAS-covered, the Standards take precedence over all other forms of accounting guidance. The table below, divides the 19 current Standards into four groups to highlight the types of coverage involved.

COST ACCOUNTING STANDARDS	
Accounting Concepts and Principles	
CAS 401	Consistency in Estimating, Accumulating, and Reporting Costs
CAS 402	Consistency in Allocating, Costs Incurred for the Same Purpose
CAS 405	Accounting for Unallowable Costs
CAS 406	Cost Accounting Period
Allocation of Costs to Contracts	
CAS 403	Allocation of Home Office Expenses to Segments
CAS 407	Use of Standard Costs for Direct Material and Direct Labor
CAS 410	Allocation of Business Unit G&A
CAS 418	Allocation of Direct and Indirect Costs
Identification and Assignment of Costs	
CAS 404	Capitalization of Tangible Assets
CAS 409	Depreciation of Tangible Capital Assets
CAS 408	Accounting for Compensated Personal Absence
CAS 412	Composition & Measurement of Pension Costs
CAS 413	Adjustment & Allocation of Pension Costs
CAS 415	Accounting for Deferred Compensation
CAS 416	Accounting for Insurance Costs
CAS 411	Accounting for Acquisition Costs of Materials
CAS 420	Accounting for IR&D/B&P

COST ACCOUNTING STANDARDS	
Cost of Money	
CAS 414	Cost of Money as an Element of the Cost of Facilities Capital
CAS 417	Cost of Money as an Element of the Cost of Capital Assets under Construction

CAS Exemptions ([FAR 30.201-4\(a\)](#) and [CFR Title 48 Chapter 99, 9903.201-1\(b\)](#)). CAS applies only to negotiated contracts and subcontracts. Therefore, contracts awarded using sealed bidding are exempt from CAS coverage. When awarding a contract using negotiation procedures, insert CAS clauses unless the contract or offeror is specifically exempt from CAS requirements.

A contract or subcontract that is not CAS-covered at the time of award cannot become CAS-covered as the result of a contract or subcontract modification.

Criteria for Exempting Negotiated Contracts or Subcontracts From CAS Coverage	
Basis For Exemption	Exempt If Any Of The Following Situations Exist
Dollar Amount of Contract Award	Negotiated contract or subcontract less than TINA threshold (\$2,000,000) at the time of award. (When determining CAS exemptions, treat an order issued by one segment of a corporation to another as a subcontract.)
	Contracts or subcontracts of less than \$7.5 million, provided that, at the time of award, the business unit of the contractor or subcontractor is not currently performing any CAS-covered contracts or subcontracts valued at \$7.5 million or greater.
Small Business	The contract or subcontract is with a small business.
Commercial Item(s)	The contract or subcontract is firm fixed-price or fixed-price economic price adjustment (provided that price adjustment is not based on actual costs incurred) for a commercial item(s).
Method of Pricing	The contract or subcontract price is set by law or regulation.
	The contract or subcontract is firm fixed-price and awarded on the basis of adequate price competition without contractor submission of any cost data.
Foreign Contractor/ Performance	The contract or subcontract is with a United Kingdom contractor for performance substantially in the United Kingdom (provided that the contractor has filed with the United Kingdom Ministry of Defense, for retention by the ministry, a completed disclosure statement which adequately describes its cost accounting practices). Whenever the contractor or subcontractor is already required to follow U.K. Government Accounting Conventions, the disclosed practices must be in accord with those Conventions.

Criteria for Exempting Negotiated Contracts or Subcontracts From CAS Coverage	
Foreign Contractor/ Performance	The contract or subcontract is with a foreign government, agent, or instrumentality, or is awarded to a foreign concern. These contracts and subcontracts are subject to CAS 401 and 402.
	The contract or subcontract is executed and performed entirely outside the United States, its territories, and possessions.
	The subcontract is awarded under the NATO PHM Ship program and is performed outside the United States by a foreign concern.

Types of CAS Coverage ([CFR Title 48 Chapter 99, 9903.201-2](#)). The two types of CAS coverage for commercial contracts are outlined in the table below. Note that offerors with a smaller dollar value of CAS-covered contracts may elect application of the less stringent modified coverage. However, if an offeror that qualifies for modified coverage does not specifically elect modified coverage, the firm will be subject to full CAS coverage.

CAS Coverage		
Coverage Type	Application	Coverage requires that the business unit...
Full	Applies to contractor business units that... Receive a single CAS-covered contract award of \$50 million or more; or Received \$50 million or more in net CAS-covered awards during its preceding cost accounting period.	Comply with all Standards that are in effect on the date of contract award and with any Standards that become applicable because of later award of a CAS-covered contract. In addition, the business unit must submit and maintain a Disclosure Statement of its accounting practices.
Modified	If the offeror certifies that it is eligible for and elects to use modified coverage, it may be applied to a CAS-covered contract of: Less than \$50 million awarded to a business unit that received less than \$50 million in net CAS-covered awards in the immediately preceding cost accounting period.	Comply with CAS 401, 402, 405, and 406. Note: A contract awarded with modified CAS coverage shall remain subject to modified coverage throughout its life regardless of changes in the business unit's CAS status during subsequent cost accounting periods.

Educational Institutions: 48 CFR 9905 contains the following four standards that apply to educational institutions receiving a negotiated federal contract or subcontract award in excess of \$2,000,000: CAS 501, 502, 505, and 506 (standards with essentially the same requirements as CAS 401, 402, 405, and 406). A segment is required to submit a Disclosure statement upon receipt of a \$25 million CAS-covered contract award or if it received \$25 million or more in net CAS-covered awards during its preceding cost accounting period, of which, at least one award exceeded \$1 million.

Disclosure Statement ([CFR Title 48 Chapter 99, 9903.202-1](#) and [CFR Title 48 Chapter 99, 9903.202-9](#)). A Disclosure Statement is a written description of a contractor's cost accounting practices and procedures. The Statement is required to be submitted using a Disclosure Statement Form (CASB DS-1, or CASB DS-2 for educational institutions), and requires the contractor to provide general information on its operations and specific information on how the firm accounts for specific types of costs.

Requirement for Submission of a Disclosure Statement ([CFR Title 48 Chapter 99, 9903.202-1](#)). A Disclosure Statement is required for each business unit selected to receive a CAS-covered contract or subcontracts of \$50 million or more, or when the company, together with its segments, received net awards of CAS-covered contracts and subcontracts totaling \$50 million or more in its most recent cost accounting period. When a Disclosure Statement is required, a separate Disclosure Statement must be submitted for each segment with costs exceeding \$2,000,000 in the total price of any CAS-covered contract or subcontract, unless:

- The contract or subcontract is of the type or value exempted from CAS requirements, or
- CAS-covered awards in the most recently completed cost accounting period are less than 30 percent of total segment sales for the period and less than \$10 million.

Each corporate or other home office that allocates costs to one or more disclosing segments performing CAS-covered contracts must submit a completed Part VIII of the Disclosure Statement.

Foreign contractors and subcontractors who are required to submit a Disclosure Statement may, in lieu of filing a CASB-DS-1, make disclosure by using a disclosure form prescribed by an agency of its Government, provided that the Cost Accounting Standards Board determines that the information disclosed by that means will satisfy the objectives of Public Law 100-679. Currently, the use of alternative forms has been approved for the contractors of Canada and the Federal Republic of Germany.

Disclosure Statement Adequacy Review ([FAR 30.202-7\(a\)](#)). The cognizant auditor must review the Disclosure Statement to ascertain whether it is current, accurate, and complete and report the results of that review to the CFAO. Based on the audit findings, the CFAO must determine if it adequately discloses the firm's accounting practices.

If the CFAO determines that the Disclosure Statement is:

- Adequate, the CFAO must notify the contractor in writing with copies to the cognizant auditor and affected contracting officers. The notice must state that a disclosed practice shall not, by virtue of its disclosure, be considered an approved practice for pricing proposals or accumulating and reporting contract performance cost data.
- Not adequate, the CFAO must notify the contractor of the inadequacies and request a revised disclosure statement.

Disclosure Statement Adequacy and Contract Award ([FAR 30.202-6\(b\)](#)). Normally, the contracting officer must not award a CAS-covered contract until the CFAO has made a written determination that a required Disclosure Statement is adequate. However, in order to protect the Government's interest, the contracting officer may waive the requirement for an adequacy determination before contract award. If such a waiver is granted, the contracting officer must require a determination of adequacy as soon as possible after contract award.

Disclosure Statement Changes and Equitable Adjustments. A contractors may initiate changes in its disclosed accounting practices for a variety of reasons during contract performance. The table below identifies the types of accounting changes and the cost adjustment required for each type of change. FAR 30.604 provides the requirements for processing changes in cost accounting practices and determining the impact of changed practices on costs to the Government.

Requirements for Adjustment Under CAS Coverage		
Type of Accounting Change	Description	An adjustment is required.
Required change FAR 30.603-1	Required to comply with a new or modified Standard issued by the CAS Board, or to remain in compliance with any Standard.	The CFAO must negotiate an equitable adjustment (upward or downward) on existing CAS-covered contracts.
Desirable Change FAR 30.603-2(b)	The change is unilateral, but the CFAO determines that the change is desirable and not detrimental to the Government.	The CFAO must negotiate an equitable adjustment (upward or downward) on existing CAS-covered contracts.
Unilateral Change FAR 30.603-2(a)	The change is unilateral and the CFAO does not determine that the change is desirable to the Government.	Since the change is unilateral and not considered desirable, the Government is prohibited from paying increased costs in the aggregate as a result of the change.
NOTE: A change in cost accounting practices to correct a CAS noncompliance is not treated as a change in cost accounting practices or purposes of cost adjustment.		

Required Accounting System Change ([FAR 30.603-1](#), [FAR 52.230-1](#), [FAR 52.230-2](#) and [FAR 52.230-7](#)). The solicitation Cost Accounting Standards Notices and Certification provision, requires offerors to state whether or not the award of a proposed contract would require a change to established cost accounting practices that would affect existing contracts and subcontracts.

A new or modified Standard becomes applicable prospectively to existing CAS-covered contracts when a new contract containing the Cost Accounting Standards clause is awarded on or after the effective date of the new or modified Standard. If the new contract award does require an accounting system change to comply with a new or modified Standard, that change may affect the costs charged to existing contracts. Those existing contracts and subcontracts containing the Cost Accounting Standards clause may require equitable adjustments. Adjustments are limited to open contracts and subcontracts awarded before the effective date of the new or modified Standard.

The general process for negotiating the cost impact of an accounting system change required to comply with a new or modified Standard is presented in the following table.

Negotiating the Cost Impact of a Required Change	
Step	CFAO Action
1	Require contractor to prepare the proposal using the changed practice and include a description of the change as support for the pricing proposal. Require the submission of the following information on any required change in cost accounting practices within 60 days (or other mutually agreed to date) before implementation of the change: <ul style="list-style-type: none"> • A description of the change. The rationale to support any assertion that the cost impact is immaterial.
2	With assistance from the cognizant auditor, review the proposed change for adequacy and compliance. If the description of the change meets both tests, notify the contractor and request submission of a cost impact proposal. <ul style="list-style-type: none"> • For each cost accounting practice change, FAR 30.604 provides the requirements for processing changes and determining the cost impact to the Government of the change.
3	Analyze the cost impact proposal and develop a negotiation position on the net cost impact of the change (increases and decreases) on all CAS-covered contracts and subcontracts (considering input from the cognizant auditor and other available information).
4	Negotiate an equitable adjustment to existing CAS-covered contracts.
5	After negotiation, prepare a negotiation memorandum and contract price adjustments, or take alternative actions to resolve the cost impact in accordance with FAR 30.606.

Desirable and Unilateral Cost Accounting Practice Changes ([FAR 30.603-2\(b\)](#), [FAR 52.230-6](#), and [DCAM 8-502.2](#)). The Administration of Cost Accounting Standards clause of CAS-covered contracts requires the contractor to notify the ACO and submit a description of any voluntary cost accounting practice change not less than 60 days (or such date as mutually agreed to) before implementation of the voluntary change.

Negotiating the Cost Impact of a Desirable or Unilateral Change	
Step	CFAO Action
1	If you become aware of a proposed cost accounting practice change, you may remind the contractor that the contract requires the contractor to submit the description of the change in cost accounting practices not less than 60 days (or other mutually agreed to date) before implementation along with any request that the change be considered desirable.
2	With assistance of the cognizant auditor, review the proposed change for adequacy and compliance. If the description of the change meets both tests, notify the contractor and request submission of a cost impact proposal. If the description of the change is adequate, request the contractor submit a cost impact proposal. <ul style="list-style-type: none"> • For each cost accounting practice change, FAR 30.604 provides the requirements for processing changes and determining the cost impact to the Government of the change.
3	Analyze the cost impact proposal and if requested by the contractor, determine whether the change is a desirable change. Develop a negotiation position on the net cost impact of the change on all CAS-covered contracts and subcontracts. If the change is desirable and not detrimental, you may negotiate an equitable adjustment.

Negotiating the Cost Impact of a Desirable or Unilateral Change	
Step	CFAO Action
	If the change is unilateral (not considered desirable), you must ensure that the Government does not pay increased costs in the aggregate.
4	Negotiate the cost impact or make a unilateral adjustment(s) if unable to reach a negotiated settlement. After negotiation, prepare a negotiation memorandum and contract price adjustments, or take alternative actions to resolve the cost impact in accordance with FAR 30.606.

Adjustment for Noncompliance ([FAR 30.202-7\(b\)](#) and [FAR 30.605](#)). After the CFAO's notification of Disclosure Statement adequacy, the cognizant auditor must conduct a detailed compliance review to ascertain whether or not the disclosed practices comply with [FAR part 31](#) and CAS. Contractor's failure to comply with CAS may be identified then or at any time during the performance of a CAS-covered contract or subcontract. The cognizant auditor must report any alleged noncompliance to the CFAO for appropriate action.

Under the contract Cost Accounting Standards clause, the contractor must agree to an adjustment in contract price or a cost allowance, if the contractor fails to comply with an applicable Standard or to follow any cost accounting practice consistently and such failure results in increased cost to the Government. Adjustments must provide for recovery of increased costs and related interest computed at the annual rate established under Section 6621 of the Internal Revenue Code of 1986.

The following table outlines the general steps involved in negotiating the cost impact of CAS noncompliance.

Negotiating the Cost Impact of CAS Noncompliance (FAR 30.605)	
Step	CFAO Action
1	Within 15 days of receipt of a report of alleged noncompliance from the auditor, make an initial finding of compliance or noncompliance and notify the auditor.
2	If there is an initial finding of noncompliance, immediately notify the contractor in writing of the exact nature of the noncompliance and allow the contractor 60 days within which to agree or to submit reasons why the contractor believes its existing practices are compliant.
3	If the contractor disagrees with the initial finding of noncompliance, review the reasons why the contractor considers the current practices to be in compliance and make a determination of compliance or noncompliance, including a written explanation on the rationale used in making the decision. Notify the contractor and the auditor in writing of the determination.
4	If there is a determination of noncompliance, inform the contractor that the noncompliance should be corrected and of the Government's remedies if it is not corrected. When a cost accounting practice change is required to correct a noncompliance, request that a revised Disclosure statement be submitted to correct the noncompliant practice. Review the revised disclosures for adequacy and compliance. If the description of the change meets both tests, notify the contractor and request submission of a cost impact proposal. <ul style="list-style-type: none"> • For each noncompliance, the cost impact to the Government will depend on the type of noncompliance (estimating or cost accumulation). • FAR 30.605 provides the requirements for processing noncompliances and determining the impact of noncompliant practices on costs to the Government.
5	Negotiate appropriate adjustments to preclude the payment of increased costs in the

Negotiating the Cost Impact of CAS Noncompliance (FAR 30.605)	
Step	CFAO Action
	aggregate. If an agreement cannot be negotiated, you may make a unilateral adjustment, subject to contractor appeal as provided for in the contract Disputes clause.
6	After negotiation, prepare a negotiation memorandum and contract price adjustments, or take alternative actions to recover the cost impact in accordance with FAR 30.606.

Alternatives for Resolving Cost Impacts ([DCAM 8-503](#) and [FAR 30.606](#)). When resolving cost impacts resulting from cost accounting practice changes or noncompliances, the CFAO may:

- Adjust all of the CAS-covered contracts and subcontracts, or some of the contracts and subcontracts with a material cost impact
- Adjust contract prices, cost ceilings or target costs; or
- Use alternative methods to recover the cost impact, such as adjustment of final indirect cost rates or cash payment.

The CFAO shall not combine the cost impact of any of the following:

- A required change and a unilateral change.
- A required change and a noncompliance.
- A desirable change and a unilateral change.
- A desirable change and a noncompliance.

The CFAO shall not combine the following cost impacts *unless* all of the cost impacts are increased costs to the Government:

- One or more unilateral changes.
- One or more noncompliances.
- Unilateral changes and noncompliances.

The CFAO may consider the cost impacts of a unilateral change affecting two or more segments to be a single change if the changes affect the flow of costs between segments or it implements a common cost accounting practice for two or more segments.

Remedies for Contractor Failure to Make Submissions ([FAR 30.604\(i\)](#)),

If the contractor fails to submit the required cost impact proposal, the CFAO, with assistance from the cognizant auditor, must take appropriate action as outlined in the following table:

Response To Contractor Failure To Make Submissions	
Step	CFAO Action
1	Estimate (with assistance from the cognizant auditor) the general dollar magnitude of the change or proposed change on all CAS-covered contracts and subcontracts affected.
2	If the estimate indicates that there is a net amount due the Government, you may take one or both of the following actions: <ul style="list-style-type: none"> • Withhold up to 10 percent of each payment due the contractor on CAS-covered contracts (up to the estimated GDM of the cost impact) until the contractor furnished the information. • Issue a final decision and unilaterally adjust the contract(s) by the estimated amount of the cost impact.

3.3 Reviewing Cost Estimating Systems

Estimating System Importance ([FAR 15.407-5\(a\)](#), [DFARS 215.407-5-70](#), and [DFARS 252.215-7002](#)).

Verifiable, supportable, and well-documented cost estimates benefit both the Government and the contractor. The key to consistent preparation of quality estimates is an adequate estimating system.

An estimating system encompasses the contractor's policies, procedures, and practices for generating cost estimates and other data included in proposals submitted to customers in the expectation of receiving contract awards. Components include the contractor's:

- Organizational structure;
- Established lines of authority, duties, and responsibilities;
- Internal controls and managerial reviews;
- Flow of work, coordination, and communication; and
- Estimating methods, techniques, accumulation of historical costs, and other analyses used to generate cost estimates.

Conditions That May Indicate Estimating Deficiencies ([DFARS 215.407-5-70\(d\)\(3\)](#)). Significant estimating deficiencies are often the result of poorly constructed estimating systems. A good system integrates all aspects of the contractor's operation into an effective and trackable information flow. Some of the areas that may be included are: cost accounting, production management, budgeting, subcontracting/purchasing, inventory control, and strategic business planning.

The following have been identified by the DoD as conditions that may indicate potentially significant estimating deficiencies and excessive costs to the Government:

- Failure to ensure that historical data on the same or similar work are available to and utilized by cost estimators where appropriate.
- Continuing failure to analyze material costs or failure to perform subcontractor cost reviews as required.
- Consistent absence of analytical support for significant proposed costs.
- Excessive reliance on individual personal judgment where historical experience or commonly used standards are available.
- Recurring significant defective pricing findings within the same cost element(s).
- Failure to integrate relevant parts of other management systems (e.g., production or cost accounting) with the estimating system so that the ability to generate reliable cost estimates is impaired.
- Failure to provide established policies, procedures, and practices to persons responsible for preparing and supporting estimates.

Other indicators of problems include:

- Management information that does not match the data in proposals.
- Standards for labor and material costs that are not current.
- Changes in make-or-buy decisions not disclosed.
- Inappropriate or misleading sampling techniques.

Review Situations ([FAR 15.407-5](#)). The concepts of Total Quality Management (TQM) teach that good systems are more likely to produce good products. Based on this philosophy, the Government uses three types of reviews to assure that the estimating systems used to produce contract cost proposals are adequate.

Ongoing Audit Review Programs. Cognizant auditors may establish and manage regular programs for reviewing selected contractor's estimating systems or methods in order to:

- Reduce the scope of reviews to be performed on individual proposals;
- Expedite the negotiations process; and
- Increase the reliability of proposals.

The auditor sends a copy of the estimating system survey report and a copy of the official notice of corrective action required to each contracting office and contract administration office having substantial business with that contractor. Significant deficiencies not corrected by the contractor must be considered in subsequent proposal analyses and negotiations.

Contractually Mandated Estimating System Review ([FAR 15.407-5](#)), [DFARS 215.407-5-70](#), and [DFARS 252.215-7002](#)).

An agency may authorize or require contracting officers to establish and monitor a contractually mandated program of periodic estimating system reviews. For example, ACOs assigned to the DoD must establish a contractually mandated review program for any contractor that meets the following requirements:

During its preceding fiscal year, the contractor received DoD prime contracts or subcontracts totaling \$50 million or more for which certified cost or pricing data were required.

During its preceding fiscal year, the contractor received DoD prime contracts or subcontracts totaling \$10 million or more, but less than \$50 million, for which certified cost or pricing data were required, and the contracting officer with the concurrence of the ACO determines that a review is in the best interest of the Government.

Field Pricing Support. Auditors requested to provide field pricing support may identify estimating system deficiencies while performing any required audit. They should notify you if they believe that the offeror's estimating methods are inadequate to support the proposal or permit satisfactory administration of the contract contemplated.

Conducting a Review. When evaluating the acceptability of contractor's estimating system, the cognizant auditor should consider any factors that affect estimate development such as the following:

- The source of data for estimates and the procedures for ensuring the data are accurate, complete, and current;
- The documentation developed and maintained in support of the estimate;
- The assignment of responsibilities for originating, reviewing, and approving estimates;
- The procedures followed for developing estimates for direct and indirect cost elements;
- The extent of coordination and communication between organizational elements responsible for the estimate; and
- Management support, including estimate approval, establishment of controls, and training programs.

Resolving Deficiencies ([FAR 15.407-5](#)). Whenever an estimating system review is conducted, the auditor will document the findings and recommendations and provide them to the contracting officer (the ACO when one is assigned).

Significant deficiencies not corrected by the contractor must be considered in subsequent proposal analysis and negotiations.

The contractually-mandated DoD estimating system review program described above includes detailed guidelines for resolving deficiencies in the adequacy of contractor disclosure or estimating system characteristics.

Resolving Deficiencies in Contractually Mandated Estimating Systems	
Step	ACO Action
1	The contract Cost Estimating System Requirements clause requires the contractor to establish and maintain an adequate estimating system and disclose that system to the ACO in writing.
2	The cognizant auditor will head a team review of the contractor's estimating system disclosure and report findings on the adequacy of the disclosure and the system.
3	Provide a copy of the team report to the contractor and ask the contractor to submit a written response to any identified deficiencies within 30 days, or a reasonable extension thereof. If the contractor agrees with the report, the contractor has 60 days from the date of initial notification to correct deficiencies or submit a corrective action plan showing milestones and actions to eliminate the deficiencies. If the contractor disagrees, the contractor should provide rationale in its written response.
4	In consultation with the cognizant auditor, evaluate the contractor's response to determine whether: The existing system contains deficiencies which need correction. The deficiencies are significant deficiencies that should result in disapproval of all or a portion of the contractor's estimating system. The contractor's proposed corrective actions are adequate to eliminate the deficiency.
5	Notify the contractor and the auditor of the Step 4 determination and, if appropriate, of the Government's intent to disapprove all or selected portions of the system. The notice must: List the cost elements covered. Identify any deficiencies requiring correction. Require the contractor to correct the deficiencies within 45 days or submit an action plan showing milestones and actions to eliminate the deficiencies.
6	If the contractor has neither submitted an acceptable corrective action plan nor corrected significant deficiencies within 45 days, disapprove all or selected portions of the contractor's estimating system. The disapproval must: Identify the estimating system elements covered. List the deficiencies which prompted the disapproval. Be sent to the cognizant auditor, and each contracting and contract administration office having substantial business with the contractor.

Resolving Deficiencies in Contractually Mandated Estimating Systems	
Step	ACO Action
7	<p>With the auditor, monitor the contractor's progress in correcting deficiencies. If the contractor fails to make adequate progress, take whatever action is necessary to ensure that the contractor corrects the deficiencies. Examples of the action that you can take include:</p> <p>Bringing the issue to the attention of higher-level management.</p> <p>Reducing or suspending progress payments.</p> <p>Recommending that potential contracts not be awarded to the contractor.</p>
8	<p>Withdraw the estimating system disapproval when you determine that the contractor has corrected the significant system deficiencies. Notify the contractor, the auditor, and affected contracting and contract administration activities of the withdrawal.</p>

Protect the Government's Interests ([FAR 15.407-5\(b\)](#) and [DFARS 215.407-5-70\(d\)\(3\)](#)). If you are responsible for negotiation of a proposal generated by an estimating system with an identified deficiency, you must determine whether the identified deficiency impacts your negotiations. If it does not, proceed with negotiations as usual. If it does, you must take appropriate action to protect the Government's interests. The table below identifies some of the actions that you should consider:

For contractor estimating systems with identified deficiencies --	
Consider the following alternatives...	And the following factors related to each alternative...
Allow additional time for proposal preparation/ revision.	If the contractor can correct the estimating system deficiencies affecting the proposal in a reasonable amount of time, this option may be appropriate.
Consider changing the contract type.	Changing contract type (e.g., from FFP to FPIF) may reduce the risk to the Government. However all factors that lead to contract type selection should be considered. That may require reaccomplishing some elements of acquisition planning.
Perform additional cost analysis on suspected cost areas.	To protect the Government's interests and dig deeper into the suspected problem area, additional analysis may be appropriate. However, this does not excuse the contractor from making the necessary estimating system improvements.
Segregate suspected cost elements in a cost-reimbursement line item.	While this may work in some cases, there are several potential problems, including possible Cost Accounting Standards violation, an additional monthly billing, delays in contract closeout since the reimbursable item will require final closeout rates.

For contractor estimating systems with identified deficiencies --	
Consider the following alternatives...	And the following factors related to each alternative...
Reduce the fee/profit objective.	Proposal preparation can be considered in formulating a fee/profit objective. However, reduced fee/profit is not a substitute for possibly allowing unreasonable or unallowable costs.
Insert a reopener clause covering the suspected cost elements.	A reopener for an estimating system deficiency should identify the dollars in question and the impact on total price. (However, reopener clauses must be carefully employed and properly administered.) The clause must clearly identify the contracting officer responsible for negotiating any adjustments required by the clause. For example, in the DoD, the reopener clause must be administered by the person or office that incorporated the clause in the contract.

Monitoring Corrective Action ([DFARS 215.407-5-70](#)) and ([DFARS 252-215-7002\(g\)](#)). The cognizant auditor and administrative contracting officer are responsible for monitoring contractor progress in correcting deficiencies administrative. Should the contractor fail to make adequate progress in correcting deficiencies, several options are available:

- Highlight the deficiencies in audit and pricing reports.
- Elevate the matter to higher level contract management
- Consider reducing or suspending progress payments until identified deficiencies are corrected.
- Recommend that contracting officers not award contracts until identified deficiencies are corrected.

3.4 Recognizing Potential Indicators Of Fraud And Other Wrongdoing

Evidence of Fraud or Other Wrongdoing ([DCAM 4-702.1b](#)). When reviewing a firm's pricing and accounting practices, you may encounter information constituting evidence or causing suspicion of fraud or other wrongdoing. Sources of such information may include file documentation, statements from company employees or disgruntled participants in the wrongdoing, or other sources. Allegations may be made by letter, telephone, personal visit, or through a third party.

For the purpose of this section, the term "fraud and other wrongdoing" means any willful or conscious wrongdoing, including, but not limited to, acts of cheating or dishonesty which cause (or contribute to) a loss or injury to the Government. Examples include:

- Falsification of documents such as time cards or purchase orders;
- Charging personal expenses to Government contracts;
- Submitting false claims such as invoices for services not performed or materials not delivered;
- Intentional mischarging or misallocation of costs;
- Deceit by suppression of the truth;
- Bribery;
- Payments that violate the Foreign Corrupt Practices Act;
- Theft;
- A Government employee acquiring a financial interest in or seeking employment with a contractor over whom the employee exercises oversight;
- Kickbacks;
- Unlawful or fraudulent acts resulting from accounting classification practices designed to conceal the true nature of expenses (e.g., classifying unallowable advertising or entertainment costs as office supplies);
- Product substitution or false certification that tests were performed; or
- Any attempt or conspiracy to engage in, or use, any of the above devices.
- Potential Fraud Related to Defective Pricing.

Contracting personnel must be particularly alert to potential incidents of contractor fraud related to defective pricing-incidents where the contractor **knowingly makes a false statement or a false claim** with the intent of defrauding the Government. The Department of Defense Inspector General (DODIG) has identified 29 indicators and scenarios of potential fraud related to defective pricing:

- Alteration (without notice to the Government) or falsification of supporting data;
- Failure to update cost or pricing data even though it is known that past activity showed that costs or prices have decreased;
- Failure to make complete disclosure of data known to responsible contractor personnel;
- Distortion of the overhead accounts or baseline information by transferring charges or accounts that have a material impact on Government contracts;
- Failure to correct in a timely manner, known estimating or pricing system deficiencies which directly and repeatedly result in defective pricing;
- Repeated denial by the responsible contractor employees of the existence of historical records that are subsequently found;
- Proposing one vendor, while intending, at the time of that proposal, to use another lower priced vendor;

- Intentional failure to update cost or pricing data when clearly required by law or regulation;
- Selectively disclosing work orders with higher costs while knowingly not including additional pertinent work orders with lower costs;
- Altering the dates on material or subcontract purchase orders from dates prior to the prime contract negotiations to dates after the negotiations;
- Repeated instances of lost or destroyed records (other than those destroyed pursuant to the contractor's normal document destruction policy) which would provide supporting details for proposed costs that were based on experience;
- Fabrication of supporting information for a proposed cost factor when no historical information is actually collected or segregated for that type of expense;
- An undisclosed change in a make-versus-buy decision which is known by the contractor prior to the conclusion of final price negotiations;
- Not disclosing total company material requirements for items qualifying for quantity/sale discounts, thereby knowingly proposing a higher unit price than the combined purchase will actually generate;
- Claiming an exemption from the submittal of cost or pricing data based on catalog or market pricing when the company knows the end user of the item is always the Government;
- Proposing an increase in price due to a break in production when the contractor knows, based on the proposed delivery schedule, that no break will occur;
- Protracted delay in the release of data to the Government to which the Government is clearly entitled, under the law and regulations existing at the time of the initial request for the data, for the purpose of avoiding a reduction in negotiated price;
- Including rates in the proposal, such as insurance or workman's compensation, which are deliberately increased or inflated above the contractor's actual forecasted rates;
- Intentionally duplicating costs by proposing them as both direct and indirect;
- Consciously proposing items the contractor knows, or should know, are obsolete or unneeded to perform the contract;
- Not disclosing inventory that the contractor knew, should have known, or suspected was excess and available for use on later contracts;
- Deliberately not disclosing known or company-available actual costs that were reasonably available prior to the conclusion of price negotiations for a follow-on contract;
- Proposing a purchase at price (subcontract or interorganizational transfer) for a portion of the contract effort when the contractor knows, at the time of proposing, the effort will be performed via an interorganizational transfer at cost;
- Willful, knowing, or reckless disregard of the contractor's established estimating practices;
- Suppressing internal/external studies or reports that do not support the proposed costs;
- Commingling work orders with other work orders to hide productivity improvements or deliberately distorting the labor-hours incurred for a particular series of work orders;
- Requesting an economic price adjustment clause for material that has already been purchased;
- Submitting false documents; or
- Intentionally failing to disclose internal documents on vendor discounts that constitute cost or pricing data and were reasonably available prior to the conclusion of price negotiations.

Persons and Situations Involved ([DCAM 4-702.1a](#)). Allegations of fraud or other wrongdoing may involve the acts of:

- Government employees (military or civilian) in their relations with the Government.
- Government employees (military or civilian) in their relations with individuals or firms.
- Individuals or firms in their business relations with the Government.
- Individuals or firms in their business relations with other individuals or firms doing business with the Government.

Responsibility to Report ([DoD 5500.7-R](#), and [FAR 1.602-2](#)).

Government officials receive guidance on ethical conduct from a combination of laws, executive orders, regulations, and directives. While specific procedure may vary from agency to agency, this guidance consistently emphasizes that employees must report any suspected waste, fraud, abuse, or corruption to appropriate authority.

Contracting personnel have a special responsibility to safeguard the interests of the United States in its contractual relationships. That includes a responsibility to ensure that all ethics guidelines are strictly followed throughout the contracting process.

Coordinated Team Effort ([FAR 3.700](#)). The Government may pursue different remedies for fraud or other suspected types of wrongdoing. In many cases, the action will involve civil or criminal court action. Administrative actions may also be involved. For example, the Government has the right to void or rescind a contract when the contractor is found guilty of bribery, conflict of interest, or similar misconduct related to the contract.

A coordinated Government Acquisition Team effort is essential to assure effective resolution given the merits of the case. The Government legal counsel should play a key role in determining the proper course of action. For cases related to pricing and accounting practices, the cognizant Government auditor should be involved in establishing the merits of the case.

Chapter 4

Forecasting Cost Overruns

4.0 – Chapter Introduction

4.1 – Identifying And Analyzing Cost And Schedule Variances

4.2 – Estimating Cost To Complete

App 4A – Earned Value Management System Guidelines

4.0 Chapter Introduction

This chapter will examine methods that can be used to identify, analyze, and resolve contract cost and schedule variances.

Contract Surveillance ([FAR 42.1103](#), [FAR 42.1104](#), and [FAR 42.1105](#)). While the contractor is responsible for timely cost-effective contract performance, the Government is responsible for maintaining contract surveillance to the extent necessary to protect the Government's interests. Appropriate procedures for identification and analysis of cost and schedule variances should be a part of every contract surveillance plan.

As a contracting officer preparing a new contract, consider the information required for effective surveillance of contract performance as you define contract-reporting requirements. If you are the contracting officer responsible for contract administration, determine the contract surveillance requirements based on the criticality of the contract requirement to the Government and the circumstances affecting contract performance.

Criticality to the Government. The contracting officer must assign a criticality designator to each contract following the guidelines in the table below. In general, the more critical the requirement is to the Government, the more attention you should be given to contract surveillance, including cost and schedule variance identification and analysis.

Contract Criticality To Government Operations		
Criticality Designator	Relative Criticality	Criterion
A	Most critical.	Critical contracts (including DX-rated contracts), contracts involving unusual and compelling urgency, and contracts for major systems.
B	Moderately critical.	Contracts (other than those designated "A") for items needed to maintain a Government or contractor production or repair line, to preclude out-of-stock conditions, or to meet user needs for non-stock items.
C	Least critical.	All other contracts.

Circumstances of the Contract. In general, the level of complexity of the contract will drive the level of contract surveillance. When analyzing contract complexity, consider:

- **Contract performance reporting.** Cost-reimbursement, time-and-materials, and labor-hour contracts typically have stringent requirements for reporting progress and performance than fixed-price contracts.
- **Contract performance schedule.** Contracts with longer or complex schedule requirements normally merit increased surveillance, because there may not be immediate indicators identifying a potential or active problem. In addition, a contract with an ambitious or aggressive completion schedule will normally merit greater surveillance to ensure schedule milestones are met.
- **Contractor's history of contract performance.** A contractor with a history of overruns, late completion of performance, or late deliveries will normally merit closer surveillance to ensure performance outcomes.
- **Contractor's experience supporting supplies or services contracts.** A contractor with limited experience will normally merit closer surveillance.
- **Contractor's financial capability.** A contractor with marginal financial capability will normally merit closer surveillance.

Any supplementary written instructions from the contracting office.

4.1 Identifying And Analyzing Cost And Schedule Variances

Uses for Information on Variances ([FAR 52.232-7\(c\)](#), [FAR 52.232-20\(a\)](#), [FAR 52.232-22\(a\)](#), [FAR 52.243-1\(b\)](#), [FAR 52.243-2\(b\)](#), [FAR 52.243-3\(b\)](#), and [FAR 52.243-4\(d\)](#))

Information on variances from cost and schedule projections can provide vital input to many contract administration decisions.

- Information on the contractor's progress toward timely contract completion is important for the administration of any contract. However, it is most important for cost-reimbursement, time-and-material, and labor-hour contracts. For these contracts, the contractor only agrees to put forth its best effort to complete the contract effort within funding, cost, or price limitations to the extent prescribed in the contract.
- Appropriate Government surveillance during performance will provide reasonable assurance that efficient methods and effective cost controls are used.
- Information on contractor cost and schedule performance is essential to negotiating an equitable adjustment that leaves the contractor in the same profit position as it was before the modification.
- Information on cost of the current contract can be a key element in projecting the cost of follow-on contracts awarded before the current contract is complete.

Consider Both Cost and Schedule Variances. To analyze variances, you need to be able to consider contractor cost and schedule variances from initial cost estimates. For example, a contractor in Month 4 of a 12-month contract is tracking perfectly with estimated costs through Month 4. However, the contractor is two months behind schedule. In other words, two months of actual performance have cost as much as four months were projected to cost. If we consider only cost, there does not appear to be a problem. However, if we consider both cost and schedule, there appears to be significant potential for a cost and/or schedule overrun.

Information Sources. You can use information from a variety of sources to monitor cost and schedule performance variance, such as:

- Contractually required cost/schedule analysis and reporting, including:
 - Contract Performance Reports under Earned Value Management System (EVMS) Guidelines; and
 - Cost/Schedule Status Report. (This is no longer a valid data item, but may still be in use on older contracts.)
- Contractually required cost information, including:
 - Contract Funds Status Reports:
 - Progress payment requests;
 - Cost-reimbursement vouchers;
 - Contract progress reports; or
 - Limitation of cost/funds notices.
- Contractor production management reports and analyses, Including:
 - Integrated Master Schedule/Integrated Master Plan (IMP/IMS) required under EVMS criteria
 - Phase Planning or Gantt Charts
 - Production Flow Charts
 - Program Evaluation and Review Technique (PERT) network analyses
- Progress review meetings
- Observation by Government personnel

Points to Consider in Information Source Selection. The method that you select must be appropriate for the contract. When you have a complex or difficult contract for a requirement with a Criticality A Designator, you should consider contractually mandated analysis and reporting system (e.g., compliance with EVMS Guidelines for a major acquisition). The risk involved will likely merit the additional cost of the required system. In addition, you must also consider the cost of the contract when determining information sources. For example, EVMS is required on DoD cost or incentive contracts valued at \$20,000,000 or more and is optional below \$20,000,000 and is a risk based decision.

It is unlikely that a requirement with a Criticality C Designator would merit the added cost of any contractually mandated cost/schedule reporting. For low-value low-risk items, you would probably rely on routine observation by Government personnel, unless the contract value meets EVMS applicability thresholds (\$20,000,000 for DoD contracts).

To be effective, the method selected must provide or permit you to develop:

- A cost baseline upon which the original contract cost was derived (usually the contractor's time phased budget or proposal). This is called the planned value in EVM terminology.
- A schedule baseline with an integrated, network schedule supporting the planned value.
- Actual costs incurred for completed work.
- An estimate to complete.

Earned Value Management Systems ([OMB Circular A-11 Part 7 Capital Programming Guide](#), ANSI/EIA Standard-748-A-1998(R2002), [MIL-HDBK-881A](#) (30 Jul 2005), and [DFARS 252.232-7002](#))

Surveillance (routine evaluation and assessment) of the EVMS is mandatory for all contracts that require supplier EVMS compliance—which is basically all contracts with an EVM requirements to comply with the 32 ANSI/EIA-748 EVMS guidelines. [Appendix 4A](#) presents the 32 Industry Standard Guidelines for development and operation of Earned Value Management Systems (EVMSs). Under these guidelines, contract work is planned, budgeted, and scheduled in time-phased "planned value" increments to establish a cost and schedule measurement baseline. Actual cost and schedule performance is then compared to the established baseline.

- **Compliance.** Surveillance ensures that the supplier is meeting contractual terms and conditions and is in compliance with applicable policies and regulations. If changes are made to those terms and conditions, then a modification to the contract is required. Surveillance becomes mandatory through the inclusion of the Defense Federal Acquisition Regulation Supplement (DFARS) clause [DFARS 252.234-7002](#). Requiring contractors to comply with EVMS Guidelines encourages them to use effective internal cost and schedule management control systems, and permits the Government to rely on timely data produced by those systems for determining product-oriented contract status. However, compliance should only be required when contract cost and complexity merit the cost of compliance with EVMS Guidelines.

For cost or incentive contracts and subcontracts valued at \$20,000,000 or more, the earned value management system shall comply with the guidelines in the American National Standards Institute/Electronic Industries Alliance Standard 748, Earned Value Management Systems (ANSI/EIA-748).

For cost or incentive contracts and subcontracts valued at \$50,000,000 or more, the contractor shall have an earned value management system that has been determined by the cognizant Federal agency to be in compliance with the guidelines in ANSI/EIA-748. For cost or incentive contracts and subcontracts valued at \$20,000,000 or more, the earned value management system shall comply with the guidelines in the American National Standards Institute/Electronic Industries Alliance Standard 748, Earned Value Management Systems (ANSI/EIA-748); however is not required to be formally determined compliant by the cognizant Federal agency to be in compliance. For cost or incentive contracts and subcontracts valued at \$50,000,000 or more, the contractor shall have an earned value management system that has been determined by the cognizant Federal agency to be in compliance with the guidelines in ANSI/EIA-748. ([DFARS 252.234-7001](#), [DFARS 252.234-7002](#)).

In regards to [DFARS 252.242-7001](#) and [DFARS 252.242-7002](#), the contractor is required to have an EVMS that complies with ANSI/EIA-748; however, the Government will not formally accept the contractor's management system (no compliance review)." While not required, if a risk-based decision is made to require EVM on cost or incentive contracts valued at less than \$20 million or FFP contracts, the above paragraph should be included in the statement of work.

If you are assigned to another agency, consult agency guidance for contracting situations that require contractor compliance with EVMS Guidelines.

- **Stipulating a Work Breakdown Structure.** The framework for EVMS is the Work Breakdown Structure (WBS) and the contractor's baseline plan developed using that structure.
 - The WBS is a product-oriented family tree division of hardware, software, services, and other work tasks which organizes, defines, and graphically displays the product to be produced, as well as the work to be accomplished to achieve the specified product.
 - When you expect that the contract will require the contractor to comply with EVMS guidelines, the request for proposal should require the offeror to provide cost information based on a WBS identified in the solicitation. The offeror can provide more levels of information than required by the solicitation, but the firm cannot provide fewer.
 - The multiple levels of the WBS "explode" the work required down to identifiable work packages that relate costs to specific contract effort. In a common WBS:
 - Level 1 is the entire system;
 - Level 2 identifies the major elements of Level 1;
 - Level 3 identifies the major elements of Level 2; and
 - Each lower level provides increasingly detailed information.

The following table provides an example of a 3-level WBS structure. The example is for a missile system, but the concept can be applied to any large system. The program work breakdown structure provided to the contractor is typically to Level 3 of the WBS. According to DoD guidance, the top 3 Levels of the Program WBS must conform to the appropriate Appendix in [MIL-HDBK-881A](#) for the particular type of system/effort. The contractor will then extend the WBS to the lowest level necessary for effective management. EVMS reporting typically occurs at Level 3, however, reporting can be required to a lower level of the WBS for those elements deemed higher risk to allow for more comprehensive oversight and analysis. The same WBS structure is required for the Contract Performance Report, the Integrated Master Schedule, and any other cost reports such as the Contractor Cost Data Reports (CCDR) (required on contracts >\$50,000,000).

Missile System Work Breakdown Structure, Levels 1-3		
Level 1	Level 2	Level 3
Missile System	Air Vehicle	Propulsion (Stages 1..n) Payload Airframe Reentry System Post Boost System Guidance and Control Ordnance Initiation Set Airborne Test Equipment Airborne Training Equipment Auxiliary Equipment Integration, Assembly, Test and Checkout

Missile System Work Breakdown Structure, Levels 1-3		
Level 1	Level 2	Level 3
Missile System	Command and Launch Equipment	Surveillance, Identification, and Tracking Sensors Launch and Guidance Control Communications Command and Launch Applications Software Command and Launch System Software Launcher Equipment Auxiliary Equipment Booster Adapter
Missile System	Training	Equipment Services Facilities
Missile System	Peculiar Support Equipment	Test and Measurement Equipment Support and Handling Equipment
Missile System	System Test and Evaluation	Development Test and Evaluation Operational Test and Evaluation Mock-ups/System Integration Labs (SILs) Test and Evaluation Support Test Facilities
Missile System	Systems/Project Management	Systems Engineering Project Management
Missile System	Data	Technical Publications Engineering Data Management Data Support Data Data Depository
Missile System	Operational/Site Activation	System Assembly, Installation, and Checkout on Site Contractor Technical Support Site Construction Site/Ship/Vehicle Conversion
Missile System	Common Support Equipment	Test and Measurement Equipment Support and Handling Equipment
Missile System	Industrial Facilities	Construction/Conversion/Expansion Equipment Acquisition or Modernization Maintenance (Industrial Facilities)
Missile System	Initial Spares and Repair Parts	Identified Spares Allowance List (by system grouping or element)

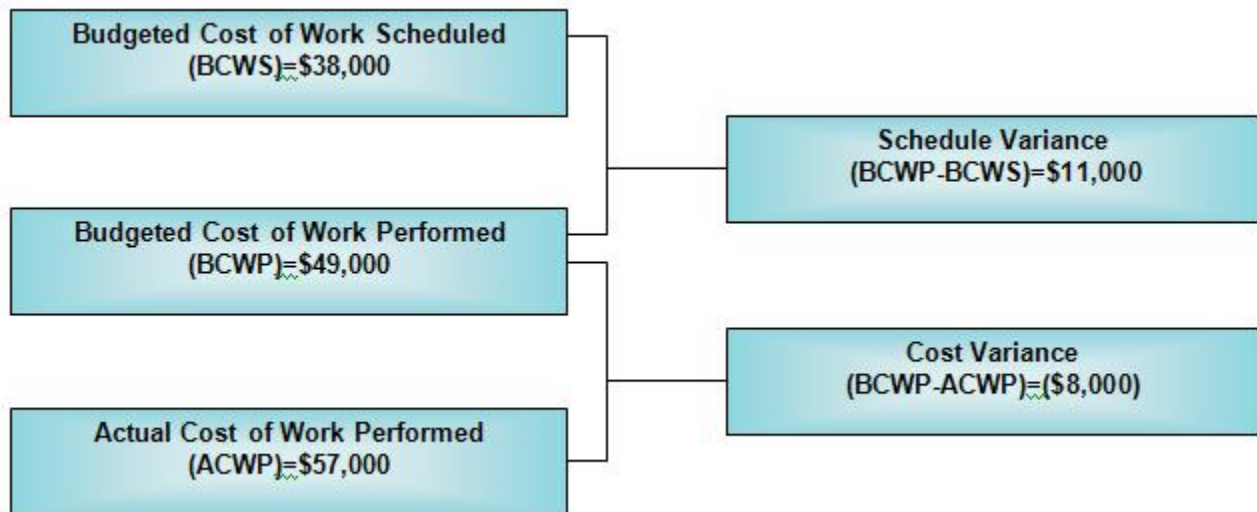
4.1 Identifying And Analyzing Cost And Schedule Variances (cont)

- **Establishing A Contract Cost/Schedule Baseline.** When the contract requires EVMS compliance, a multifunctional Integrated Baseline Review (IBR) must be conducted after contract award. Government participants in the review will normally include engineers, other technical personnel, EVMS support personnel, and program management personnel. Together with contractor representatives, this team will review the contractor's baseline plan to ensure all work has been planned appropriately, budgets are adequate for accomplishment of the planned work, and the appropriate method for claiming "earned value" has been identified. This will normally include work authorizations, schedules, work package budgets, and progress measurement methods.
- IBRs are intended to provide a mutual understanding of risks inherent in contractor's performance plans and underlying management control systems. An effective IBR:
 - Lays a solid foundation for mutual understanding of project risks;
 - Provides an invaluable opportunity to compare PMs'(government and contractor) expectations and to address differences before problems arise;
 - Provides project management teams with a thorough understanding of the project plan and its risks, allowing early intervention and the application of resources to address project challenges;
 - Increases confidence in the project Performance Measurement Baseline (PMB), which provides a powerful, proactive, program management capability to obtain timely and reliable cost and schedule projections.

The goal of a successful IBR is to ensure consistent understanding and expectations on the part of the government and contractor and that the contractor has a well-supported plan for successful contract performance. It is important to note that the IBR is not the end objective. It is one element of an iterative, continuing process that provides a structure for program management to openly discuss the project's plan, strengths, and risks.

- **Comparing Actual Cost/Schedule With The Baseline.** Each month during contract performance, the contractor will submit a Contract Performance Report (CPR) that compares actual performance with budgeted performance and establishes a common reference point for identifying variances. CPRs provide key information on:
 - **Budgeted Cost of Work Scheduled (BCWS).** BCWS is the amount budgeted for work scheduled to be accomplished. It is also called planned value. It is a time-phased expenditure plan, measurable for the current, cumulative-to-date, and contract completion time periods. When the BCWS is time-phased over the life of the contract, it becomes the Performance Measurement Baseline or PMB. The summation of all the BCWS for the program (BCWS cumulative) is equal to the Budget at Completion or BAC.
 - **Budgeted Cost of Work Performed (BCWP).** BCWP is the amount budgeted for that portion of the scheduled work that was actually performed (i.e., what the contractor planned or budgeted to spend for the work actually accomplished). This is also called earned value.
 - **Actual Cost of Work Performed (ACWP).** ACWP is the amount actually spent in the accomplishment of work performed. The amount actually spent includes direct costs (e.g., labor and material) and indirect costs (e.g., overhead and G&A expense).

The following example demonstrates how BCWS, BCWP, and ACWP can be used to identify contract cost/schedule variances:



In this example, the contractor has a positive schedule variance indicating the contract is ahead of schedule. BCWP is \$11,000 greater than BCWS. That is almost 29 percent more work completed than was scheduled. However, for the work performed, the contractor has a negative cost variance indicating the contract is over budget. The ACWP is \$8,000 more than the BCWP. That is approximately 16 percent over budget.

- **Analyzing Reported Variances.** Note that the calculations above identify an area where actual contract costs exceed budgeted costs but do not explain how the variances will affect the total contract. To permit more detailed analysis, a Contract Performance Report or CPR is required when EVM is required on the contract. The CPR includes five different presentation formats:
 - An analysis of performance by work breakdown structure (WBS) element. (Format 1)
 - An analysis of performance by organizational category (Format 2);
 - A time-phased contract budgeted cost baseline for contract completion (Format 3);
 - A time-phase manpower loading estimate for future contract completion (Format 4); and
 - A narrative explanation and analysis of significant variances (Format 5).

These five formats are required for contracts greater than or equal to \$50,000,000. On contracts valued at or greater than \$20,000,000 but less than \$50,000,000, it is recommended that CPR and IMS reporting be tailored. Tailoring to the specific needs of the program is highly encouraged. For contracts less than \$50,000,000, the formats can be tailored in certain areas based on a program risk assessment. Specific areas that can be tailored for contracts less than \$50,000,000 include: Format 1 & 2 reporting levels, reporting frequency, submission dates, date of first and last reports, Format 5 variance reporting thresholds, fixed number of variances, percentage or dollar thresholds, specific variances, contractor format, or electronic data interchange format. More information on tailoring the CPR can be found in Paragraph 2.2.5.6.3 of the Earned Value Management Implementation Guide or EVMIG located on the DCMA website (<http://www.dcmamil/>).

A key point to remember is that the data presented in the CPR is cost data, and does not include fee/profit. The CPR is required monthly, unless the reporting frequency is tailored.

When analyzing variances, you will normally need support from Government technical personnel to review the contractor's analysis in technical performance areas. This analysis will help determine the reason for, and the significance of, any cost variance.

- **Example Of Performance Analysis By WBS Element.** The table below presents key CPR information for several elements of the contract WBS.

Cost Performance Report Work Breakdown Structure								
Budget Baseline	Cumulative Cost To Date (in \$000)					Cost At Completion (in \$000)		
\$1.5 mil	Budgeted Cost			Variance				
WBS Element	Work Scheduled	Work Performed		Schedule	Cost	Budgeted	Estimated	Variance
1.1	250	250	260	0	(10)	250	260	(10)
1.2	90	85	84	(5)	1	100	100	0
1.3	130	150	155	20	(5)	330	340	(10)
1.4	200	200	185	0	15	250	235	15
1.5	300	310	320	10	(10)	400	415	(15)
1.6	120	120	140	0	(20)	120	140	(20)
Subtotal	1,090	1,115	1,144			1,450	1,490	(40)
Mgmt. Reserve						50		50
Total	1,090	1,115	1,144			1,500	1,490	10

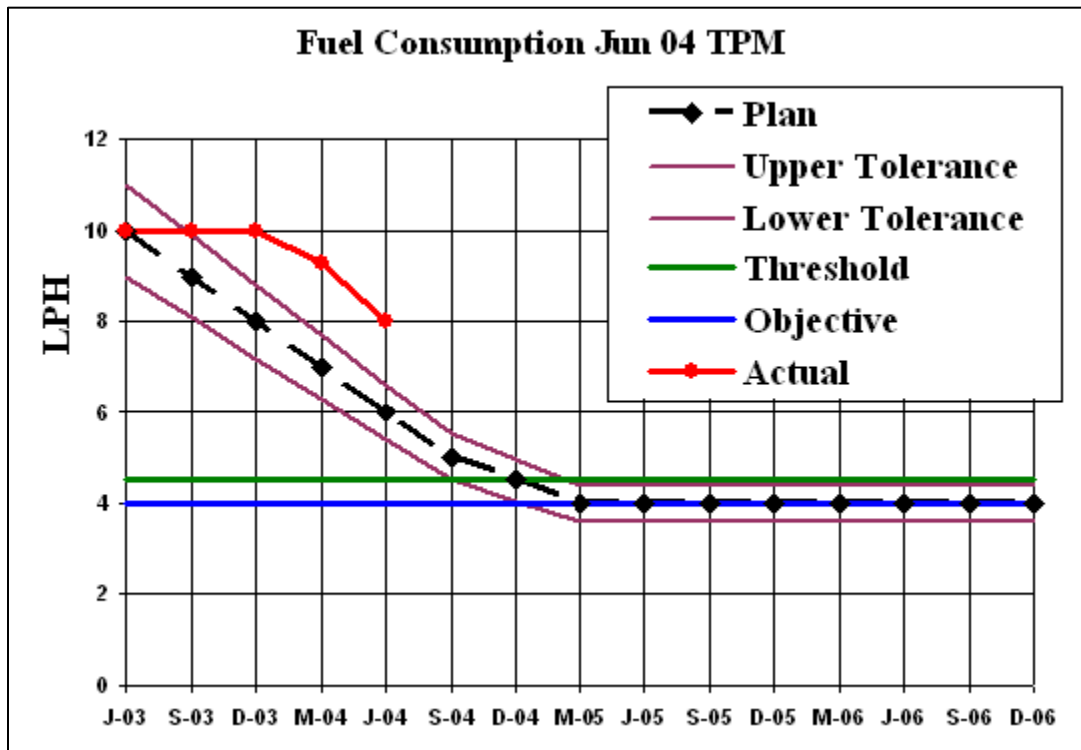
Based on the above report, you could make the following observations:

- WBS Element 1.1.
 - Comparison of BCWS, BCWP, and the Cost-at-Completion Budgeted reveals that all are equal and the work is complete.
 - Comparison of BCWP and ACWP reveals that the element experienced a \$10,000 cost overrun at completion.
 - Comparison of the Cost-at-Completion Budgeted, Estimated, and Variance columns also reflect the \$10,000 cost overrun.
- WBS Element 1.2.
 - Comparison of BCWS with BCWP reveals that the work is behind schedule (SV=(\$5,000))
 - Comparison of BCWP with ACWP shows that the contractor is slightly underrunning budgeted cost. (CV=\$1,000)
 - Comparison of the Cost-at-Completion Budgeted, Estimated, and Variance columns indicates that the work is expected to be on budget at completion.

- WBS Element 1.3.
 - Comparison of BCWS with BCWP reveals that the work is ahead of schedule. (SV=\$150,000-\$130,000=\$20,000)
 - Comparison of BCWP with ACWP shows that the contractor is experiencing a slight overrun of \$5,000 over budgeted cost.
 - Comparison of the Cost-at-Completion Budgeted, Estimated, and Variance columns indicates that the overrun is expected to grow to \$10,000 at completion.
- WBS Element 1.4.
 - Comparison of BCWS with BCWP reveals that the work is on schedule.
 - Comparison of BCWP with ACWP shows that the contractor is experiencing an underrun of \$15,000.
 - Comparison of the Cost-at-Completion Budgeted, Estimated, and Variance columns indicates that the underrun is expected to remain at \$15,000 through completion.
- WBS Element 1.5.
 - Comparison of BCWS with BCWP reveals that the work is ahead of schedule. (SV-\$10,000)
 - Comparison of BCWP with ACWP shows that the contractor is experiencing an overrun of \$10,000. (CV=(\$10,000))
 - Comparison of the Cost-at-Completion Budgeted, Estimated, and Variance columns indicates that the overrun is expected to grow to \$15,000 at completion.
- WBS Element 1.6.
 - Comparison of BCWS, BCWP, and the Cost-at-Completion Budgeted reveals that all equal and the work under is complete. (BCWS_{cum}=BAC)
 - Comparison of BCWP and ACWP reveals that the element experienced a \$20,000 overrun at completion.
 - Comparison of the Cost-at-Completion Budgeted, Estimated, and Variance columns also reflect the \$20,000 overrun.
- Subtotal.
 - Comparison of the Cost-at-Completion Budgeted, Estimated, and Variance Subtotals reveals a projected net overrun of \$40,000. Since the contractor had set aside a management reserve of \$50,000, the contract is still within the original Budgeted Cost baseline with \$10,000 of management reserve remaining. There appears to be little need for in-depth technical analysis at this time because the contractor is still within the original Budget Cost baseline and the contract is 76 percent complete.

If the percent complete on the contract had been less, then further analysis would probably be warranted. Relying solely on the contractor's estimate at completion is risky. For this reason, the program will calculate their own Estimate at Completion using statistical methods and trend data to project costs at the end of the effort. This analysis can be augmented by evaluations into specific technical areas (or WBS elements) experiencing negative cost and/or schedule variances. For example, this technical evaluation can utilize an analysis of Technical Performance Measures or TPMs. For example, the TPM for fuel consumption shown below shows actual performance above the expected upper threshold limit, but it is trending toward the goal or objective. If WBS Element 1.5 in the CPR above was for the engine of the missile (ahead of schedule but over cost), we would analyze the TPMs that could be causing this situation and have our technical experts evaluate the contractor's narrative explanation for variances in Format 5 of the CPR.

More will be discussed later in this Chapter on calculating Estimates at Completion.



Cost/Schedule Status Reports. This is no longer a valid report based on the Mar 2005 changes to the DoD EVMS application thresholds and reporting requirements. You may, however, still see the C/SSR on contracts awarded prior to the 2005 change. Analysis of C/SSR cost/schedule data is consistent with the analysis described above for the Contract Performance Report (CPR).

Contract Funds Status Report. For flexibly-priced contracts, you may also consider requiring a continuing detailed report on the status of contract funding. You may require this report in addition to or instead of the type of cost/schedule reporting described above. One example of this type of reporting is the DoD Contract Funds Status Report (CFSR). The CFSR is reported at price rather than cost (includes fee or profit). This form should be reconciled with the CPR quarterly to evaluate the adequacy of program funding levels.

CLASSIFICATION												
CONTRACT FUNDS STATUS REPORT (Dollars in _____)										Form Approved OMB No. 3701-0187		
<small>The public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Department of Defense, Executive Service Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORMS TO THE ABOVE ORGANIZATION.</small>												
1. CONTRACT NUMBER	2. CONTRACT FUNDING FOR FOR BY	3. PREVIOUS REPORT DATE	7. CONTRACTOR (Name, address and zip code)				3. INITIAL CONTRACT PRICE					
2. CONTRACT TYPE		4. APPROPRIATION	6. CURRENT REPORT DATE	8. PROGRAM			8. TARGET					
							9. CEILING					
							10. ADJUSTED CONTRACT PRICE					
							8. TARGET					
							9. CEILING					
11. FUNDING INFORMATION												
LINE ITEM/ISSUE ELEMENT a	APPROPRIATION BUDGET FUNCTION	FUNDS AUTHORISED TO DATE c	ACCUMULATED EXPENDITURES OWN COMMITMENTS TOTAL d	CONTRACT WORK AUTHORIZED			FORECAST			TOTAL REQUIRE- MENTS e	FUNDS CARRY- OVER f	NET FUNDS REQUIRED g
				EXPANDED h	NOT DEBITED i	SUBTOTAL j	NOT YET AUTHORIZED k	ALL OTHER WORK l	SUBTOTAL m			
						0.00				0.00	0.00	0.00
						0.00				0.00	0.00	0.00
						0.00				0.00	0.00	0.00
						0.00				0.00	0.00	0.00
						0.00				0.00	0.00	0.00
						0.00				0.00	0.00	0.00
12. CONTRACT WORK AUTHORIZED (with Fee/Profit) - ACTUAL OR PROJECTED												
		ACTUAL TO DATE										AT COMPLETION
a. OPEN COMMITMENTS												
b. ACCRUED EXPENDITURES												
c. TOTAL (12a + 12b)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13. FORECAST OF BILLINGS TO THE GOVERNMENT												
14. ESTIMATED TERMINATION COSTS												
15. REMARKS												

DD FORM 1586, AUG 96

CLASSIFICATION _____ PREVIOUS EDITION MAY BE USED. Reset Page _____ of _____ Pages

The CFSSR supplies funding data about defense contracts to program managers for:

- Updating and forecasting contract funds requirements;
- Planning and decision making on funding changes in contracts;
- Developing funds requirements and budget estimates in support of approved programs;
- Determining funds in excess of contract needs and available for de-obligation;
- Obtaining rough estimates of termination costs; and
- Determining if sufficient funds are available by fiscal year to execute the contract.

The program manager should obtain a CFSSR ([DD Form 1586](#)) on contracts over 6 months in duration. The CFSSR has no specific application thresholds; however, the program manager should carefully evaluate application to contracts valued at less than \$1.5 million (in then-year dollars).

- **Reporting.** Data Item Description (DID) [DI-MGMT-81468](#) should be used to obtain the CFSSR. The contracting officer and contractor should negotiate reporting provisions in the contract, including level of detail and reporting frequency. The program manager should require only the minimum data necessary for effective management control. The CFSSR should not be applied to Firm-Fixed Price contracts unless unusual circumstances dictate specific funding visibility. The requirement for Contract Funds Status Reporting should be tailored to the specific contract involved. The CFSSR is normally required quarterly and must provide enough information for Government personnel to compare the estimate of total funds required to complete authorized contract work with existing contract funding.

- **Analyzing Report Information.** These reports can be combined with cost information from contractor requests for progress payment or cost-reimbursement vouchers to obtain a general picture of contract progress compared to costs expended. If you identify an apparent problem, you should request a technical review of the contractor's physical progress toward contract completion.

Progress Payment Requests ([FAR 32.503-4](#) and [FAR 32.503-5](#)). A contractor making a request for progress payments must complete a [Standard Form \(SF\) 1443](#), Contractor's Request for Progress Payment. As part of the request, the contractor must identify total costs to date and estimated additional cost to complete the contract. The estimated additional cost to complete the contract may be the last estimate made, adjusted for costs incurred since the last estimate. However, the contractor must update the estimate at least semi-annually.

- Before making progress payments, you must establish the reliability of the contractor's accounting system and controls. Once you have done that, you may rely on the accounting system and the certification on the SF 1443 when making a progress payment.
- Normally, you should not request an audit of individual progress payment requests. However, you should consider requesting an audit if you have reason to:
 - Question the reliability or accuracy of the contractor's certification on the SF 1443, or
 - Believe that the contract will involve a loss.
- While you may rely on the contractor's accounting system and certification without prepayment review, you must make periodic reviews to determine the validity of progress payments already made or expected to be made. These post-payment reviews must include a number of elements including a determination that the contract price will be adequate to cover the anticipated cost of contract completion or that the contractor has adequate resources to complete the contract. A review of the contractor's actual physical progress should be a part of these post-payment reviews.

Cost-Reimbursement Vouchers ([FAR 52.216-7\(b\)](#)). Under cost-reimbursement contracts, the contractor can submit vouchers or invoices for payment of costs. Unlike the Contractor's Request for Progress Payment, the contractor is not required to submit an estimate of the cost to complete the contract with the cost-reimbursement voucher. However, the vouchers do provide an excellent record of the contractor's costs that can be coupled with other information such as production surveillance and reporting documents to identify potential cost overruns. The record includes:

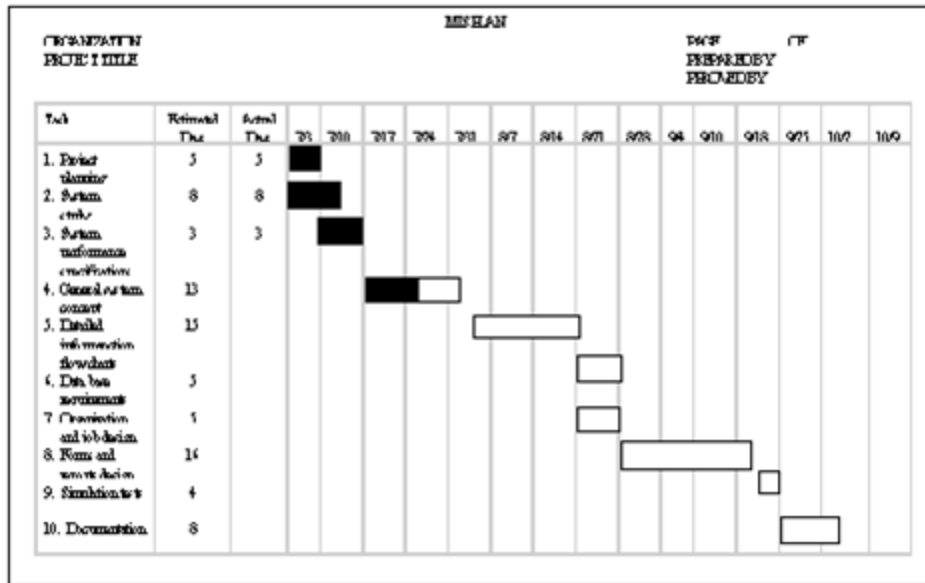
- Those recorded costs that, at the time of the request for reimbursement, the contractor has paid by cash, check, or other form of actual payment for items or services purchased directly for the contract.
- Costs incurred, but not necessarily paid for, including:
 - Materials issued from the contractor's inventory and placed in the production process for use on the contract;
 - Direct labor;
 - Direct material;
 - Other direct in-house costs; and
 - Properly allocable and allowable indirect costs.
- The amount of progress payments that have been paid to the contractor's subcontractors.
- Contractor contributions to any pension or other post-retirement benefit, profit sharing, or stock ownership plan paid in accordance with contract requirements.

Limitation of Cost/Funds Notice. All cost-reimbursement contracts must include a contract clause limiting the Government's obligation to reimburse contractor costs. As shown in the table below, each of the clauses used to limit the Government's obligation also requires contractor notification that total costs are approaching that limit.

Contractor Notification Requirements		
If the contract is...	Then the contract must include the...	Which requires the contractor to notify the Government:
A fully-funded cost-reimbursement contract for other than consolidated facilities, facilities acquisition, or facilities use	Limitation of Cost clause (FAR 52.232-20)	Whenever the Government share of contract costs is expected to... <ul style="list-style-type: none"> • Exceed a stated percentage (normally 75 percent) of estimated contract cost within a stated period (normally 60 days); or • Be either greater or substantially less than previously estimated.
An incrementally-funded cost-reimbursement contract	Limitation of Funds clause (FAR 52.232-22)	Whenever the Government share of contract costs is expected to exceed a stated percentage (normally 75 percent) of the amount so far allocated to the contract cost within a stated period (normally 60 days). Sixty days before the end of the period specified in the contract schedule of the estimated amount of funds (if any) required to continue timely performance.
A time-and-material or labor-hour contract.	Payments Under Time-and-Materials and Labor-Hour Contracts clause (FAR 52.232-7)	Hourly rate payments and material costs are expected to... <ul style="list-style-type: none"> • Exceed 85 percent of the ceiling price within the next 30 days; or • Be substantially greater or less than the stated ceiling price.

DO NOT expect contractor notification requirements to replace effective contract surveillance! You should be questioning significant variations long before contractor notification. By the time you receive contractor notification, it may be too late for the contractor to take corrective action. In fact, the contractor may fail to provide timely notice despite the contract requirement. There have been many contracts where the contractor did not provide notice until after all contract funds were expended. Using a CPR and CFSR can give warning of significant variations in cost so that planning can be accomplished in time to react to budget shortfalls.

Gantt or Phase- Planning Charts. One of the most common techniques for managing schedules for both supply and service contracts is the Gantt Chart (also known as the Phase-Planning Chart). The Gantt Chart provides a graphical representation of the start date, end date, and process time for each phase in the production process.



The Gantt chart above depicts the critical tasks required to develop a Management Information System (MIS) Plan. For each task:

- The estimated days required to complete the task are identified along with a graphic representation of the length of time required.
- In the graphic presentation, bars representing contract effort and a grid scaled to the indicated time (e.g., weeks in the example above) are used to indicate the estimated length of time required to complete each task.
- As the work is performed, the bars may be shaded to indicate the time worked.
- If more time than estimated is required to complete a task, the related bar is extended.
- When the task is completed, the actual days required are also annotated.

With some understanding of the effort required, you can use this Gantt chart to identify schedule problems that will affect the cost to complete the project. For example, the chart above shows that the performance specifications should be completed before work begins on the general system concept. If development of the performance specifications took 10 days instead of three, that delay could affect the entire project. The contractor would need to examine ways of shortening other tasks or performing tasks concurrently to meet the required schedule.

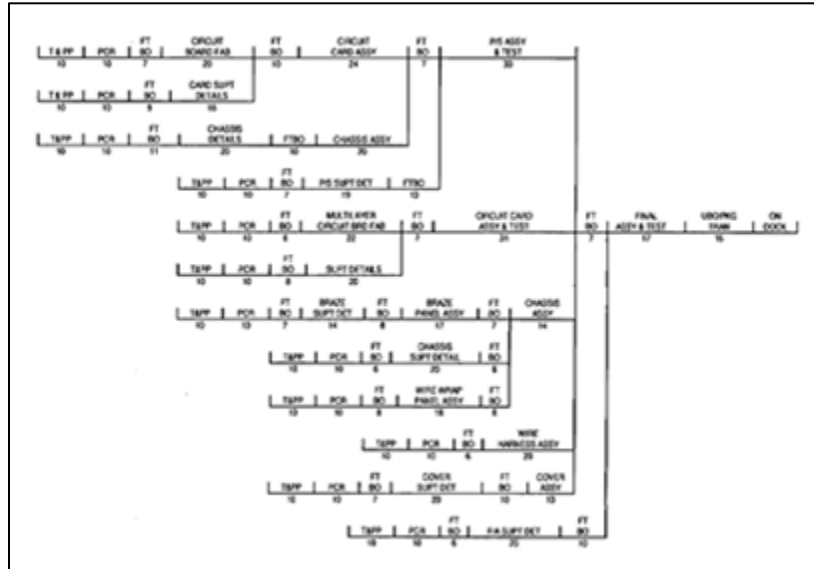
If the problems extend the time required to complete an activity on the critical path, the contractor must take action to identify cost effective ways to meet the original schedule. With a GANTT chart, identifying the critical path can be difficult since relationships between tasks and interdependencies aren't indicated. We will look at other scheduling techniques that do allow for the identification of the critical path for the project such as PERT or network schedules.

However, when there is a threat to the contract schedule or cost estimates, you should call upon Government technical personnel to examine the contractor's estimates.

Production Flow Charts. Production flow charts can be developed to more clearly define contract schedules. The production flow chart is developed using the major schedule milestones, production sequence, and projected manpower. The example below depicts the first unit flow chart for production of a new product.

The flow time for each of the assemblies is determined by utilizing the estimated labor-hours, crew sizes, and the operations shifts projected for contract performance.

With the overall sequence of the major activity defined, activities can be scheduled for completion to meet subsequent events which are dependent upon them. Start times for each activity will be determined by estimating when the activity must be completed and the estimated time required to complete the activity.



T&PP - Tools and Production Planning

PCR - Production Control Records

FTBO - Flow Time Between Orders

UBO - Unit Buy Off

PKG - Package

Tran - Transportation

All Flow Times are Shown in Days

Using this procedure, the entire schedule can be displayed on a single chart. All organizations can determine at a glance when their responsibilities start, the estimated time required, and the required completion time. The effect of any delay on the overall schedule becomes obvious.

In the chart above, if circuit card assembly and test required 22 days instead of 20, the overall project would not be delayed because of the 5-day flow time between orders. However, if circuit card assembly and test required 40 days because of production problems, contractor corrective action would be necessary to meet the original schedule.

With knowledge of the interrelated activities required for production, Government personnel could raise questions regarding contractor corrective actions. Contractor projected actions could be evaluated for effectiveness and potential effect on cost.

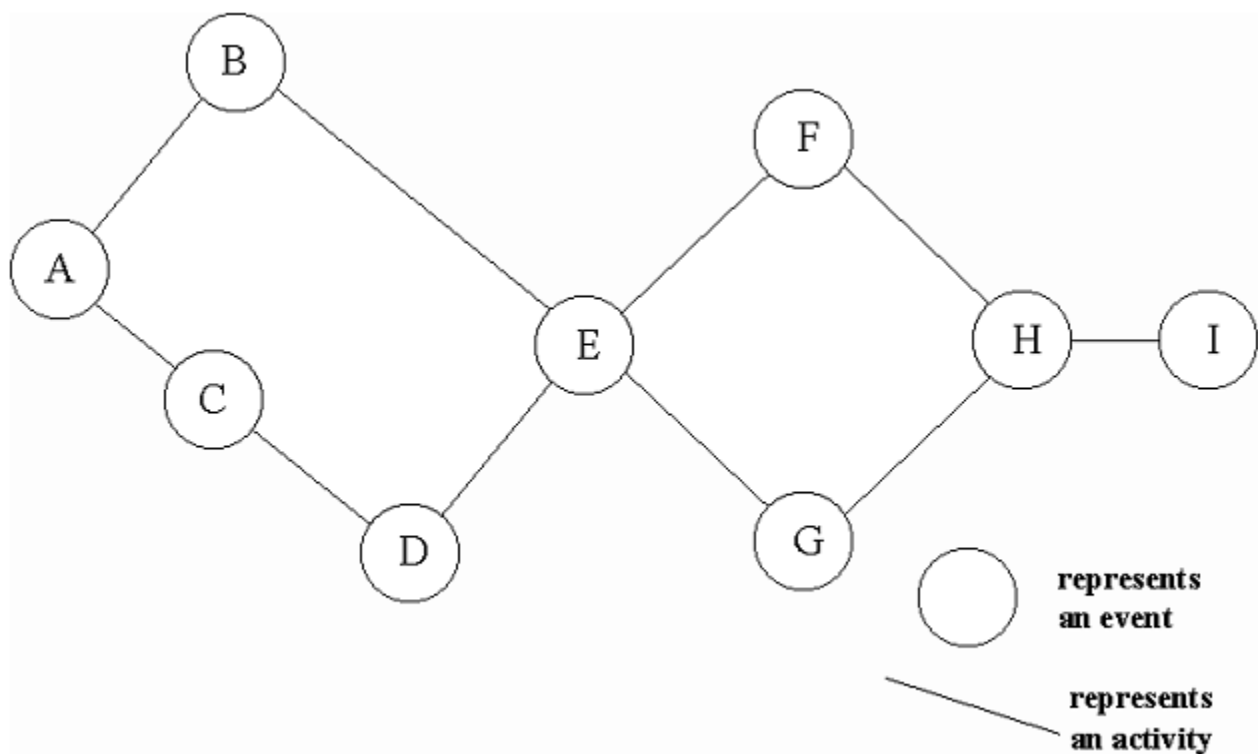
Program Evaluation and Review Technique. The Program Evaluation and Review Technique (PERT) takes the analysis of production flow one step further. PERT permits the contractor to analyze the relationships of all elements needed to complete a project and identify the critical path -- the path that defines the estimated time required to complete the project.

If an element requires more time than estimated, PERT permits analysis of the effect on timely project completion (the critical path). If the increased time required to complete the element does not affect the critical path, no management action may be required. If the completion schedule is affected, PERT permits analysis of alternative corrective actions and the cost associated with each action. An evaluation

of the network schedule along with the CPR schedule variance can be used in conjunction to determine project schedule impacts.

- **PERT Network Structure.** To understand PERT analysis, you must first understand PERT network structure. The PERT network is composed of events and activities.
 - An **event** is a specific milestone that must be reached before a new activity can begin. For example, a foundation must be completed before a contractor can start erecting a building frame. On a PERT chart, events are typically shown as circles or nodes.
 - An **activity** is the work effort over a period of time required to achieve a specific event. On a PERT chart, activities are shown as the lines that connect the event circles, and in effect define the relationships of the activities and events required to complete a project.

The figure below depicts a **PERT network**. Network events are labeled with letters (e.g., A, B, C, etc.). The activity that begins at A and ends at B is referred to as AB. Note that activities AB, BE, AC, CD, and DE, all must be completed before Event E can be achieved.



- **Activity Times.** The next thing needed to develop the PERT network is information on the length of time to accomplish each activity. PERT uses three estimates of the time required to complete each activity.

$$\text{Activity Time} = \frac{a + 4m + b}{6}$$

Where:

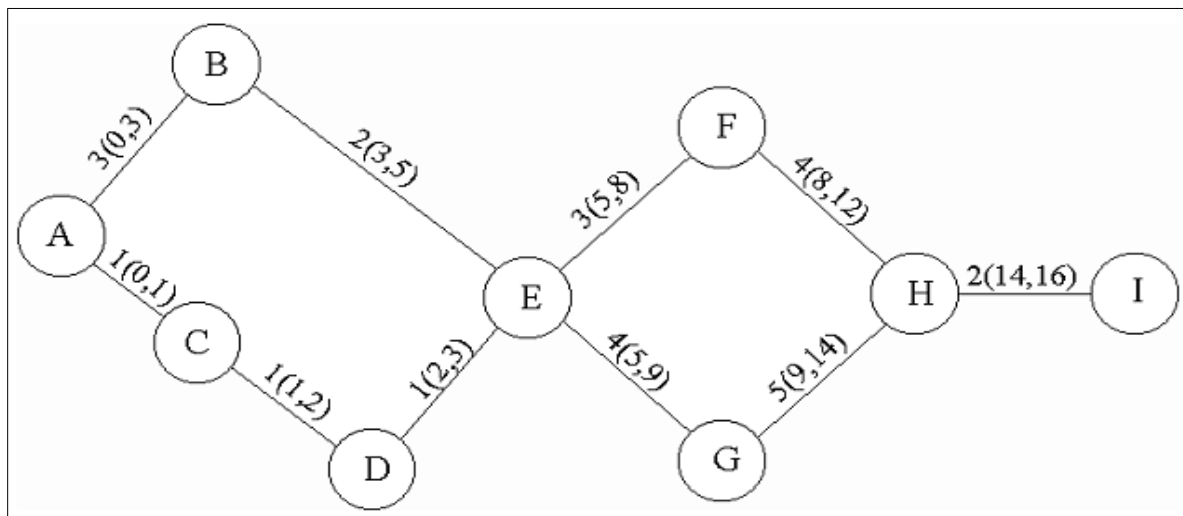
- a = Optimistic time -- the completion time if everything goes as well as can be expected.
- m = Most likely time -- the completion time if everything goes as expected.
- b = Pessimistic time -- the completion time if the things that may go wrong do go wrong.

To facilitate analysis and discussion, times for the activities in the network above are delineated in the following table.

Activities and Times Required for Project Completion			
Activity	Length (Months)	Activity	Length (Months)
AB	3	EF	3
AC	1	EG	4
BE	2	FH	4
CD	1	GH	5
DE	1	HI	2

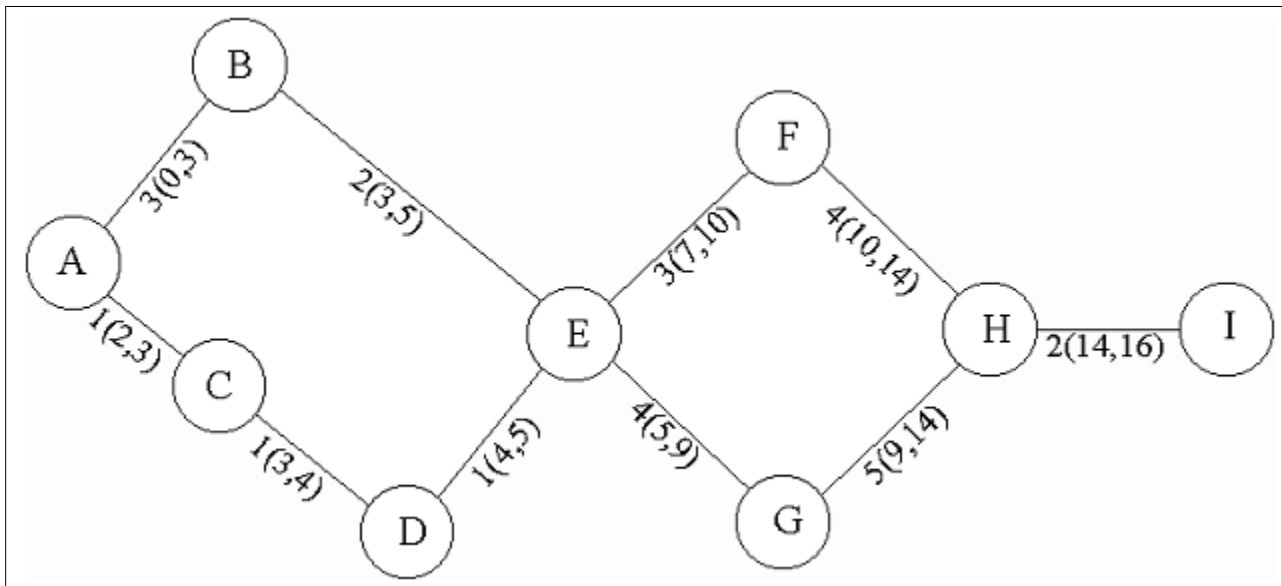
- Early Start Times.** If you assume that Event A is project start, you can work across the PERT network and determine how long it will take to complete the project. The times developed by working from the beginning to end are known as the Early Start Times or T_e . This is also called a "forward pass." When reading through the network below, note that:
 - The T_e entries are above the activity lines.
 - The format of the T_e entries is: Length of Time Required to Complete the Activity (Activity Start Time, Start Time Plus Length of Time Required to Complete the Activity). For example:
 - Activity AB reads "3(0,3)", which means the it will take three months to complete the activity, the activity can begin at project start (Month 0), and it will end at the end of Month 3.
 - Activity BE reads "2(3,5)", which means that it will take two months to complete the activity, the activity can begin at the end of Month 3, and it will end at the end of Month 5.

When more than one activity ends at an event, the earliest start time for the next activity is the latest time coming into the event. For example, DE is projected to be complete at the end of Month 3, but since BE is not projected to be complete until the end of Month 5, any activities beginning at E cannot start until the end of Month 5.



- Late Start Times.** Based on the PERT network developed so far, the project should take sixteen months to complete. The next step is to determine T_l or Late Start Times -- the latest time that an event can start and still complete the project on time. The T_l is calculated the same way as T_e except the calculation is done from the end of the project back to the beginning. This is also called a "backward pass." When reading through the network below, note that:
 - The T_l entries are below the activity lines.
 - The format for T_l is similar to the format for T_e . For example
 - Activity HI reads "2(14,16)", which means that it will take two months to complete the activity. If the activity is to end at Month 16, it must start no later than Month 14.
 - Activity FH reads, "4(10,14)", which means that it will take four months to complete the activity, and if the activity is to end at Month 14, it must start no later than Month 10.

When more than one activity begins at an event, the earliest T_l is used to calculate the T_l for activities prior to the event. For example, EF has a T_l of Month 7 while EG has a T_l of Month 5. The end time used to calculate BE and DE would be the earliest available T_l or Month 5.



- Critical Path.** Given the information now available, you can identify the Critical Path. The longest of these paths (a-b-e-g-h-l) is sixteen days which is the **shortest** time in which the entire network can be completed. This is called the **critical path** of the network -- the path where the difference between T_e and T_l (slack time or float) equals zero. The following table and network show the critical path - AB, BE, EG, GH, and HI.

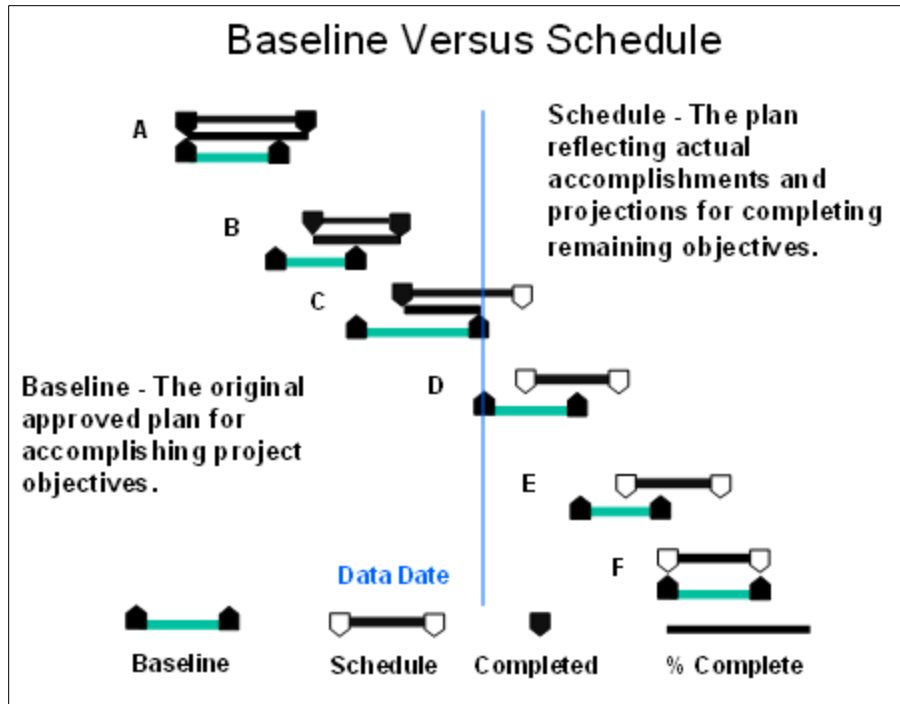
Activity										
	AB	AC	BE	CD	DE	EF	EG	FH	GH	HI
T_e	0	0	3	1	2	5	5	8	9	14
T_l	0	2	3	3	4	7	5	10	9	14
Slack Time	0	2	0	2	2	2	0	2	0	0

- **Cost/Schedule Impact.** With the critical path established, you can consider the impact of any activity time change.
 - Any increase or decrease in the time required to complete any activity on the critical path will increase or decrease the time to complete the entire project.
 - If the time required to complete Activity HI grew from two months to three months, then the entire project time would be increased by one month.
 - If there is a need to accelerate the project schedule, then management knows which activities must be shortened to shorten the project (critical path activities), and can evaluate the cost/schedule trade-offs.
 - For activities not on the critical path, changes do not impact the entire project time.
 - If the time required to complete Activity FH grew from four to five months there would be no increase in total project time because no activities beyond Event H can begin until all activities leading up to Event H have been completed. Activity FH would still be completed a full month ahead of Activity GH.
 - If the time to complete Activity FH were accelerated to three months, again there would be no effect on the time required to complete the project. Activity GI could still not begin until Activity FH is completed.

Precedence Diagram Method (Network Scheduling). This analysis can also be done using the Precedence Diagram Method which allows for the identification of Early Start/Finish, Late Start/Finish, float, and critical path.

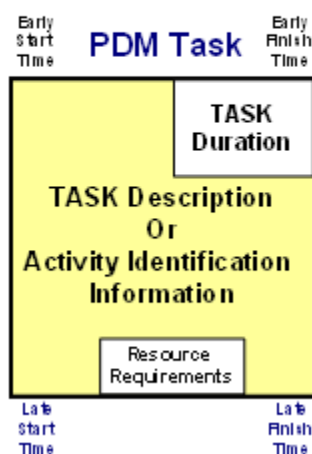
There are four items that must be identified as part of the scheduling process: tasks, durations of tasks, order of tasks, and constraints. The tasks should include all the work and activities that need to be done to accomplish the work, and they should be traceable back to the Work Breakdown Structure (WBS). The duration of each task should be a measure of how long the work will take. It is most frequently measured in days, either calendar or work days. Once the durations have been identified, the order of the tasks must be determined along with the criteria for starting each task. For example, must Task A be completed before Task B can start or can they occur simultaneously? Finally, any constraints on resources must be highlighted and worked into the schedule. This is called resource loading and it can include facilities, such as test ranges, or manpower limitations.

When developing a network schedule, it is important to understand two key terms: baseline and schedule. The baseline is the original approved plan for accomplishing project objectives. In terms of EV, this will be the Performance Measurement Baseline or PMB. The schedule, on the other hand, reflects actual accomplishments and the planned projections for completing remaining objectives. The figure below shows several different baseline vs. schedule relationships that must be understood in order to analyze schedule performance.



The blue line is time now and it is used to evaluate actual accomplishment against the baseline. The green lines represent the baseline for each task, the black lines represent actual or planned performance, and the black progress bar denotes the percent complete of each task. By evaluating each task, you can determine whether the task is on schedule or has slipped, and whether the duration has remained the same or increased. For example, the duration of Task A has increased (schedule line is longer than the baseline) and it has slipped because the end date is beyond the original baseline completion date. For Task B, the duration appears to be the same length, however, the task has slipped. All of the tasks on this schedule appear to be related because as Task A slipped, it affected the start/finish of the remaining tasks. In order to more fully evaluate the impact of slips, we can use the precedence diagram method.

Precedence Diagram Method (PDM) Task Relationships



Task Relationships

- Finish to Start
- Finish to Finish
- Start to Start

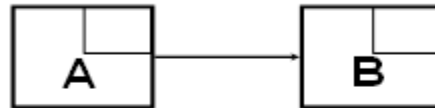
Early Start and Early Finish, as determined by the "forward pass," are shown at the top of the box.

Late Start and Late Finish, as determined by the "backward pass," is reflected at the bottom of the box. The task duration (typically # of days) is annotated in the top right corner of the box.

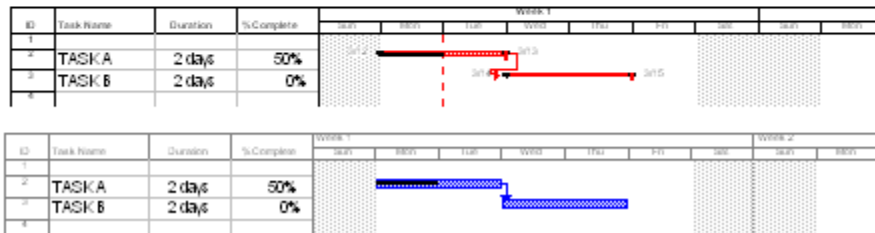
PDM is similar to PERT, however, it allows for multiple task relationships to be used in the development of the schedule. A fundamental understanding of scheduling techniques revolve around the task and its relationship to other tasks. There are three main task relationships: Finish-to-Start, Finish-to-Finish, and Start-to-Start. The following three figures demonstrate these three primary task relationships in the PDM format and how they would be presented in Microsoft Project.

Finish-to-Start

Task Relationships Finish to Start

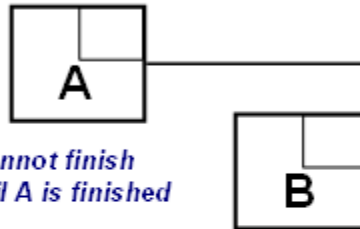


B cannot start until A is finished

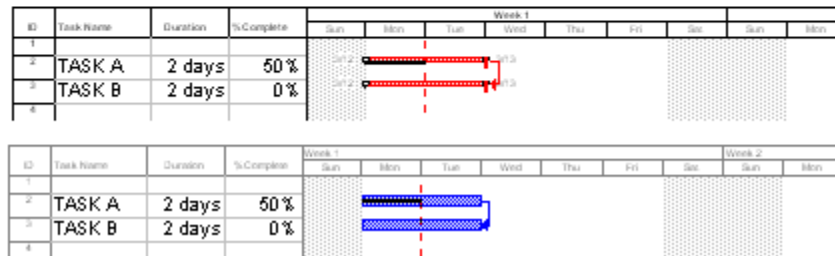


Finish-to-Finish

Task Relationships Finish to Finish

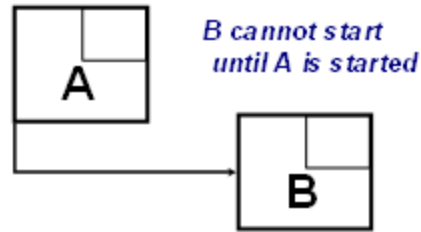


B cannot finish until A is finished



Start-to-Start

Task Relationships Start to Start



ID	Task Name	Duration	% Complete	Week 1								
				Sun	Mon	Tue	Wed	Thu	Fri	Sat		
1												
2	TASK A	2 days	50%		█	█						
3	TASK B	2 days	0%		█	█						
4												

ID	Task Name	Duration	% Complete	Week 1							Week 2	
				Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
1												
2	TASK A	2 days	50%		█	█						
3	TASK B	2 days	0%		█	█						
4												

Given a combination of task relationship types, the next step is to recognize the "time" factor or the lag in the relationship of one or more tasks to every other task in the project. Many tasks will not have any lag built into the relationship; the follow-on task can begin as soon as the preceding task is completed. However, some tasks may have a "wait" time necessary before the follow-on task can start. The relationship lag allows for the optimum application of resources to accomplish the tasks in a complex project. An example of this relationship may be painting a room. You cannot start to hang pictures until 1 day after painting is complete; this allows the paint to dry completely.

Task Relationships Finish to Start with a Lag



B cannot start until 1 day after A is completed

ID	Task Name	Duration	% Complete	Week 1							
				Sun	Mon	Tue	Wed	Thu	Fri	Sat	
1											
2	TASK A	2 days	50%		█	█					
3	TASK B	2 days	0%								
4											

ID	Task Name	Duration	% Complete	Week 1							Week 2	
				Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
1												
2	TASK A	2 days	50%		█	█						
3	TASK B	2 days	0%									
4												

When performing a schedule analysis, we have to determine the critical path. We begin by calculating the earliest finish time (EFT), latest finish time (LFT), and float. Float is defined as the amount of time an activity can be delayed or expanded before it impacts the project finish time ($LFT - EFT = \text{Float}$). Critical path items are those items that have zero float. This means that when a task on the critical path slips, the

entire schedule slips.

Schedule analysis and identification of the critical path are key components of a robust analysis of contract status. EVM metrics, along with the schedule analysis, provide a more complete picture of contractor performance. For example, a negative schedule variance (SV) indicates the contractor is behind schedule, however, we cannot really tell whether the contract will finish late without determining whether the tasks with the negative schedule variance are on the critical path. If they are not on the critical path, then we still have float in the schedule and may still complete the contract on time. If the tasks are on the critical path, then we know a negative SV will mean an overall schedule slip.

To obtain detailed contractor schedule information, we will use the Integrated Master Schedule (IMS). An IMS is required within DoD when EV is required on a contract (>\$20,000,000). It is provided by the contractor monthly as a Contract Data Requirements List (CDRL) deliverable. DI-MGMT-81650 is the IMS data item included in the CDRL. For contracts between \$20,000,000 and \$50,000,000, the IMS can be tailored for degree of networking, report frequency, submission dates, date of 1st and last reports, frequency of schedule risk analysis, and electronic data interchange format. More information on tailoring the IMS can be found in Paragraph 2.2.5.7 of the Earned Value Management Implementation Guide or EVMIG located on the DCMA website (<http://www.dcmamail.com>).

Problem Analysis. If the problems extend the time required to complete a task, the contractor must determine the effect on the remaining schedule. If timely performance is affected, the contractor must take action to identify cost effective ways to shorten the critical path to meet the original schedule. Without an integrated network schedule, the manager must evaluate the various arguments on an almost daily basis as to where to apply limited resources. This frequently results in management emphasis being pulled away from the actual time drivers on the schedule that would have been visible with a network analysis and could result in unforeseen program slips. With network analysis, crisis management is reduced because management will know which items can slip and which cannot without major impact to the master program schedule. When there is a schedule or cost risk to the Government, you should request Government technical personnel to examine the contractor's analysis and projected action to correct the problem.

Progress Review Meetings. Regularly scheduled progress review meetings provide an excellent forum for the identification and resolution of contract problems that may affect contract cost and performance. Many contracts include a requirement for periodic review meetings. When there is no contract requirement and you feel that such meetings would be beneficial, consider suggesting an informal review program to the contractor as a forum for sharing concerns, before they become problems.

- **Management Review Meetings.** Management review meetings typically include key members of the contractor and Government contract teams (e.g., program management, contracting, technical, quality assurance, and others).
 - Together, you can evaluate overall contract status, including the identification and resolution of problems that may be affecting contract cost or schedule.
 - The contractor may be required to submit a contract status report as a Contract Data Requirements List (CDRL) deliverable prior to each review. Those status reports then become the basis for conference analysis and discussion.
 - You should encourage open discussion to identify problems that may affect contract schedule or cost as early as possible so that action can be taken to resolve them and minimize their effect.
- **Technical Team Meetings.** Periodic meetings between Government and contractor technical personnel provide a forum to discuss technical questions that may affect contract cost and schedule. These technical meetings can be used to supplement or replace the management team meetings described above.
 - As a supplement, these meetings can be used to resolve technical questions too complicated to be resolved at management team meetings.
 - As an alternative, these meetings provide a vital forum for the exchange of information

and ideas.

Caution all participants in such meetings that contract changes can only be accomplished through written contract modification issued by the contracting officer. Agreements at the meetings cannot change the contract terms.

- Caution Government personnel not to issue direction to the contractor that is outside their authority under the contract. Remind them that they may be held personally responsible for any unauthorized commitment -- constructive change -- unless the commitment is ratified by the Government. Ratification by the government must be approved by the Head of the Contracting Agency. If a constructive change happens, it could lead to other complications such as an Anti-Deficiency Act violation if sufficient funds are not available to fund the change.
- Caution contractor personnel to notify the contracting officer immediately of any action by any Government personnel that they interpret as a change to the contract.

Routine Observations by Government Personnel. Even with all the available reports and management analyses, the first indication of potential cost/schedule problems often comes from routine observations by Government technical personnel.

- **Encourage Observation.** Routine observations by Government personnel could identify a variety of indicators of problems affecting timely and cost effective contract performance, such as:
 - Selection of work methods that are not suited to the contract effort;
 - Problems in completing critical tasks or production processes;
 - Inadequate personnel training or experience;
 - Labor unrest (i.e., dissatisfaction that could cause a slowdown in operations);
 - Inadequate tooling or equipment;
 - Excessive work in process inventory;
 - Excessive scrap rates; or
 - Comments about cost/schedule problems made by contractor personnel.
- **Encourage Reporting.** The biggest problem with routine observations as a source of information on potential overruns is that the observations are often not reported to the contracting officer. To benefit from this source of information, you must foster the team concept and make every effort to keep the lines of communication open between yourself, the auditor, and such Government technical personnel as the user, Contracting Officer Representative (COR), Contracting Officer Technical Representative (COTR), Industrial Specialist, or Quality Assurance Representative (QAR). These specialists form the core of the acquisition team. They approach the contract from different perspectives but with one goal, effective and efficient contract performance. The Defense Contract Management Agency (DCMA) is also a key player in oversight of the contractor and can provide valuable assistance in identifying problems early.
- **Foster Communication.** By fostering communication between Government Acquisition Team members, you can benefit from the picture that is created when different pieces of the puzzle are brought together.
 - On a manufacturing contract, a QAR notes a large number of rejects from a particular process. At the same time, the Industrial Specialist notes that a shop responsible for that process is not meeting schedule commitments. Together, these bits of information paint a picture of a contractor that has significant quality problems that are affecting production and contract cost.
 - On an engineering services contract, the COTR feels that the Contractor Team Leader has only minimal experience in performing the type of work required by the contract. A Government Project Engineer feels that the Team Leader is putting unreasonable constraints on contractor personnel and these constraints are hampering contract operations. It may be that the contractor's failure to hire a qualified Team Leader is

putting the contract schedule and cost performance in jeopardy.

4.2 Estimating Cost To Complete

Support for Estimating Cost to Complete the Contract. Whenever you suspect a cost overrun, remember that the contracting officer is ultimately responsible for monitoring contractor performance and estimated cost to complete the contract. However, the contracting officer should actively seek support from other members of the Government Acquisition Team.

- Assistance from Government technical personnel is essential in analyzing contract progress to date and estimating the amount of effort required to complete the contract.
- The auditor is the Government expert on contract cost. Audit assistance can be invaluable in verifying the actual contract cost incurred and validating data offered by the contractor to support projections of the cost to complete the contract.
- The requiring activity can provide valuable insight to the analysis process. As the organization responsible for managing funds, they must be involved in any decision to increase contract price or any decision to modify contract requirements to contain costs.
- Support from the acquisition integrated product team to include the program manager and EV analyst are key components to successful analysis of contract cost and schedule performance.

Procedure for Estimating the Cost to Complete the Contract. When developing an estimate of the cost to complete a contract:

- Determine the progress toward contract completion to date.
- Determine the cost of the contract work completed to date.
- Determine the reasons for variances from initial estimates.
- Estimate the amount of work remaining to be completed.
- Estimate the cost of the work remaining to be completed.

Progress Toward Contract Completion. Normally, the most difficult element of developing an estimate to complete the contract is determining the amount of work completed to date. It is relatively easy to determine the number of hours worked, wages paid, and material purchased, but those are measures of input --not measures of progress toward contract completion. It is not always easy to determine how these inputs have contributed to completing the work required by the contract.

To determine the work completed to date, you must rely on the sources and types of information identified in the previous section of this chapter:

- Contractually required cost/schedule analysis and reporting;
- Contractually required cost information;
- Contractor production management reports and analyses;
- Progress review meetings; or
- Observation by Government personnel.

Normally, the more detailed the information provided by the data source, the more valuable it is as a basis of estimating the cost to complete the contract. Contract progress reports typically provide a general overview of contract performance and specific detail only on a limited number of special interest items. However, detailed contractor CPR data would normally be more valuable than general contract production management reports, because the BCWS, BCWP, and ACWP data presented in the CPR provide detailed information on the contractor's cost/schedule performance. As the Performance Measurement Baseline (PMB) is developed (remember this is the time-phased BCWS), the contractor must identify methods to "take credit" for work completed. These measures range from subjective to more objective; the greater the understanding of these methods and how they affect the assessment of work

completed, the better your estimate to complete will be as a forecast. A thorough understanding of earned value data will significantly enhance the value of the data used to project the cost to complete the effort.

As you analyze available information, you should request support from the using activity and Government technical personnel. They are the experts on Government requirements and contractor progress. When you request analysis support, establish an "as of" date for the analysis. That date can then be used for the collection of data on both contract work completed and the cost for completing that work.

Cost of Work Completed to Date. In determining the cost of work completed, rely on contractor submissions and input from involved members of the Government Acquisition Team. Normally, the cognizant auditor plays a key role in evaluating cost information submitted by the contractor. However, others can play key roles, particularly when the contractor has implemented a management system that complies with EVMS Guidelines.

If the auditor has identified deficiencies in the contractor's accounting system, consult with the auditor to determine how those deficiencies may affect the contractor's recording of contract costs. You should also consult with DCMA to determine if any deficiencies have been identified, through routine surveillance, with the contractor's EVMS system (if validated). These deficiencies can also affect the validity, accuracy, and usefulness of reported data.

Determine Reasons for Variances From Initial Estimates. Before you can estimate the cost to complete the contract, you must determine the reason for the overrun.

- **Gather Information.** Solicit opinions from the contractor and Government Acquisition Team experts concerning the reasons for the overrun. Ask questions such as:
 - Why do actual costs differ from the original estimates?
 - Have circumstances outside the contract affected costs? For example, has a major reduction in business volume increased indirect cost rates and inflated contract costs?
 - Does the Government have any responsibility for the increased costs?
 - What can be done by the contractor and/or the Government to bring costs back into line?

If EV is required on the contract, the contractor must submit a Variance Analysis in Format 5 of the CPR. This narrative should address the reasons for the variance, the root cause, and any corrective actions planned to correct the problem. This is a good tool to keep overruns from becoming a surprise, and if done correctly, can provide valuable insight into the reasons for cost or schedule issues.

- **Identify The Reason.** The overrun could result from many possible reasons, including:
 - Conflicting interpretations of contract requirements; (however these should be resolved as part of the Post Award contract or the Integrated Baseline Review so they don't become an issue during contract execution)
 - One or more specific contract performance problems; or
 - Generally poor contractor management of contract operations.
- **Evaluate Current Status.** Evaluate available information to establish whether the situation that caused the overrun has been resolved.

Estimate Amount of Work Remaining. Once you have determined the amount of contract effort completed to date, it is relatively easy to estimate the tasks that remain to be completed. Again, you should request support from other members of the Government Acquisition Team as you perform your analysis. They can provide invaluable support in developing and evaluating both cost and schedule estimates for contract completion. Work remaining in EV terms is calculated as follows:

$$\text{Budget at Completion} - \text{Budgeted Cost of Work Performed} \\ (\text{BAC} - \text{BCWP} = \text{Work Remaining}).$$

Once you have identified how much work remains, you need to decide if the contractor will continue to perform as they have so far on the contract or if issues have been resolved and performance will improve.

Of course, there is also the alternative that performance will continue to decline. Trend analysis should be performed using cumulative EV data from CPRs.

Cost of Work Remaining to be Completed. Once you have determined the amount of work remaining and the causes for cost growth, you can estimate the cost to complete the contract. Given this information, estimating the cost to complete the contract is much like estimating the cost of a new contract.

- Select estimating methods and quantitative techniques based on the information available. You can develop estimates using any appropriate method -- round-table, comparison, or detailed. However, as the contractor progresses toward contract completion, you should expect more reliance on comparison and detailed estimates and less on round table estimates.
- Consider contract cost history along with other available data in estimate development. For example, where there has been a history of schedule delays and cost overruns, it may not be reasonable to assume that future contract effort will be completed as projected.
- Where there has been a history of schedule delays or cost overruns, it may not be reasonable to assume that future effort will be as projected.
- If there are cost or schedule constraints, develop several cost estimates based on different completion scenarios, such as:
 - Complete contract to original contract specification and schedule requirements.
 - Complete the contract to original specification requirements but allow additional time.
 - Complete the contract to original schedule requirements but reduce contract specification.
 - Adjust both the contract specification and schedule requirements.

This type of "bottoms-up" estimate will typically be developed by the contractor (at least annually). The contractor will provide, as part of the CPR, a most likely cost to complete the project. The program office, however, will develop their own Estimate At Completion (EAC), typically using a formula-based approach based on trend analysis. There is a basic formula for calculating an EAC:

$$\text{EAC} = \text{Actuals to Date} + [(\text{Remaining Work})/(\text{Efficiency Factor})].$$

$$\text{Actuals to Date} = \text{ACWP}$$

$$\text{Work Remaining} = \text{BAC} - \text{BCWP}$$

The efficiency factor can vary depending on the determination of future contractor performance. Common efficiency factors include: cumulative CPI, 3 period average CPI, 6 period average CPI, composite index (CPI*SPI), or a weighted index (0.8CPI + 0.2 SPI).

If the reason for the overrun has been resolved, you can be much more certain of your estimate of the work required to complete the contract. If the issues have been resolved, the contractor could work at the original planned efficiency or continue at the current efficiency level. In this case, using the cumulative CPI as the efficiency factor would be appropriate. Within the DoD, the "rule of thumb" is that this efficiency factor generates the "best case" EAC projection. If the issues leading to the overrun have not been resolved, you must consider possible solutions and related risks as you develop your estimate. In this situation, you would need to choose an efficiency factor that best captures the performance expected and anticipated risks. For more information on Estimates At Completion (EAC) calculations, you can reference the Defense Acquisition University EVM Gold Card. It contains Earned Value Management terms, metrics, calculations, and policy information.

4.3 Resolving Potential Cost Overruns

Course of Action. Once the actual cost of work completed and estimates to complete have been identified, a course of action must be determined.

Fixed-Price Contracts. A cost overrun in a firm fixed-price contract, fixed-price economic price adjustment contract (unless the adjustment is based on actual cost), or fixed-price contract with prospective price redetermination contract will not affect contract price. A cost overrun on a fixed-price incentive contract or fixed-price contract with price redetermination may affect overall contract price, but the Government's contract obligation will be limited by the contract ceiling price.

While the effect on contract price will be limited, a cost overrun may have a substantial effect on contract performance. Additional costs will reduce profits and may result in a contract loss. Contractor efforts to control costs may result in decisions that affect the quality of contract performance. Accordingly, with fixed-price contracts, your primary efforts should generally be directed toward:

- Monitoring contract performance more closely to assure that all work is being accomplished in accordance with contract requirements, and
- Considering the need for adjustment in the liquidation rate for any progress payments based on cost.

Cost-Reimbursement Contracts. For cost-reimbursement contracts, you must determine the most appropriate action considering that the Government is responsible for reimbursing the contractor for all allowable costs up to the cost and funding limits established in the contract. The most common alternatives for action include:

- Withhold action until more information is available.
- Provide additional funds/time to complete the contract as is.
- Redefine the contract effort to fit existing funds.
- Allow the contract to continue without change.
- Terminate the contract.

As you determine the appropriate course of action, you should consider contract cost and other factors including: contract schedule, probable impact of not completing the contract, alternatives to completing the contract (e.g., terminate and re-procure from another source), availability and sources of funding, and many more.

Withhold Action. In situations where your analysis has identified cost or schedule variances, you may wish to stand pat (i.e., take no action until you can obtain additional information).

- Consider this course of action when:
 - You are not sure that the contractor cannot recover from current cost or schedule variances to complete the contract within the original cost and schedule.
 - You are awaiting additional information that may affect contract cost and schedule.
 - A major program management decision is in progress and the decision will affect the action you will take on the contract.
 - Funding is uncertain.
- When you withhold action awaiting more information, inform the contractor. Failure to put the contractor on notice can result in the Government assuming additional liability through constructive consent. Consider the following general steps to put the contractor on notice that the Government intends to withhold action pending further fact-finding:
 - Acknowledge that the Government is considering whether to add funds or increase the estimated contract cost.

- Point out that the contractor is entitled to stop work when the contract dollar limit has been reached.
- Admonish the contractor that any work done beyond the dollar limit will be at the contractor's own risk.

Provide Extra Funds/Time to Complete the Contract. When additional funding is available, the need exists, and the increase in cost is justifiable, the most logical course of action may be to continue contract performance following the original contract technical and schedule requirements.

You should consider schedule relief, with or without extra funding, when contract problems have affected the contractor's ability to complete the contract on time.

Consider the following points when implementing a decision to add funds and/or change the contract schedule:

- Obtain necessary approvals for your proposed course of action.
 - If you are planning to increase contract cost, establish the amount of additional funds required and obtain a funded purchase request from the requiring activity. This will require coordination with the Business Financial Manager to confirm sufficient funds are available for the correct fiscal year. If they are not, then funds may need to be reprogrammed from another program or requested through the Planning, Programming, Budgeting, and Execution (PPBE) system. Reprogramming is an option if funds are needed in the current fiscal year; PPBE if funds are needed in future years. The timing and amount of the shortfall are critical aspects to determine the flexibility in meeting increased funding requirements.
 - If you are planning to change the contract schedule, obtain concurrence on any proposed delivery date changes from the requiring activity. In addition, many schedule changes will also require additional funding so this must be considered.
 - If either of these changes will occur in a program, you should coordinate with the Program Manager. If either cost or schedule adjustment is significant, the PM will need to determine whether the changes will cause a breach of the Acquisition Program Baseline and additional reporting through the acquisition approval chain.
- Meet with the Contractor to review contract requirements and verify the remaining tasks, then negotiate the cost/time changes needed to complete the contract.
- Negotiate adequate consideration to the Government for increasing contract cost or revising the contract schedule (e.g., a reduction in potential contract fee).
- Execute and distribute a bilateral contract modification.

Redefine Contract Requirements to Fit Existing Funds. Redefining contract effort to fit available funds -- sometimes called downscoping -- can be a viable option for research contracts, as well as supply and service contracts with multiple line items. This option is particularly attractive when additional funds are not available, but it can also be employed when the requiring activity determines that marginal elements of the contract are not worth the additional money. Descoping the contract will have to be coordinated with the Program Manager to ensure user requirements are met and/or requirements documents are updated to reflect the change. If the descoping is within existing trade space, coordination with the PM may be adequate.

To implement a decision to reduce contract scope, use either a deductive contract modification or a partial termination for convenience. As you decide which one to use, consider the guidance presented in the paragraphs below. However, consult with your agency legal counsel before making a final decision on which approach is appropriate in your situation.

- **Deductive Contract Modification.** In general, you should use a deductive modification when the redefinition of contract requirements is within the scope of the original contract.
 - For example, you can use a contract modification under the Changes clause to downsize requirements in a variety of ways, including changes in:
 - Specifications, drawings, or designs for supplies.
 - Description of services.
 - Method of shipping or packing.
 - Place of delivery or performance.
 - However, none of the Changes clauses available for cost reimbursement contracts provide for changes in quantity. Such changes are normally considered to change the scope of the contract.
- **Partial Termination for Convenience.** In general, a partial termination for convenience is appropriate when the redefinition of contract requirements will change the scope of the original contract. You should use a partial termination when:
 - You are redefining contract requirements by eliminating items from the contract.
 - The redefinition of other requirements (e.g., the description of services) is so substantial as to change the scope of the contract.

Allow the Contract to Continue Without Change. If you select this alternative, allow the contract to continue until funds expire.

- Consider this alternative when:
 - Additional funds are not available but continued contract performance will benefit the Government.
 - Most of the vital elements of the contract will be accomplished within current requirements and funding.
 - The cost of contract redefinition or termination will be greater than the cost of simply allowing the contractor to use available funds and then halting contract performance.
- If you select this alternative, it is absolutely critical that you:
 - Advise the contractor that additional funds will not be added to the contract.
 - Advise the contractor that any contract performance beyond current contract dollar limits will be at the contractor's expense.
 - Not suggest that the contractor perform beyond current contract dollar limits.

Terminate the Contract. If you believe that the Government's best interests will be served by ending the contract immediately, terminate the entire contract for convenience.

Appendix 4A, Earned Value Management System Guidelines

Organization.

1. Define the authorized work elements for the program. A work breakdown structure (WBS), tailored for effective internal management control, is commonly used in this process.
2. Identify the program organizational structure including the major subcontractors responsible for accomplishing the authorized work, and define the organizational elements in which work will be planned and controlled.
3. Provide for the integration of the company's planning, scheduling, budgeting, work authorization and cost accumulation processes with each other, and as appropriate, the program work breakdown structure and the program organizational structure.
4. Identify the company organization or function responsible for controlling overhead (indirect costs).
5. Provide for integration of the program work breakdown structure and the program organizational structure in a manner that permits cost and schedule performance measurement by elements of either or both structures as needed.

Planning, Scheduling, and Budgeting.

6. Schedule the authorized work in a manner which describes the sequence of work and identifies significant task interdependencies required to meet the requirements of the program.
7. Identify physical products, milestones, technical performance goals, or other indicators that will be used to measure progress.
8. Establish and maintain a time-phased budget baseline, at the control account level, against which program performance can be measured. Initial budgets established for performance measurement will be based on either internal management goals or the external customer negotiated target cost including estimates for authorized but undefinitized work. Budget for far-term efforts may be held in higher level accounts until an appropriate time for allocation at the control account level. On government contracts, if an over target baseline is used for performance measurement reporting purposes, prior notification must be provided to the customer.
9. Establish budgets for authorized work with identification of significant cost elements (labor, material, etc.) as needed for internal management and for control of subcontractors.
10. To the extent it is practicable to identify the authorized work in discrete work packages, establish budgets for this work in terms of dollars, hours, or other measurable units. Where the entire control account is not subdivided into work packages, identify the far term effort in larger planning packages for budget and scheduling purposes.
11. Provide that the sum of all work package budgets plus planning package budgets within a control account equals the control account budget.
12. Identify and control level of effort activity by time-phased budgets established for this purpose. Only that effort which is not measurable or for which measurement is not practicable may be classified as level of effort.
13. Establish overhead budgets for each significant organizational component of the company for expenses which will become indirect costs. Reflect in the program budgets, at the appropriate level, the amounts in overhead pools that are planned to be allocated to the program as indirect costs.
14. Identify management reserves and undistributed budget.
15. Provide that the program target cost goal is reconciled with the sum of all internal program budgets and management reserves.

Accounting Considerations.

16. Record direct costs in a manner consistent with the budgets in a formal system controlled by the general books of account.

17. When a work breakdown structure is used, summarize direct costs from control accounts into the work breakdown structure without allocation of a single control account to two or more work breakdown structure elements.

18. Summarize direct costs from the control accounts into the contractor's organizational elements without allocation of a single control account to two or more organizational elements.

19. Record all indirect costs which will be allocated to the project.

20. Identify unit costs, equivalent units costs, or lot costs when needed.

21. For EVMS, the material accounting system will provide for:

- Accurate cost accumulation and assignment of costs to control accounts in a manner consistent with the budgets using recognized, acceptable, costing techniques.
- Cost performance measurement at the point in time most suitable for the category of material involved, but no earlier than the time of progress payments or actual receipt of material.
- Full accountability of all material purchased for the project including the residual inventory.

Analysis and Management Reports.

22. At least on a monthly basis, generate the following information at the control account and other levels as necessary for management control using actual cost data from, or reconcilable with, the accounting system:

- Comparison of the amount of planned budget and the amount of budget earned for work accomplished. This comparison provides the schedule variance.
- Comparison of the amount of the budget earned and the actual (applied where appropriate) direct costs for the same work. This comparison provides the cost variance.

23. Identify, at least monthly, the significant differences between both planned and actual schedule performance and planned and actual cost performance, and provide the reasons for the variances in the detail needed by program management.

24. Identify budgeted and applied (or actual) indirect costs at the level and frequency needed by management for effective control, along with the reasons for any significant variances.

25. Summarize the data elements and associated variances through the program organization and/or work breakdown structure to support management needs and any customer reporting specified in the project.

26. Implement managerial action taken as the result of earned value information.

27. Develop revised estimates of cost at completion based on performance to date, commitment values for material, and estimates of future conditions. Compare this information with the performance measurement baseline to identify variances at completion important to company management and any applicable customer reporting requirements including statements of funding requirements.

Revisions and Data Maintenance.

28. Incorporate authorized changes in a timely manner, recording the effects of such changes in the budgets and schedules. In the directed effort prior to negotiation of a change, base such revisions on the amount estimated and budgeted to the program organizations.

29. Reconcile current budgets to prior budgets in terms of changes to the authorized work and internal replanning in the detail needed by management for effective control.

30. Control retroactive changes to records pertaining to work performed that would change previously reported amounts for actual costs, earned value, or budgets. Adjustments should be made only for correction of errors, routine accounting adjustments, effects of customer or management directed changes, or to improve the baseline integrity and accuracy of performance measurement data.

31. Prevent revisions to the program budget except for authorized changes.

32. Document changes to the performance measurement baseline.

Chapter 5

Recognizing and Adjusting Defective Cost Pricing

5.0 – Chapter Introduction

5.1 – Identifying Possible Defective Pricing

5.2 – Developing The Government Position On Price Adjustment

5.3 – Completing Settlement Action

5.0 Chapter Introduction

This chapter covers the activities associated with identifying and adjusting for defective pricing:

Defining Defective Pricing ([FAR 52.215-10\(a\)](#)). Defective pricing is any contracting action subject to the Truth in Negotiations Act (TINA) where the negotiated (other than sealed bidding procedure) contract price including profit or fee was increased by a significant amount because:

- The contractor or a subcontractor at any tier furnished to the Government certified cost or pricing data that were not complete, accurate, and current as certified in the contractor's Certificate of Current Cost or Pricing Data;
- A subcontractor or a prospective subcontractor at any tier furnished to the contractor certified cost or pricing data that were not complete, accurate, and current as certified in the contractor's Certificate of Current Cost or Pricing Data; or
- Any of the above parties furnished data of any description that were not accurate.

Defective Pricing Remedies ([FAR 15.407-1](#), [FAR 15.408](#), [FAR 52.215-10](#), and [FAR 52.215-11](#)). When defective pricing occurs, the Government is entitled to a price reduction to eliminate any significant overpricing related to the defective data. That reduction must consider increases in both cost and profit or fee related to the defective data.

In addition to a price adjustment, the Government is also entitled to:

- Interest on any overpayments that resulted from the defective pricing of supplies or services accepted by the Government.
- A penalty equal to the amount of any overpayment, if the contractor knowingly submitted certified cost or pricing data which were incomplete, inaccurate, or not current.

The Government entitlement to these remedies is incorporated in the prime contract using one of the following clauses:

- [FAR 52.215-10](#), Price Reduction for Defective Certified Cost or Pricing Data
- [FAR 52.215-11](#), Price Reduction for Defective Certified Cost or Pricing Data-Modifications

The prime contract also requires that covered subcontracts must include the substance of the appropriate clause above.

For a newly awarded contract, the applicable certified cost or pricing data threshold is the threshold that is in effect on the date of agreement on price, or the date of award, whichever is later ([FAR 15.403-4\(a\)\(1\)](#)). The cost or pricing data threshold is currently \$2,000,000. This amount is subject to review and possible adjustment starting October 1, 2000 and every five years thereafter.

Subcontract and Subcontract Modification Certified Cost or Pricing Data Threshold ([FAR 52.215-12](#) and [FAR 52.215-13](#)).

For prime contract modifications, new subcontracts at any tier, and subcontract modifications, the applicable certified cost or pricing data threshold is established by the prime contract.

- For most contracts, the applicable certified cost or pricing data threshold is the current threshold on the date of agreement on price, or the date of award, whichever is later.
- Some older contracts specify a dollar threshold that does not automatically change as the current threshold changes. However, a specific dollar threshold can be updated using a bilateral contract modification.

TINA Cost or Pricing Data Requirements ([FAR 15.403-4\(a\)\(1\)](#)). Unless an exception applies, the Truth in Negotiations Act (TINA), as amended, requires you to obtain certified cost or pricing data before performing any of the following actions when the price is expected to exceed the certified cost or pricing data threshold:

- The award of any negotiated contract (except for undefinitized actions such as letter contracts).
- The award of a subcontract at any tier, if the contractor and each higher-tier subcontractor have been required to furnish cost or pricing data.

- The modification of any sealed bid or negotiated contract (whether or not cost or pricing data were initially required) or subcontract.
 - When calculating the amount of the contract price adjustment, consider both increases and decreases. (For example, a \$500,000 modification resulting from a reduction of \$1,500,000 and an increase of \$1,000,000 is actually a pricing adjustment of \$2,500,000 exceeding the current cost or pricing data threshold.)
 - This requirement does not apply when unrelated and separately priced changes for which certified cost or pricing data would not otherwise be required that are included for administrative convenience in the same contract modification.

Exceptions to TINA Certified Cost or Pricing Data Requirements (FAR 15.403-1). The same laws that establish requirements for certified cost or pricing data also provide for mandatory exceptions. **Never** require certified cost or pricing data” when a TINA exception applies. However, “Data other than certified cost or pricing data” may be obtained if necessary to determine if prices are a fair and reasonable.

Except from TINA requirements if...	Standard for Granting the Exception
<p>The contracting officer determines that the agreed-upon price is based on adequate price competition.</p>	<p>A price is based on adequate price competition when one of the following situations exists:</p> <ul style="list-style-type: none"> • Two or more responsible offerors, competing independently, submit priced offers that satisfy the Government's expressed requirement and both of the following requirements are met: • Award will be made to the offeror whose proposal represents the best value where price is a substantial factor in the source selection; and • There is no finding that the price of the otherwise successful offeror is unreasonable. Any finding that the price is unreasonable must be supported by a statement of the facts and approved at a level above the contracting officer. <p>DFARS 215.371 – Only one offer</p> <ul style="list-style-type: none"> • It is DoD policy, if only one offer is received in response to a competitive solicitation <ul style="list-style-type: none"> ○ To take the required actions to promote competition (see DFARS 215.371-2), ○ To ensure that the price is fair and reasonable (see 215.371-3) ○ And if required to comply with the statutory requirement for certified cost or pricing data (see FAR 15.403-4). • For acquisitions that exceed the simplified acquisition threshold, if only one offer is received when competitive procedures were used and <u>no</u> TINA exception applies, then the cost or pricing data shall be certified.
<p>The contracting officer determines that the item price is set by law or regulation.</p>	<p>Pronouncements in the form of periodic rulings, reviews, or similar actions of a governmental body, or embodied in the laws, are sufficient to demonstrate a set price.</p>

Except from TINA requirements if...	Standard for Granting the Exception
The contracting officer determines that you are acquiring a commercial item.	<p>A new contract or subcontract must be for an item that meets the FAR commercial-item definition.</p> <p>A contract or subcontract modification of a commercial-item contract must not change the item from a commercial item to a noncommercial item.</p>
The head of the contracting activity waives the requirement.	<p>The head of the contracting activity (HCA) (without power of delegation) waives the requirement in writing. The HCA may consider waiving the requirement if the price can be determined to be fair and reasonable without submission of certified cost or pricing data.</p> <p>Note: Consider the contractor or higher-tier subcontractor to whom the waiver relates to have been required to provide cost or pricing data. Consequently, award of any lower-tier subcontract expected to exceed the cost or pricing data threshold requires the submission of cost or pricing data unless an exception otherwise applies to the subcontract.</p>

Other Prohibitions Against Requiring Certified Cost of Pricing Data ([FAR 15.403-1\(a\)](#) and [FAR 15.403-2](#)).

Never require cost or pricing data for:

- Any contract or subcontract action with a price that is equal to or less than the simplified acquisition threshold. When calculating the price adjustment related to a contract modification, consider both increases and decreases, unless unrelated and separately priced changes for which cost or pricing data would not otherwise be required are included for administrative convenience in the same contract modification.
- The exercise of a contract option at the price established at contract award or initial negotiation.
- Proposals used solely for overrun funding or interim billing price adjustments.

Certified Cost or Pricing Data Requirements Authorized by the Head of the Contracting Activity ([FAR 15.403-4\(a\)\(2\)](#)).

If none of the exceptions or prohibitions described above apply, the head of the contracting activity (without power of delegation) may authorize the contracting officer to require certified cost or pricing data for any contract action below the cost or pricing data threshold.

- The head of the contracting activity must justify the requirement.
- Documentation must include a written finding that certified cost or pricing data are necessary to determine whether the price is fair and reasonable and the facts supporting that finding.

Cost or Pricing Data ([FAR 2.101](#)). Cost or pricing data:

- Means all facts that, as of the date of price agreement or, if applicable, another date agreed upon between the parties that is as close as practicable to the date of agreement on price, that prudent buyers and sellers would reasonably expect to affect price negotiations significantly.
- Are factual, not judgmental, and are therefore verifiable.
- While they do not indicate the accuracy of the prospective contractor's judgment about estimated future costs or projections, they do include the data forming the basis for that judgment.
- Are more than historical accounting data; they are all the facts that can be reasonably expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred.

- They also include, but are not limited to, such factors as Include such factors as:
 - Vendor quotations;
 - Nonrecurring costs;
 - Information on changes in production methods and in production or purchasing volume;
 - Data supporting projections of business prospects and objectives and related operations costs;
 - Unit-cost trends such as those associated with labor efficiency;
 - Make-or-buy decisions;
 - Estimated resources to attain business goals; and
 - Information on management decisions that could have a significant bearing on costs.

Certified cost or pricing data means "cost or pricing data" that were required to be submitted in accordance with [FAR 15.403-4](#) and [15.403-5](#) and have been certified, or is required to be certified, in accordance with 15.406-2. This certification states that, to the best of the person's knowledge and belief, the cost or pricing data is accurate, complete, and current as of a date certain before contract award. Cost or pricing data is required to be certified in certain procurements.

Data other than certified cost or pricing data means pricing data, cost data, and judgmental information necessary for the contracting officer to determine a fair and reasonable price or to determine cost realism. Such data may include the identical types of data as certified cost or pricing data, consistent with Table 15-2 of 15.408, but without the certification. The data may also include, for example, sales data and any information reasonably required to explain the offeror's estimating process, including, but not limited to—

- (1) The judgmental factors applied and the mathematical or other methods used in the estimate, including those used in projecting from known data; and
- (2) The nature and amount of any contingencies included in the proposed price.

Data Submission ([FAR 15.406-2\(c\)](#), [FAR 15.408](#), and [FAR Table 15-2](#)). FAR Table 15-2 makes a clear distinction between submitting cost or pricing data and merely making available books, records, and other documents without identification.

- The offeror's requirement to submit cost or pricing data is met when all accurate cost or pricing data reasonably available to the offeror have been submitted, either actually or by specific identification, to the contracting officer or an authorized representative (e.g., the cognizant auditor).
- As later information comes into the offeror's possession, the offeror should promptly submit it to the contracting officer in a manner that clearly shows how the information relates to the offeror's price proposal.
- The requirement for submission of cost or pricing data continues up to the time of agreement on price, or another date agreed upon between the parties involved.
- The offeror must include an index (appropriately referenced) of all the cost or pricing data and information accompanying or identified in the proposal. Any additions or revisions to the original data submission must be annotated on a supplemental index.

Judgment and Cost or Pricing Data (Texas Instruments, Inc., 87-3 BCA 20,195 and Grumman Aerospace Corp., 86-3 BCA 19,091).

"*Certified*" cost or pricing data are facts and do not include any contractor judgment used to estimate future costs. However, there are cases where the Boards of Contract Appeals (BCAs) have found that fact and judgment were so entwined that the judgments must be disclosed.

Example 1: A BCA ruled that a contractor was required to submit a computer-generated report used for estimating unit cost and forward pricing, even though the report contained both cost history and judgment. The judgment was not cost or pricing data. However, the cost history that served as the basis for that judgment was cost or pricing data. The BCA ruled that the report was not excluded from disclosure simply because it included judgment along with the cost or pricing data.

Example 2: A BCA ruled that a contractor was required to submit a draft cost analysis report. The contractor erroneously contended that the narrative analysis contained in the report did not constitute facts and that the bottom line contained in the report was itself meaningless if the Government was provided with the numbers required to perform the arithmetic to reach that bottom line. However, given the nature of the report, the BCA found that the narrative analysis added meaning to the raw figures and could not be said to lack factual content simply because it contained elements of judgment. Moreover, the draft status of the report did not affect its availability for disclosure to the Government, even though the contractor had an internal policy against releasing draft documents.

Situations Requiring a Certificate of Current Cost or Pricing Data (FAR 15.406-2(e)). Whenever you obtain **certified** cost or pricing data, you must obtain a Certificate of Current Cost or Pricing Data unless you find after data submission that the proposal qualifies for an exception to the submission requirement. Never require a Certificate of Current Cost or Pricing Data when a proposal qualifies for an exception.

If you determine after data submission that a proposal should be excepted from the cost or pricing data requirement, treat the data received as information other than cost or pricing data.

Certificate Wording. FAR 15.406-2(a). FAR prescribes the following wording for the Certificate of Current Cost or Pricing Data:

Certificate Of Current Cost Or Pricing Data

This is to certify that, to the best of my knowledge and belief, the cost or pricing data (as defined in section 15.401 of the Federal Acquisition Regulation (FAR) and required under FAR subsection 15.403-4) submitted, either actually or by specific identification in writing, to the contracting officer or to the contracting officer's representative in support of _____* are accurate, complete, and current as of _____**. This certification includes the cost or pricing data supporting any advance agreements and forward pricing rate agreements between the offeror and the Government that are part of the proposal.

Firm _____

Signature _____

Name _____

Title _____

Date of execution*** _____

* Identify the proposal, quotation, request for price adjustment, or other submission involved, giving the appropriate identifying number (e.g., RFP No.).

** Insert the day, month, and year when price negotiations were concluded and price agreement was reached or, if applicable, another date agreed upon between the parties that is as close as practicable to the date of agreement on price.

*** Insert the day, month, and year of signing, which should be as close as practicable to the date when the price negotiations were concluded and the contract price was agreed to.

This exact language specified in [FAR 15.406-2\(a\)](#) must be used. Accepting any variation from the FAR language could potentially invalidate the certificate.

For example: Suppose an offeror innocently replaced part of the last sentence "...includes the cost or pricing data supporting any advance agreements and forward pricing rate agreements between the offeror and the Government that are part of the proposal," with the following words "...includes the cost or pricing data supporting estimates of all direct labor hours and direct material costs in the proposal." If the contracting officer accepted the modified certification and labor rates or overhead rates were later found to be based on defective data, the contracting officer may have unwittingly weakened a legitimate defective pricing case.

Contractor Sweeps. Defective pricing could result, if any person in the contractor's organization knew that cost or pricing data submitted by the offeror were not accurate, complete, and current, when price negotiations were concluded and price agreement was reached or (if applicable) on another agreed-upon date. For example, defective pricing could occur if a subcontract buyer knew that a subcontractor intended to revise its proposal downward by \$50,000, and failed to advise others in the prime contractor's organization.

To assure compliance with TINA requirements, many contractors have instituted programs for conducting extensive reviews of available cost or pricing data after negotiations are complete, but before submitting the Certificate of Current Cost or Pricing Data.

- These reviews are commonly known as "sweeps."
- The objective is to identify any new or revised data required to assure that all cost or pricing data are accurate, complete, and current.
- The offeror then submits the new or revised data to the Government with the Certificate of Current Cost or Pricing Data.
- In some cases, offerors have taken several months to complete a sweep for a single contract.

If a contractor requires more than 30 days to submit a Certificate of Current Cost or Pricing Data, the delay could indicate serious flaws in the contractor's estimating system. Consider the potential for such flaws as you analyze future cost proposals.

Whenever the contractor submits new or revised cost or pricing data after agreement on contract price but prior to contract award, you should require the contractor to provide an index of the data and a statement that explains how the data relate to the offeror's price proposal.

- **Review The Data and Related Explanation.** Determine if the new or revised data will have a significant impact on the negotiated price.
- **Establish Your Position On The Need To Adjust Contract Price.** If the data indicate that the negotiated price was increased or decreased by any significant amount because the contractor did not submit accurate, complete, and current data before price agreement, establish your position on any price changes needed before contract award. Consult with agency legal counsel to assure that your position conforms to the requirements of the law and agency policy.

For example: The DoD Inspector General (DODIG) has established the following position on the treatment of cost or pricing data identified by offerors after agreement on price but before contract award:

- Do not increase the contract price as a result of data submitted after price agreement.
- Reduce the agreed-upon price if the data indicate that the negotiated contract price was increased by any significant amount because the contractor did not submit the data before price agreement.
- **Reach Agreement With The Offeror.** Because you do not yet have a binding contract, the contracting officer and the contractor must negotiate, using the new or revised data submitted by the offeror.

- **When Needed, Obtain An Updated Certificate Of Current Cost Or Pricing Data.** If contract price changes based on the new or revised data, you must decide whether to rely on the certification submitted with the data or require a new certification. Consult with agency legal counsel to assure that your position conforms to the requirements of the law and agency policy.
 - If the discussions with the offeror are limited to cost or pricing data covered by the existing Certificate of Current Cost or Pricing Data, a new certificate will normally not be necessary.
 - If the discussions with the offeror are based on data not covered by the existing Certificate of Current Cost or Pricing Data, require the offeror to submit a new certificate. That certificate must certify that the data were accurate, complete, and current as of the close of the reopened negotiations or (if applicable) on another agreed-upon date.
- **Document Your Actions.** Whatever action you take, assure that it is clearly documented in the contract file.

Document Reliance on Cost or Pricing Data ([FAR 15.406-3\(a\)](#), [FAR 15.407-1\(a\)](#), [FAR 15.407-1\(b\)\(3\)](#), Conrac Corp., 78-1 BCA 12,985, Norris Industries, Inc., 74-1 BCA 10482, Aerojet Ord. Tenn., 95-2 BCA 27,922, and Gen. Dynamics Corp., 93-1 BCA 25,378).

Your price negotiation memorandum must indicate what cost or pricing data you relied upon when negotiating contract price. Courts and BCAs have refused to support Government allegations of defective pricing when the contractor argued successfully that the Government did not rely on the defective cost or pricing data. The strongest evidence of reliance on cost or pricing data is a clear price negotiation memorandum.

- Reliance exists when you directly or indirectly use offeror cost or pricing data to establish a contract price or a contract price negotiation objective.
 - Direct reliance occurs when you use cost or pricing data obtained directly from the offeror's proposal.
 - Indirect reliance occurs when you use audits, cost estimates, should-cost studies, technical evaluations, or any other evaluations which in turn considered the contractor's cost or pricing data.
- Reliance is not limited by what you "should have known." For example, a contractor cannot argue that a careful comparison with another proposal by the company would have revealed an error.
- Reliance is not negated by offeror price reductions or concessions made in the give-and-take of negotiations, unless the reduction or concession is specifically tied to updated cost or pricing data.
- Reliance does not exist if you knew, at the time of price agreement, that specific data provided by the contractor were not accurate, complete, and current. In fact, FAR requires you to notify the contractor if you learn prior to price agreement that the cost or pricing data are not accurate, complete, and current.

5.1 Identifying Possible Defective Pricing

Indicators That Cost or Pricing Data Are Defective ([DCAM 14-117](#)). You may uncover indicators of defective cost or pricing data during day-to-day operations or during reviews of contractor operations (e.g., technical reviews for negotiating other related contracts, purchasing system reviews, or contract performance reviews). Examples of situations that may raise your concern about possible defective pricing include:

- Incurred costs (either generally or in a particular category) seem to be running significantly less than projected.
- Operations included in the contractor's proposal are not actually performed in completing the contract.
- Direct cost items included in the proposal appear to be priced higher than they should be based on information available to the contractor (and not disclosed to the Government) at the time of contract price agreement.
- Data presented during later negotiations with the same company provide information that is significantly different from that presented in earlier negotiations.
- Data collected during market research for a subsequent contract are inconsistent with the certified data.
- Defective pricing is identified on related contracts.
- Operating budget plans (e.g., indirect cost budgets) contain data that are different from the data in the contract proposal.
- Labor-mix estimates do not include data on the actual labor mix on the same or similar contracts.
- Review of other proposals indicates that the value of the contractor's inventory was erroneously computed or the latest valuation was not reflected in the contractor's proposal.
- Estimating system reviews reveal deficiencies in procedures for identifying and submitting cost or pricing data.
- Contractor pricing personnel or negotiators informally state that they failed to follow contractor internal pricing policy or estimating and/or purchasing manual instructions.
- Technical review of contract performance indicates that quantity estimates were erroneous because the contractor did not use current product drawings or failed to read drawings correctly.
- Purchasing reviews indicate that the contractor did not submit available evaluations of vendor quotations or failed to reveal changes in its evaluations.
- Purchasing reviews indicate that purchase order cancellations were not disclosed to the Government.
- Later technical evaluations indicate that the contractor did not disclose projected increases in business volume that would affect current and projected overhead and general and administrative expense rates.
- Contract performance reviews indicate that the contractor duplicated cost estimates for the same task.
- The make-or-buy plan submitted with the proposal is significantly different than the plan being used in contract performance.
- New or revised production processes which will be used in contract performance were not disclosed.

Discuss Concerns with the Contractor. After contract award, investigate whenever you suspect that the data provided by the contractor or subcontractor were not accurate, complete, and current as of the close of negotiations or (if applicable) on another agreed-upon date.

To assure that you understand the situation, you may wish to contact the contractor to discuss your suspicions before contacting the cognizant auditor. During your discussions:

- Describe the data that you suspect are defective.
- Unless it would jeopardize the Government's position, describe the reasons that you suspect that the data are defective.
- Obtain the contractor's position on whether the cost or pricing data were accurate, complete, and current.

Document your suspicions and the results of your discussions with the contractor. Place a copy in the affected contract file(s).

Discuss Concerns with Auditor. If you are not satisfied with the contractor's position, you may wish to informally contact the cognizant auditor before requesting a defective pricing audit. A situation that appears suspicious may, in fact, result from using acceptable accounting and estimating practices.

Consider Defective Pricing Significance ([FAR 15.407-1\(b\)](#), [FAR 52.215-10](#), [FAR 52.215-11](#), [DCAM 14-120.1](#), and Kaiser Aerospace & Electronics Corp., 90-1 BCA 22,489).

The FAR defective pricing clauses provide that the Government is entitled to remedies if a contract price was increased by any "significant amount," because the contractor provided cost or pricing data that were not complete, accurate, and current. However, it does not define what amount is significant.

One BCA found that the Government was entitled to a reduction of \$5,000 even though that amount was only two-tenths of one percent of the contract price. The decision pointed out that the language of the Truth in Negotiations Act does not vest in a contractor the right to keep amounts obtained through supplying defective pricing data on the grounds that the amount so obtained was insignificant in relation to the overall contract price.

However, substantial resources are required to identify, pursue, and settle defective pricing allegations. Accordingly, you should consider the materiality of alleged defective pricing before you decide to pursue the allegation.

There are no universal Government policy on materiality, but DCAA provides one useful guideline. In DCAA potential price adjustments of less than five percent of contract price or \$50,000, whichever is less, are normally considered immaterial and not pursued unless:

- A contractor's deficient estimating practices have resulted in recurring defective pricing; or
- The potential price adjustment is due to a system deficiency which affects all contracts priced during the period.

Request a Defective Pricing Audit ([FAR 15.407-1\(c\)](#)). If you still suspect that the contract price significantly increased because of defective cost or pricing data, request an audit to evaluate the accuracy, completeness, and currency of the cost or pricing data submitted by the contractor through the close of negotiations. As part of your request, provide the following information:

- Identify the data that you suspect are defective.
- Describe, in detail, your reasons for suspecting that the data are defective.
- Provide the auditor a copy of:
 - The PNM if one was not previously provided.
 - The final proposal index of cost or pricing data provided by the contractor.
 - Any cost or pricing data provided to the contracting officer to support the contractor's pricing proposal, but not previously provided to the auditor.
- If the auditor needs any additional information or support to complete the audit, you should provide it in a timely manner.

5.2 Developing The Government Position On Price Adjustment

Requirement for Prompt Audit Resolution ([FAR 15.407-1](#), [DoDI 7640.2](#), and [OMB Circular A-50](#)).

The first step in developing a Government position on a price reduction for defective pricing is a post-award audit. Although the FAR requires contracting officers to request a Government audit when they suspect defective pricing, most audits that identify defective pricing are undertaken as part of a systematic agency audit program or defective pricing reviews conducted by the GAO and Inspectors General.

Regardless of why the audit was initiated or which organization performed the audit, Public Law and Office of Management and Budget (OMB) guidance require audit resolution within six months of the date that the audit was issued. Resolution occurs when the Government prenegotiation objective on the defective pricing is documented and approved in accordance with agency requirements.

- For GAO audits resolution requires an agency response to Congress.
- For other defective pricing audits, resolution occurs when:
 - The audit organization and agency management or contracting officials agree on the Government's prenegotiation objective, or,
 - If the parties cannot agree, when the audit follow-up official determines the matter to be resolved.

Contractor agreement is not required to achieve audit resolution. A defective pricing audit report is considered resolved when the prenegotiation objective is approved even though the contractor still has the right to negotiate, appeal, or litigate the resolution.

Process for Developing a Prenegotiation Position ([DoDI 7640.2](#)). Agency directives (e.g., Department of Defense Directive (DODD) 7640.2, Policy for Follow-up on Contract Audit Reports) provide detailed policy and procedural guidance for the resolution and disposition of specified audit reports. The table below delineates typical steps in a negotiated settlement of an alleged case of defective pricing **[in order to achieve disposition in accordance with DoDI 7640.2]**. If a negotiated settlement cannot be reached, the process can take much longer **[especially if it goes into litigation]**.

Notional Schedule for a Negotiated Settlement		
Step	Contracting Officer Action	Complete by Day
1	Receive audit and initiate tracking.	5
2	Review the audit report and develop action plan.	10
3	Assemble related facts: <ul style="list-style-type: none"> • Request contractor comments and rebuttal, if any, to defective pricing allegations. • Review the PNM and other documents related to cost or pricing data submission and contract negotiation. • Consult with Government personnel involved in the negotiation process. 	75
4	Review the contractor's response: <ul style="list-style-type: none"> • Request audit comments on the contractor's rebuttal and any additional information uncovered during your review. • Request legal comments on the audit and the contractor's rebuttal. Include copies of all relevant documents in your request. • If new information is uncovered during your review, request additional contractor comments and rebuttal, if any. 	135

Notional Schedule for a Negotiated Settlement		
Step	Contracting Officer Action	Complete by Day
5	Develop, Document, and Obtain Approval of Prenegotiation Objective (Agency Decision)	180
6	Conduct settlement discussions with the contractor.	240
7	Complete the adjustment: (Completion of Action) <ul style="list-style-type: none"> • Prepare the following documents: • Price negotiation memorandum. • Contract modification - if the contractor owes the Government money. (Make modification bilateral if agreement was reached, unilateral if agreement was not reached.) • Final decision if agreement was not reached. • Demand for payment. • Obtain necessary clearance reviews. • Distribute the appropriate documents to the parties involved. 	300

Review the Audit Report. Assure that the audit report:

- References the correct cost or pricing data cutoff date for receipt of updated cost or pricing data. The "as of" date is crucial, not date of certificate execution.
- Reflects the use of the contractor's latest certified cost or pricing data as reconciled with the PNM, and that the auditor considered all cost or pricing data and updated proposals.
- Clearly demonstrates a causal relationship between the cost or pricing data defect and the increase in contract price.
- Specifically references the exact cost category of the contractor's proposal deemed defective.
- Considers any prime contract special provisions that control the method of pricing contract modifications (when applicable).
- Findings are not affected by:
 - Incomplete or undefined contractor nomenclature;
 - Information outside the scope of certified cost or pricing data (e.g., judgments that had been made by contractor personnel);
 - An unclear audit scope; or
 - Unsubstantiated statements or conclusions that are not specifically supported by the audit findings.

Immediately consult your legal counsel for assistance and direction if a defective pricing case appears to involve fraud. Hold all actions involving suspected fraud in abeyance pending receipt of legal advice and any required coordination with the Department of Justice.

Request Contractor Comments ([FAR 15.407-1\(d\)](#), [DCAM 4-303.1](#), [DCAM 4-304.3](#), and [DCAM 14-122](#)).

DCAA and most other Government audit organizations discuss factual matters with contractors throughout the post-award audit process. They also generally request contractor comments on a draft copy of the audit report exhibits, explanatory notes, disputed documents, and other significant audit information prior to final audit release. If the contractor refuses to provide comments on a draft report, the auditor may even ask for contracting officer assistance in obtaining a response. Generally, the contractor's responses to audit findings and the auditor's comments on those responses are included in the final audit report.

Still, you should give the contractor one final opportunity to comment on the audit findings before you develop your prenegotiation objectives. Limit the data released to that used as a basis for the prime contract price reduction.

- If there is some reason that you are unable to release the entire audit report, provide the contractor with a detailed summary of key elements.
- If the defective pricing allegations relate to subcontractor data, provide information necessary to support a prime contract price reduction available to the prime contractor. Assure that you do not disclose subcontractor trade secrets or confidential business information.
- If the contractor requests a copy of the price negotiation memorandum (PNM), most agencies authorize contracting officer release of pertinent portions. However, you should consult your agency legal counsel to determine your authority for release and any conditions required for release.

Establish a reasonable date for contractor response (normally 30 days). The period for response may be extended if necessary, but you should always emphasize to the contractor that a timely and complete response is essential to timely disposition of the defective pricing allegations.

Review Information Available Within Government Resources. Review the PNM and other information available within Government resources related to cost or pricing data submission and contract negotiation. Weigh the audit findings against any other information identified.

- In particular, you should consider the documentation in the PNM. The PNM should provide essential information concerning the cost or pricing data submitted by the contractor and the reliance placed on that data in contract pricing.
- You may find documents that clearly support the position that the data were defective and significantly affected the negotiated price.
- You may find other documents with information indicating that the data were not defective, such as:
 - Additional proposal updates provided by the contractor during the course of negotiations (e.g., later purchase orders, more current labor and overhead rates, or production techniques proposed by the contractor during negotiations).
 - Evidence indicating that the defective data did not have a significant effect on contract price because the contracting officer did not rely on it.
- Collect factual information and documentation from engineers, price analysts, production specialists, and others who may possess information on the preaward negotiation process that is not included in the contract file.

Review the Contractor's Response ([FAR 15.407-1\(d\)](#), Univ. of Cal., San Francisco, 97-1 BCA 28,642, and *M-R-S Mfg. Co. v. U.S.*, 203 Ct.Cl. 551, 492 F.2d 35).

Review the contractor's response to identify areas of agreement and the contractor's rationale for any disagreement. If the contractor agrees with the audit findings, your task is easy. Occasionally, a contractor will even submit a check with its audit response. However, more often, the contractor will submit a rebuttal to the audit findings.

Obtain support as necessary from other members of the negotiation team. Support from the cognizant auditor and legal counsel can be particularly valuable.

Remember that the Government's right to a price adjustment is not affected by any of the following circumstances:

- The contractor or subcontractor was a sole-source supplier or otherwise was in a superior bargaining position.
- The contracting officer should have known that the cost or pricing data at issue were defective even though the contractor or subcontractor took no affirmative action to bring the character of the data to the attention of the contracting officer.

- The contract was based on an agreement about the total cost of the contract and there was no agreement about the cost of each item procured under the contract.
- The prime contractor or subcontractor did not submit a Certificate of Current Cost or Pricing Data relating to the contract.

Your review may raise additional questions concerning the contractor's position and related information that must be answered before you can begin to prepare your prenegotiation objectives. In fact, you may find it necessary to exchange questions and answers with the contractor several times before the true differences between the audit position and the contractor's position are clear. If all parties can agree on the facts, it should be much easier to dispose of the audit.

Price Adjustment Prenegotiation Objective ([FAR 15.407-1\(b\)](#), [FAR Table 15-2](#), [DCAM 14-116.2](#), Kaiser Aerospace & Electronics, 90-2 BCA 22,965, Sperry Corp. Computer Systems, 88-3 BCA 21,623, and McDonnell-Douglas Corp., 69-2 BCA 7897).

The cognizant contracting officer is responsible for determining the price adjustment, if any, due the Government as the result of the alleged defective pricing. If your position differs from the final position of the cognizant auditor, assure that you comply with your agency and local procedures for documentation and review procedures to achieve audit resolution.

If you believe that the data provided by the contractor were defective, you must determine what the price would have been if the data had not been defective. The difference is the price adjustment due the Government as a result of the defective pricing.

- **Establish A Price-Adjustment Baseline.** Your price-adjustment baseline should be the price supported by the defective cost or pricing data submitted by the offeror before the close of negotiation or another agreed-upon date. Draw information on the data submitted from the PNM and the last cost or pricing data index submitted by the contractor.
 - Normally, you should use the baseline calculated by the auditor and reported in the defective pricing audit. This audit should have been adjusted for any additional cost or pricing data submitted by the contractor up to the time of price agreement and any sweeps data submitted after price agreement but before contract award.
 - You may modify the audit baseline if you identify new data or interpret existing data in a manner other than that used by the auditor in preparing the report. Normally, you should coordinate with the auditor before adopting an adjusted baseline to identify any pitfalls associated with your approach.
 - BCA decisions (e.g., Sylvania Elect. Products, 70-2 BCA 8387, affirmed 202 Ct. Cl. 16,479 F.2d 1342) have accepted baselines based on the amount negotiated when the facts of the case clearly demonstrated that the specific cost element was reduced from the proposed amount to the amount negotiated. However, you should not adjust a baseline based on general across-the-board price reductions because there is no way to determine if those adjustments were related to the specific costs involved.
- **Calculate A Dollar-for-Dollar Reduction.** Normally, you should calculate the price reduction amount using the difference between the analysis baseline and a comparable price based on accurate, complete, and current data for the negotiation period.
 - That dollar-for-dollar reduction assumes that the **natural and probable consequence** of defective pricing is a price increase equal to the amount of the data defect plus applicable overhead and profit/fee.
 - The contractor may question the dollar-for-dollar reduction alleging that the defective data did not create a dollar-for-dollar change in contract price. For example, the firm could present evidence indicating that the contracting officer used a method (e.g., a pricing formula) that was not affected by the defective data. If that happens and the case goes to a BCA or Court, you:
 - Must provide evidence that defective data led to a price increase and the amount of that increase.

- **Consider Special Rules For Reductions Related To Unused Subcontract Quotes** ([FAR 15.407-1\(f\)\(1\)](#)). Special treatment is required for situations where a prime contractor uses defective subcontractor data in its pricing proposal but does not award a subcontract to the proposed subcontractor.
 - If the prime contractor awards the subcontract to a lower priced subcontractor, any adjustment in the prime contract price due to defective subcontract data is limited to the difference (plus applicable indirect cost and profit/fee) between the subcontract quote used for pricing the prime contract and the actual subcontract price (provided the data on which the actual subcontract price is based is not defective).
 - If the prime contractor performs the work in-house, any adjustment in the prime contract price due to defective subcontract data is limited to the difference (plus applicable indirect cost and profit/fee) between the subcontract quote used for pricing the prime contract and actual cost to the prime contractor.
- **Consider Offsets.** When one element of proposed cost is overstated because a firm based its proposal on defective data, another cost in the same proposal may be understated because the firm based its proposal on defective data. If a contractor claims an offset, you should request support from the cognizant auditor in evaluating that claim.
 - Allow an offset for any proposed costs that were understated because the firm based its cost proposal on defective data, up to the amount of the Government's defective pricing claim. In other words, the overall contract price must not increase because the contractor provided defective cost or pricing data.
 - Only allow an offset in an amount supported by the facts if the contractor:
 - Certifies that, to the best of the contractor's knowledge and belief, the contractor is entitled to the offset in the amount requested; and
 - Proves that the cost or pricing data were available before the date of agreement on price, but were not submitted.
 - Only allow an offset for understated cost elements in the same pricing action. The understated cost need not come from the same cost grouping (e.g., material, direct labor, or indirect cost).
 - Do not allow an offset if the:
 - Understated data were known by the contractor to be understated when the Certificate of Current Cost or Pricing Data was signed; or
 - The facts demonstrate that the price would not have increased in the amount proposed for offset even if the available data had been submitted before the date of price agreement or another agreed-upon date.

Interest Adjustment Prenegotiation Objective ([FAR 15.407-1\(b\)\(7\)](#)). In calculating the interest due:

- Determine the defective pricing amounts that have been overpaid to the contractor by the Government.
- Consider the date of each overpayment.
 - For subcontract defective pricing, use the date that payment was made by the Government to the prime contractor, based on the prime contract progress billings or deliveries, which included payments for a completed and accepted subcontract item.
 - For other defective pricing, use the date that payment was made by the Government to the prime contractor for the related completed and accepted contract items.
- Apply the underpayment interest rate(s) in effect for each quarter from the time of overpayment to the time of repayment, utilizing rate(s) prescribed by the Secretary of the Treasury. Remember that interest continues to accrue until repayment is made.

Penalty Prenegotiation Objective ([FAR 15.407-1\(b\)\(7\)](#)). The current contract clauses on price reduction for defective pricing require the contracting officer to assess a penalty for any overpayment that resulted from knowing submission of defective cost or pricing data under any Government contract. Prior to 1 October 1995, the penalty provision only applied to DoD contracts.

The contract clauses require you to set the penalty at an amount equal to the amount of the overpayment.

Obtain Objective Review and Approval ([DoDI 7640.2](#) and [OMB Circular A-50](#)). Before entering into discussions with the contractor, obtain all reviews and approvals required by FAR, agency, or contracting activity guidance. This action will normally meet the requirement for audit resolution.

Even if it is not specifically required, consider obtaining legal review before entering into discussions with the contractor on a defective pricing case.

5.3 Completing Settlement Action

Process for Completing the Settlement Action. After all the necessary reviews and approvals have been completed, you will be in a position to complete settlement action, including the following.

- Conduct settlement discussions with the contractor;
- Complete settlement documentation;
- Obtain necessary clearance reviews and approvals; and
- Distribute the appropriate documents to the parties involved.

Conduct Settlement Discussions (FAR 33.210). Conduct settlement discussions with the contractor to reach a bilateral agreement. If you believe it would benefit discussions, invite the cognizant auditor to participate in discussions.

In attempting to reach a settlement, do not:

- Make an agreement that precludes further defective pricing audit reviews on the same or other contracts.
- Make an agreement that is contingent upon settling defective pricing found in other contracts.
- Accept contractual goods or services on the same or other contracts as compensation for, or disposition of, a defective pricing case.
- Credit the amount of defective pricing in negotiating a concurrent or subsequent contract, including a follow-on contract.
- Adjust only one contract for defective pricing when the same defective pricing was cited on multiple contracts with the same contractor.
- Settle, compromise, pay, or otherwise adjust any claim involving fraud, or any claim or dispute for penalties or forfeitures prescribed by statute or regulation that another Federal agency is specifically authorized to administer, settle, or determine.

If you cannot reach agreement with the contractor, issue a contracting officer's final decision under the contract Disputes clause.

Complete Settlement Documentation (FAR 15.407-1(d) and FAR 33.211). Documentation is required, no matter how successful you are in reaching a negotiated settlement. In addition to a copy of the defective pricing audit, any comments obtained from the contractor, other documents used in preparing prenegotiation objectives, and prenegotiation objectives, assure that the contract file documentation includes, the price negotiation memorandum, a final decision (if necessary), a contract modification, and the demand for payment (if needed).

- **Defective Pricing Memorandum.** The pricing memorandum must include the following:
 - Your determination as to whether or not the submitted data were accurate, complete, and current as of the date certified and whether or not the Government relied on the data; and
 - The results of any contractual action taken.
- Contracting Officer's Final Decision (if required). The final decision must:
 - Describe the claim for defective pricing.
 - Reference the pertinent contract clause.
 - State the factual areas of agreement and disagreement.
 - State your decision with supporting rationale.
 - Include the paragraph at [FAR 33.211\(a\)\(4\)\(v\)](#) delineating the contractor's right to appeal.
 - Demand payment whenever the decision results in a finding that the contractor is indebted to the Government.

- **Price Reduction Contract Modification and Demand Letter.** If the contract price is reduced as a result of the alleged defective pricing, document the price reduction in a contract modification. If the amount due the Government exceeds the amount remaining on the contract, issue a demand letter to obtain the difference. Assure that the contract modification and any demand letter include the following information:
 - The repayment amount.
 - The penalty amount (if any).
 - The interest amount through a specified date.
 - A statement that interest will continue to accrue until the date repayment is made.

Obtain Clearance Reviews and Approvals. Before distributing documents related to the settlement, obtain any approvals required by agency or local guidance.

Distribute Documents ([FAR 15.407-1\(d\)](#)). Distribute the defective pricing memorandum as follows:

- Send one copy to the cognizant auditor.
- If the contract has been assigned for administration, send one copy to the ACO.
- Notify the contractor of your determination by providing the contractor a copy of the defective pricing memorandum, or by some other means.

Distribute other contractual documents as required by FAR and agency procedures.*

Chapter 6

Pricing Equitable Adjustments and Settlements

6.0 - Chapter Introduction

6.1 - Issues And Factors To Consider In Making Equitable Adjustments

6.1.1 - Equitable Adjustment Concepts

6.1.2 - Cost Issues

6.1.3 - Profit/Fee Issues

6.1.4 - Proposal Analysis And Negotiation Process Issues

6.2 - Pricing Contract Changes

6.3 - Other Situations Requiring Adjustment

6.4 - Definitizing Undefinitized Contract Actions

6.5 - Special Considerations For Pricing Claims

6.0 Chapter Introduction

This chapter will examine the application of equitable adjustment and settlement concepts in a variety of situations.

6.1 Issues And Factors To Consider In Making Equitable Adjustments

This section will examine some of the major concepts and issues that you should consider in making an equitable adjustment.

- 6.1.1 - [Equitable Adjustment Concepts](#)
- 6.1.2 - [Cost Issues](#)
- 6.1.3 - [Profit/Fee Issues](#)
- 6.1.4 - [Proposal Analysis And Negotiation Process Issues](#)

Defining Equitable Adjustment. The term "equitable adjustment" appears expressly or implicitly in several places in the FAR text and several contract clauses (e.g., Changes, Government Property, and Differing Site Conditions). Unfortunately, neither the FAR text nor the contract clauses objectively define what is equitable, so we are left with subjective definitions.

- *Webster's Third New International Dictionary* defines "equitable" as "characterized by equity...fair to all concerned ... without prejudice, favor, or rigor entailing undue hardship...that can be sustained or made effective in a court of equity or upon principles of equity jurisprudence."
- As suggested by the dictionary definition, the Courts and Boards of Contract Appeals (BCAs) have relied on such concepts as "fair and reasonable" and legal precedent to define "equitable adjustment."
 - Unfortunately, there are no hard and fast rules that will always assure agreement between contractors and the Government.
 - There are not even any rules that will always assure success before the Courts and BCAs.
- The material presented in this chapter offers a framework for you to consider in pricing equitable adjustments.

6.1.1 Equitable Adjustment Concepts

Need for Equitable Adjustments. Equitable adjustments are necessitated by some modification of the contract effort. In general, these contract modifications can be defined in one of three ways:

- Addition of work to the contract.
- Deletion of work from the contract.
- Substitution or replacement of one item of work for another (i.e., an addition with a related deletion).

This modification may come from an overt change in Government requirements or it may come from a change in the conditions surrounding the contract (e.g., differing site conditions or late delivery of Government-furnished property).

Certification Requirements ([DFARS 243.204-71](#) and [DFARS 252.243-7002](#)). The Department of Defense requires a Certification of Requests for Equitable Adjustment for any request exceeding the simplified acquisition threshold. The amount of the equitable adjustment is the aggregate sum of the dollar increase plus dollar decrease.

- The required language of the certification reads:

"I certify that the request is made in good faith, and that the supporting data are accurate and complete to the best of my knowledge and belief."

- The instructions for completing the certification put the contractor on notice that the certification requires full disclosure of all relevant facts, including:
 - Any required cost or pricing data; and
 - Actual cost information and information to support any estimated costs, even if cost or pricing data are not required.

Objectives in Making an Equitable Adjustment (Condor Reliability, Inc., 90-3 BCA 23,254).

Whatever the reason for the contract modification, the related equitable adjustment should be based on the difference between the reasonable cost of performing the contract without the addition, deletion, substitution or replacement, and the reasonable cost of performing with it.

In other words, the contractor should not be left in a better or worse cost or profit position on the unchanged work after the change than it was before the change.

To attain this objective, the price adjustment should include the:

- Direct cost of added work;
- Estimated direct cost of deleted work not already performed;
- Indirect cost affected by the modification; and
- Profit/fee affected by the modification.

Approaches to Equitable Adjustment. Over the years, Courts and BCAs have generally used one of the following four approaches to establish equitable adjustments in specific cases:

- Reasonable cost;
- Jury Verdict;
- Total cost; or
- Reasonable value.

Reasonable Cost Approach ([FAR Table 15-2](#), [FAR 31.201-3](#), and *Bruce Construction v. U.S.*, CT-CL 97 324 F2d 516, *Wyman-Gordon Co.*, 59-2 BCA 2344, *Walsh Const. Co.*, 57-2 BCA 1475, *Grumman Aerospace Corp.*, 76-1 BCA 11,671, and *General Dynamics/ Astronautics Corp.*, 63 BCA 3685).

Since the Court of Claims decision on Bruce Construction in 1963, the reasonable cost approach has generally been considered the best approach for pricing an equitable adjustment. Use it whenever accurate information is available concerning contractor costs affected by the modification. However, if contractors do not have accurate cost information, you should consider other approaches.

- Under the reasonable cost approach, the net cost of a contract modification is calculated as follows:

$$N = A - (D - C)$$

Where:

N = Net change in cost related to a contract modification

A = Current estimate of the cost to complete the added work

D = Current estimate of the cost of all deleted work

C = Actual cost of deleted work already performed

- Consider the following points whenever you use this approach:
 - **General tests of cost reasonableness.**
 - Is this type of cost generally recognized as necessary in conducting business?
 - Is the cost consistent with sound business practice, law, regulation, and the principles of "arms-length" bargaining?
 - Does the contractor's action reflect a responsible attitude toward the Government, other customers, and the taxpayers at large?
 - Are the offeror's actions consistent with established practices?
 - **No presumption of incurred cost reasonableness.** If you challenge an actual cost after an initial review of the facts, the contractor has the burden to prove that the cost is reasonable. As you answer the above questions on cost reasonableness, consider the contractor's:
 - Situation at the time that the cost was incurred.
 - Unique business judgment.
 - The amount of cost incurred and the actions of the contractor in incurring those costs.
 - **Prudent effort.** Contractors may incur excess costs despite good faith efforts. Such costs are generally considered reasonable as long as they do not exceed the costs that a prudent person would have incurred under the circumstances. For example:
 - When a contractor's decision affecting contract cost does not require Government approval, you should consider the contractor's prudent effort and the facts available when the decision was made.
 - However, if the contractor's decision required Government approval and the contractor proceeded without the required approval, the resultant costs in excess of what the Government would have approved should normally be considered unreasonable.

Jury Verdict Approach (Michael-Mark Ltd., 94-1 BCA 26,453, Herman B. Taylor Const. Co., 96-2 BCA 28,547, Conner Brother Const. Co. Inc., 95-2 BCA 27,910, Geo-Con, Inc., 96-1 BCA 28,112, and Dawco Const., Inc. v. U.S., 930 F2d 872, FAR 52.243-6, Michael-Mark Ltd., 94-1 BCA 26,453, Herman B. Taylor Const. Co., 96-2 BCA 28,547, Conner Brother Const. Co. Inc., 95-2 BCA 27,910, Geo-Con, Inc., 96-1 BCA 28,112, and Dawco Construction, Inc. v. U.S., 930 F2d 872).

Where costs cannot be segregated and identified for reasonable cost analysis, both the Government and the contractor must approach an equitable adjustment with fewer facts and increased reliance on judgment.

- In such cases, the Courts and the BCAs often use the Jury Verdict approach -- an approach that relies on available facts and expert opinion.
 - Experts for the contractor and the Government have an opportunity to present the available evidence, including the opinions of qualified experts (e.g., estimators).
 - Both sides have the opportunity to directly challenge the facts and judgment presented by the other side.
 - Based on the information presented, the Court or BCA can reach a decision on an equitable adjustment in the same manner as a jury.
- Normally, your negotiations to arrive at an equitable adjustment will not have the formality of a courtroom or a hearing room. However, you should consider the key principles of the Jury Verdict approach in cases where the following elements are present:
 - **Clear evidence that an adjustment is appropriate.** Do not use the principles of this approach, unless the facts of the case clearly demonstrate that an equitable adjustment is appropriate.
 - **Not enough information available to use for reasonable cost approach.** Good business practice and the findings of Courts and BCAs require you to use the Reasonable Cost approach when adequate cost information is available.
 - **Lack of cost information is not unreasonable.** There are many situations where it is reasonable for a contractor to have incomplete records on costs affected by a contract modification. However, you should normally not use this approach in situations where the contractor was required to maintain adequate cost information (e.g., the contractor was required to comply with the Change Order Accounting clause).
 - **Convincing evidence of costs affected.** To use this approach, you should have convincing evidence of the nature and kinds of costs affected.
 - **Reasonable basis for judgment.** This approach uses judgment instead of the calculations of the Reasonable Cost approach, but that judgment must be based on the facts available. If the facts available do not provide a reasonable bases for adjustment, you should consider the viability of the Total Cost approach before continuing.

Total Cost Approach (WRB Construction Co., v. U.S., 12 CCF 81,781, Phillips Const. Co., v U.S., 12 CCF 81,001, Servidone Const. Corp. v. U.S., 19 Cl.Ct 346, Servidone Const. Corp. v. U.S., 931 F.2d 860, and Neal & Company Inc. v. U.S., 19 Cl.Ct 463).

Under the Total Cost approach, the total cost of the change is the difference between the original contract price and the actual cost of performing the contract as changed.

- Generally, this approach is considered to be less desirable than the approaches above for two reasons:
 - Total costs can include not only the additional costs properly attributable to Government action or inaction, but also those attributable to contractor action or inaction.
 - Original contract prices are often based on unrealistically low bids/proposals.
- Consider using the key principles of the Total Cost approach in cases where the following elements are present:
 - **Clear evidence that an adjustment is appropriate.** Do not use the principles of this approach, unless the facts of the case clearly demonstrate that an equitable adjustment is appropriate.
 - **Impracticable to use another approach.** Only use this approach when it is not practicable to use the Reasonable Cost or Jury Verdict approach to calculate the equitable adjustment required. Consider use when costs cannot be allocated to specific

changes and the facts available do not permit development of reasonable estimates of actual costs.

- **Lack of cost information is not unreasonable.** Normally, you should not use this approach in situations where the contractor was required to maintain adequate cost information on the contract modification (e.g., the contractor was required to comply with the Change Order Accounting clause).
- **Realistic base for adjustment.** Only use this approach when you can establish a realistic price for contract work without the modification.
- The basis for adjustment is normally the contract price before the modification took place.
- If the contract price before the modification was unrealistically low, do not permit the contractor to "get well" by over-pricing the contract modification.
- When the contract price before the modification was unrealistic, you may consider another basis for adjustment (e.g., the contract price adjusted for known elements of unrealistic pricing).
- **Reasonable total cost.** Only use this approach when the contractor's total cost records are accurate and the total cost appears reasonable for the effort required.
- **Contractor not responsible for added cost.** Before using this approach, you must be reasonably sure that the increased costs resulted from the modification and include only those cost increases attributable to Government action/inaction.

Reasonable Value Approach (Bruce Construction v. U.S., CT-CL 97 324 F2d 516). In the past, reasonable value, was frequently used to estimate the change in contract value that resulted from the contract modification. However, this method has been replaced by the reasonable cost approach since the Court of Claims decision on Bruce Construction in 1963.

- In that case, Bruce Construction claimed a \$42,425.98 price increase for replacing concrete blocks in a construction project with sand blocks.
- Based on market prices, that claim appeared reasonable because the market price for sand blocks was generally higher than the price for concrete blocks in the area.
- In fact, Bruce purchased sand blocks for the price of concrete blocks.
- The Court rejected the claim -- finding that cost is the best measure of value.

6.1.2 Cost Issues

Contract Clauses Control Adjustment Costs. You can consider both the direct and indirect costs of the contract that are affected by the contract modification. However, applicable clauses may set limits on the types of cost that you can consider. Carefully read the applicable clause in your contract before you attempt to negotiate an equitable adjustment. Several of the most often used clauses will be examined in later sections of this chapter.

Direct Impact Costs ([FAR Table 15-2](#) and *T.C. Bateson Const. Co. v. U.S.*, 177 CT-CL 1094). Direct impact costs are costs that can be foreseen as the result of a contract modification and readily calculated based on the information available. Most direct costs affected by a contract modification are direct impact costs.

Consider the following points when estimating direct impact costs:

- The cost for added work not yet performed should be the current best estimate of the costs involved. Remember that an apparently minor modification (e.g., changing a single component) may have substantial related effects:
 - Other components may have to be changed for compatibility.
 - The labor hours or labor rates to install the new component may be affected.
 - Labor hours could be effected by different product requirements or the effect of the new component on the efficiency of assembly operations.
 - Rates could be affected by factors such as level of worker qualification requirements, timing of the labor effort, or overtime required to meet schedule requirements.
 - Delays in obtaining the new component may cause schedule delays which affect other costs.
 - Changing a single component could force a redesign to assure system compatibility (e.g., increased power requirements).
 - Such factors as a work sequence interruption, lack of a steady flow of work, and the unavoidable use of less- experienced labor may seriously affect a contractor's efficiency and increase costs.
 - Excessive overtime necessitated by additional work may affect labor efficiency. For example, the Court of Claims found that a 12-hour workday and a 6-day workweek tend to impair labor efficiency.
- The cost for added work already performed should be the reasonable actual cost of the work required.
- The cost of deleted work not yet performed should be the current best estimate of the costs required.
 - The estimate used to price the original contract may have been much higher or lower. For example, the original estimate for a component may have been \$30,000 but the current estimate is \$60,000. In this situation, \$60,000 should be deleted from the contract cost.
 - Do not allow the contract modification to change the contractor's profitability on the unchanged contract effort.
- The cost of deleted work already performed must be retained in the contract cost. For example, the contractor already acquired components for \$30,000, but the contract modification requires the contractor to use different components in the final system.
 - That cost must be retained in the total contract cost along with the cost of the replacement component.
 - The contract provision requiring the equitable adjustment will define the Government's right to prescribe the manner used to dispose of property made obsolete by a contract modification.

Unallowable Costs ([FAR Part 31](#) and [FAR 31.205-20](#)). Costs of a type that are unallowable for other contract actions are also unallowable for contract modifications. For example, many requests for equitable adjustment include costs for interest related to financing additional work under the contract. Like other interest expense, interest related to contract modifications is unallowable.

Cumulative- Impact Costs (Freeman-Darling, Inc., 89-2 BCA 21,882, Claude R. Smith, Trustee v. U.S., 40 CCF 76,854, and Ingalls Ship. Div., Litton Systems, Inc., 78-1 BCA 13,038.45).

Cumulative-impact costs are costs that are unforeseeable or costs that were not readily computable at the time of an initial equitable adjustment. They typically occur as the result of an unanticipated loss of efficiency or productivity caused by numerous contract modifications on a single major contract. As you examine a request for equitable adjustment to cover cumulative impact, consider the:

- **Need For Separate Adjustment.** Whenever possible, you should negotiate all adjustments for a contract modification at the same time. However, unforeseeable or uncomputable costs may be considered later.
 - A contractor cannot request a separate adjustment for cumulative-impact costs simply because it underestimated the impact of the change on other operations.
 - To request a separate adjustment for cumulative-impact costs, the contractor must show that neither side intended to consider such costs during previous equitable adjustments. For example, a contractor could assert during negotiations of an equitable adjustment that the modification or modifications have far reaching effects on efficiency that cannot be estimated at the time but must be considered after contract completion. If it is not clear that the equitable adjustment covers all costs related to the modification, the contractor might later claim the right to such an adjustment.
- **Unforeseeable Effect Of Numerous Modifications.** To obtain a separate adjustment for the cumulative effect of numerous modifications, the contractor must provide documented evidence that there were numerous changes and reasonable evidence that there was an unforeseen or uncomputable effect on contract operations efficiency related to those changes.
 - Cumulative impact costs were allowed in the Ingalls Shipbuilding case -- where three shipbuilding contracts were affected by several thousand change orders that occasioned a 58 percent contract price increase (from \$113 to \$209 million) and spawned a 4-year delay in the first incremental delivery.
 - Cumulative impact costs were denied in the Dyson case (Dyson & Company, 78-2 BCA 13,482, affirmed, 79-1 BCA 13,661)-- where cumulative impact costs presented on behalf of a mechanical subcontractor whose work had been exposed to 39 change orders that increased subcontract performance costs by roughly 19 percent (\$612,454 was added to \$3.3 million) and added 100 days of time extension.
- **Unforeseeable Effect Of A Single Modification.** The contractor could assert that there was an unforeseeable impact from a single contract modification. For example, in the Penner case (Joseph Penner, 80-2 BCA 14,604), the contractor obtained an equitable adjustment for the delay, disruption, and ripple effects which resulted from the Government's directive to change the method of pile driving under a construction contract. In that case:
 - During the installation of piling, it became apparent that the vibrations produced by the steam-activated pile-driving rig being used might damage adjacent property, and the Government directed the contractor to change to using water jetting.
 - While the contractor took reasonable steps to prepare for the large amounts of water produced by the jetting procedure, the firm was overwhelmed by the actual amount of water and mud that resulted.
 - As a result, the contractor was forced to make changes in the sequence of work and experienced considerable delay in its projected schedule.
 - Since the contractor was not at fault for the type of jetting used or the method of work, the Government was responsible for the unanticipated consequences of the contract modification.

- **Effect On Modified Contract Only.** A contractor is normally not entitled to recover cumulative impact costs for the ripple effect of Government-caused disruption of one contract on the contractor's efficiency and productivity on other Government contracts, unless there is specific contract language authorizing such damages. For example, if the component produced in Contract A is Government-furnished property for Contract B, any delay in providing the item under Contract B would be grounds for a separate equitable adjustment.

Normal Indirect Cost Adjustment for Additions and Deletions ([FAR 15.404-1\(c\)](#), [FAR 15.404-2\(a\)](#), [FAR 15.404-2\(d\)](#), [FAR 15.407-3](#), and CBC Enterprises, Inc., 24 CT-CL 187).

In most cases, you should estimate the indirect cost effect of additions or deletions using the current estimated or actual indirect cost rates and bases for each accounting period affected by the equitable adjustment. As with direct costs, the current rates may be substantially different than those used to price the contract. As you estimate the effect of the contract change on indirect costs, consider applicable:

- **Forward Pricing Rate Agreements.** A Forward Pricing Rate Agreement (FPRA) is a formal bilateral agreement that binds the contractor to propose the negotiated rates and the Government to accept them in pricing individual contract actions. Each agreement includes provisions for canceling all or a portion of the agreement if circumstances change and the rate(s) are no longer valid representations of future costs. If the contractor and the Government have negotiated a forward pricing rate agreement (FPRA), and:
 - The effect of the Government action is relatively small considering the contractor's total business base, you should normally use the FPRA rates in negotiating an equitable adjustment.
 - The effect of the Government action is relatively large considering the contractor's total business base, you should contact the contracting officer responsible for FPRA negotiation, to discuss the possible need to reopen FPRA negotiations.
- **Forward Pricing Rate Recommendations.** Forward Pricing Rate Recommendations (FPRRs) are formal rate recommendations developed by the cognizant ACO for all Government buying activities.
 - Although FPRRs are only recommendations, you should not develop an independent position without first contacting the contract administration office that issued the FPRR. The contract administration office should be able to supply information supporting the reasonableness of the recommended rate.
 - Consider inviting the ACO who issued the FPRR and cognizant auditor to attend negotiations concerning indirect cost rates.
- **Audit Recommended Rates.** These are rates developed by Government audit personnel as a result of their review of the contractor's indirect cost rate proposal. The recommendation may result from the audit of the current contract proposal, a recent (within the last 12 months) contract proposal, or a separate indirect cost rate proposal. These are important recommendations, because auditors are the only members of the Government Acquisition Team who have general access to the contractor's accounting records. However, they are recommendations. The contracting officer is still responsible for evaluating contract price reasonableness.

Unabsorbed and Extended Overhead ([DCAM 12-603](#) and [DCAM 12-803](#)). Indirect costs are absorbed (charged) to various cost objectives using indirect cost rates. As a contract incurs the indirect cost allocation base, indirect costs are absorbed using the appropriate indirect cost rates.

When the Government stops or delays all or part of the contract effort, the actual indirect cost allocation base (e.g., hours or dollars) for the accounting period will decrease. Unless new, expanded, or rescheduled work under other contracts can replace the affected effort or the indirect cost pool can be reduced, the lower allocation base will increase the actual indirect cost rate for the period. The higher indirect cost rates will directly affect the cost of other contracts.

You can provide equitable adjustment relief to cover any unabsorbed or extended overhead associated with Government delays or work stoppages, if the contractor can show that it necessarily suffered actual damage because the nature of the delay or work stoppage made it impractical to undertake the performance of other work.

Methods for estimating the proper relief for unabsorbed indirect cost are presented later in the chapter.

6.1.3 Profit/Fee Issues

Authority to Adjust Profit ([FAR 52.242-14\(b\)](#)).

Before you allow profit/fee as part of an equitable adjustment, assure that the contract permits such an allowance, either expressly or by implication. For example, the FAR Suspension of Work clause specifically excludes profit from any adjustment resulting from a suspension, delay, or interruption of work under the clause.

Consistent Profit/Fee Rationale. Use the same rationale to establish the profit/fee on added work that you use to establish the profit/fee on deleted work. However, depending on the nature of the work added or deleted and the risk involved, the profit rates for work added and deleted by the same modification could be different.

Basic Contract Profit/Fee Rate ([FAR 15.404-4\(c\)\(6\)](#)). For equitable adjustments, you may use the basic contract profit/fee rate as the prenegotiation objective for an equitable adjustment when the contract change or modification:

- Calls for essentially the same type and mix of work as the basic contract; and
- Is of relatively small dollar value compared to the total contract value.

Major Adjustment Profit/Fee Rate ([FAR 15.404-4](#)). When an equitable adjustment does not meet one of the criteria identified above, you must develop a profit/fee objective considering the FAR profit/fee factors and applicable agency guidance.

Incurred Costs And Risk Evaluation. When you evaluate risk as part of profit/fee analysis, consider the relationship between incurred costs and profit/fee. For example, if the negotiations are to definitize an undefinitized contract action, contractor cost risk may be reduced, because substantial costs may have already been incurred. As long as incurred costs are reasonable, they are not subject to estimating error or any type of speculation. There is no forward pricing risk associated with these costs. In addition, the experience gained in incurring these costs may have reduced the cost risk on the remainder of the contract.

Follow your agency profit/fee analysis guidelines in evaluating the effect of incurred costs on contract risk. For example ([DFARS 215.404-71-3\(d\)\(2\)](#) and [NASA 1815.404-471-3\(d\)\(2\)](#)):

- If you are assigned to a DoD organization, you must consider any reduced risk on the portion of the contract performed before definitization and the portion that will be performed after definitization.
 - When costs have been incurred prior to definitization, generally regard contract type risk to be at the low end of the designated range.
 - If a substantial portion of the costs have been incurred prior to definitization, you may assign a value as low as zero percent to cost risk, regardless of the contract type.
- If you are assigned to NASA, your evaluation of contract risk must consider all attendant circumstances and should not be based solely on the portion of costs incurred, or percentage of work completed, before definitization.
 - Under some circumstances, you may reason that the total amount of cost risk has been effectively reduced.
 - Under other circumstances, you may reason that the contractor's cost risk is substantially unchanged.

6.1.4 Proposal Analysis And Negotiation Process Issues

Consider the steps in the following table as you evaluate contractor proposals for equitable adjustments or termination settlements ([FAR 43.204\(b\)](#)).

Analysis And Negotiation Process	
Step	Action
1	Assure that the contractor has provided any required cost or pricing data or information other than cost or pricing data in a format suitable for analysis.
2	Request technical and/or audit/pricing support required to support proposal analysis. If you need field pricing support, ensure that your request includes a list of any significant contract events which may aid in the analysis of the proposal such as: <ul style="list-style-type: none"> • Date and dollar amount of the contract award and/or modification. • Date of submission of the initial contract proposal and dollar amount. • Date of alleged delays or disruptions. • Performance dates as scheduled at date of award and/or modification. • Actual performance dates. • Date entitlement to an equitable adjustment was determined. • Date of certification of request for adjustment if certification is required. • Dates of any pertinent Government actions or other key events during contract performance which may have an impact on the contractor's request for equitable adjustment.
3	After technical and/or audit/pricing support is received, determine if fact-finding is required to support resolution of identified issues. In determining the need for fact-finding, consider the: <p>Time delays or disruptions involved.</p> <ul style="list-style-type: none"> • Complexity of the issues involved. • Technical complexity of the requirement. • Dollars involved.
4	Establish your negotiation objective based on the contractor's proposal and other available information. Document and coordinate your objective in accordance with agency procedures. Depending on the circumstances, your objective may be an increase, a decrease, or no change in contract price.
5	Conduct negotiations. During negotiations remind the contractor of the importance of providing current, accurate, and complete data, especially when the contractor is incurring contract costs while negotiations are in progress.
6	Use a bilateral contract modification to document agreement on an equitable adjustment.
7	If you cannot reach agreement on a fair and reasonable price, issue a unilateral change administratively changing the contract price to a figure that you can support as being fair and reasonable. Advise the contractor that it has the right to pursue a claim under the Disputes clause.

Certified Cost or Pricing Data Exceptions ([FAR 15.403-1\(c\)](#)). **NEVER** require certified cost or pricing data if the contract or subcontract modification meets one of the following requirements:

- If the modification is below the TINA threshold of \$2,000,000 and cost analysis clearly demonstrates that the proposed price is fair and reasonable;
- Prices are set by law or regulation;
- A commercial-item contract modification does not change the item from a commercial item to a noncommercial item; or
- The head of the contracting activity, without power of delegation, has waived the requirement for certified cost or pricing data submission (in exceptional cases).

Requirement for Certified Cost or Pricing Data ([FAR 15.403-4\(a\)](#)). If none of the above exceptions apply, you must obtain certified cost or pricing data before pricing a contract modification (whether or not cost or pricing data were initially required) when the price is expected to exceed the cost or pricing data threshold:

- When deciding whether certified cost or pricing data are required, sum the value of related increases and decreases in contract requirements. For example, a \$500,000 modification resulting from a reduction of \$1,500,000 and an increase of \$1,000,000 is a \$2,500,000 price adjustment when determining the need for cost or pricing data.
- Do not sum the value of unrelated and separately priced changes for which cost or pricing data would not otherwise be required. Such changes may be included in the same contract modification for administrative convenience.

Modification Certified Cost or Pricing Data Threshold ([FAR 52.215-13](#) and [FAR 52.215-21](#)). For prime contract and subcontract modifications, the applicable certified cost or pricing data threshold is established by the prime contract.

- For most contracts, the applicable certified cost or pricing data threshold is the current threshold on the date of agreement on price, or the date of award, whichever is later.
- Some older contracts specify a dollar threshold that does not automatically change as the current threshold changes. However, a specific dollar threshold can be updated using a bilateral contract modification.

Certified Cost or Pricing Data Below the \$2,000,000 Threshold ([FAR 2.101](#) and [FAR 15.403-4\(a\)\(2\)](#)). You may require certified cost or pricing data below the certified cost or pricing data threshold, but only if all three of the following requirements are met:

- The estimated value of related increases and decreases priced together exceeds the simplified acquisition threshold.
- No exception to requiring certified cost or pricing data applies.
- The head of the contracting activity (without power of delegation) authorizes you to require certified cost or pricing data.
 - The head of the contracting activity must justify the requirement for certified cost or pricing data.
 - File documentation must include a written finding that certified cost or pricing data are necessary to determine whether an offered price is fair and reasonable and the facts supporting that finding.

Certified cost or pricing data ([FAR 2.101](#) and [FAR 52.215-20](#)). means "cost or pricing data" that were required to be submitted in accordance with FAR 15.403-4 and 15.403-5 and have been certified, or is required to be certified, in accordance with 15.406-2. This certification states that, to the best of the contractor's knowledge and belief, the cost or pricing data is accurate, complete, and current as of a date certain before contract award. Cost or pricing data is required to be certified in certain procurements Submissions:

- As a minimum, must meet contract data requirements for modifications.
- Require certification as accurate, complete, and current in accordance with [FAR 15.406-2](#).

Data Other than Certified Cost or Pricing Data ([FAR 2.101](#) and [FAR 15.403-3](#)). This data is any type of contractor information that is necessary to determine price reasonableness or cost/price realism, but does not require certification as accurate, complete, and current, in accordance with [FAR 15.406-2](#). It may include pricing, sales, or cost information. Such data may include the identical types of data as certified cost or pricing data, consistent with Table 15-2 of 15.408, but without the certification. The data may also include, for example, sales data and any information reasonably required to explain the contractor's estimating process, including, but not limited to—

- (1) The judgmental factors applied and the mathematical or other methods used in the estimate, including those used in projecting from known data; and
- (2) The nature and amount of any contingencies included in the proposed price.

If you can establish an equitable adjustment using price information alone, you should limit contractor information requirements to price information other than certified cost or pricing data. For example, the contract modification replaces one catalog-priced item with a similar catalog-priced item. Normally, the equitable adjustment will be limited to the price difference between the two products. Price information other than cost or pricing data should be enough to support the adjustment.

6.2 Pricing Contract Changes

Contract Change Authority. A change is any alteration within the scope of the contract that is made under the authority of the contract Changes clause. As delineated in the table below, the type of changes that can be made under the authority of the Changes clause depends in part on the type of contract involved.

Contract Changes Under the Changes Clause	
Type of Contract	Changes That Can Be Made
Non-Commercial Supply-Fixed-Price Contract or Cost-Reimbursement FAR 52.243-1 FAR 52.243-2	<ul style="list-style-type: none"> • Drawings, designs, or specifications when the supplies to be furnished are to be specifically manufactured for the Government in accordance with the drawings, designs, or specifications. • Method of shipping or packing. • Place of delivery
Non-Commercial Service-Fixed-Price Contract or Cost-Reimbursement FAR 52.243-1, Alt I or II FAR 52.243-2, Alt I or II	<ul style="list-style-type: none"> • Description of services to be performed. • Time of performance (i.e., hours of the day, days of the week, etc.). • Place of performance of services.
Time-and-Material or Labor-Hour FAR 52.243-3	<ul style="list-style-type: none"> • Drawings, designs, or specifications • Method of shipping or packing. • Place of delivery • Amount of Government-furnished property
Architect-Engineer or Other Professional Services Contracts-Fixed Price FAR 52.243-1, Alt III	<ul style="list-style-type: none"> • Services to be performed.
Transportation Services - Fixed Price FAR 52.243-1, Alt IV	<ul style="list-style-type: none"> • Specifications. • Work or services. • Place of origin. • Place of delivery. • Tonnage to be shipped. • Amount of Government-furnished property.
Research and Development-Fixed-Price Contract or Cost-Reimbursement FAR 52.243-1, Alt V FAR 52.243-2, Alt V	<ul style="list-style-type: none"> • Drawings, designs, or specifications. • Place of inspection, delivery, or acceptance.
Construction or Dismantling, Demolition, or Removal of Improvements- Fixed-Price Contract FAR 52.243-4	<ul style="list-style-type: none"> • Specifications (including drawings and designs). • Method or manner of performance of the work. • Government-furnished property or services. • Acceleration in the performance of the work.
Construction -Cost-Reimbursement FAR 52.243-2, Alt III	<ul style="list-style-type: none"> • Plans and specifications or instructions incorporated in the contract.

Initiation of Changes. You can implement contract changes, initiated by the Government or the contractor, under the Changes clause. For example, you can change the contract specifications because of a change in Government requirements or because of a product improvement recommended by the contractor.

Unilateral and Bilateral Modifications ([FAR 43.103](#), [FAR 43.101](#), [FAR 52.212-4\(c\)](#), and [FAR 52.243-1](#)). In Government contracting, there are two basic types of authorized contract modifications -- unilateral and bilateral:

- Unilateral modifications are signed only by the contracting officer. Unilateral modifications are used to:
 - Make administrative changes.
 - Issue change orders.
 - Make changes authorized by clauses other than a changes clause (eg. Property clause, Options clause, or Suspension of Work clause).
 - Issue termination notices.
 - The contractor is required to continue performance of the contract as changed and can request an equitable adjustment within the period prescribed in the contract.
- Bilateral modifications are signed by both the contractor and the contracting officer. You can use a bilateral modification to:
 - Define all aspects of the contract modification, including an equitable adjustment, at the time that the change is made;
 - Definitize a letter contract.
 - Reflect other agreements of the parties modifying the terms of the contract.

Preference for Bilateral Modifications ([FAR 43.102\(b\)](#)). Price contract modifications, including changes that could be issued unilaterally, before their execution if you can do so without affecting the interest of the Government. If a significant cost increase could result from the contract modification and time does not permit price negotiation, negotiate a not-to-exceed price whenever practical.

Costs to Consider ([FAR 52.243-1](#), [FAR 52.243-2](#), [FAR 52.243-3](#), and [FAR 52.243-4](#)). Carefully read the Changes clause in the contract before you attempt to negotiate an equitable adjustment. The Changes clauses for fixed-price supply and service contracts, cost-reimbursement supply and service contracts, time-and-materials/labor-hour contracts, and fixed-price construction contracts all include words similar to the following:

If any such change causes an increase or decrease in the cost of, or the time required for, performance of any part of the work under this contract, whether or not changed by the order, the Contracting Officer shall make an equitable adjustment....

The various Changes clauses require the contractor to assert its right to an equitable adjustment within a specific number of days. However, if the facts justify, the contracting officer may receive and act upon a request received at any time prior to final payment under the contract.

An equitable adjustment under the Changes clause can consider:

- **The Cost of Changed Work.** You can negotiate an adjustment in both the direct and indirect costs of changed work.
- **The Cost Effect on Unchanged Work.** You can negotiate an equitable adjustment for any increased costs for unchanged work incurred as a result of the change.
- **The Cost of Preparing a Request for Equitable Adjustment.** To obtain an equitable adjustment, the contractor must submit a proposal asserting its right to an adjustment. Since this proposal is required by the contract, the costs related to proposal preparation are allowable in accordance with the terms of the contract.

- **Costs Related To The Change Incurred Before Contractor Notice in Construction.** The Changes clause for fixed-price construction contracts is unique in that it includes a provision allowing you to consider costs related to changes other than written contract modifications signed by the contracting officer.
 - Other written or oral orders (including direction, instruction, interpretation, or determinations) may be considered as changes under the Changes clause provided that the contractor provides the contracting officer with a written notice stating the following:
 - The date, circumstances, and source of the order.
 - The contractor regards the order as a change order.
 - Under this clause, you can make an equitable adjustment for costs related to a change that were incurred even before the contractor provided written notice of the change. If the request for equitable adjustment is:
 - Based on defective specifications and the Government is responsible, include in the equitable adjustment any increased cost reasonably incurred by the Contractor in attempting to comply with the defective specifications.
 - Not based on defective specifications, do not make any adjustment for change-related costs incurred more than 20 days before the contractor provided written notice.

Costs Not to Consider ([FAR 31.201-2](#), [FAR 31.205-47\(f\)\(1\)](#), [FAR 52.243-1](#), [FAR 52.243-2](#), [FAR 52.243-3](#), and [FAR 52.243-4](#)).

Never consider the following types of cost when making an equitable adjustment:

- **Affected Costs On Other Contracts.** A contract modification may affect the costs of performing other contracts. For example modifying a production operation could eliminate labor-hour improvement anticipated when a related contract was priced. Do not consider an equitable adjustment for cost increases or decreases for other contracts, unless there is specific contract language authorizing such adjustment.
- **Costs Of Changes Made By Persons Other Than The Contracting Officer.** Except for construction (see above), the Changes clauses do not provide for equitable adjustments based on changes made by persons other than an authorized contracting officer.
- **Costs Of Prosecuting A Claim.** The costs of preparing an equitable adjustment are allowable, but the costs of prosecuting a claim or appeal against the Government are not. Normally, a request for an equitable adjustment becomes a claim when it is certified as a claim or the contracting officer issues a final decision and the contractor proceeds with action under the contract Disputes clause.
- **Costs That Are Otherwise Unallowable.** Costs that are generally unallowable for other contract actions under the general factors for determining cost allowability are also unallowable for contract changes.

Profit/Fee ([FAR 52.243-1](#), [FAR 52.243-2](#), [FAR 52.243-3](#), and [FAR 52.243-4](#)). Equitable adjustments for a contract change should include profit/fee unless specifically precluded by the contract. The FAR Changes clauses do not preclude including profit/fee in an equitable adjustment. However, another contract clause may preclude including profit/fee in an adjustment.

Change Order Accounting ([FAR 52.243-6](#)). If the contract includes the Change Order Accounting clause, you may require change order accounting whenever the cost of a change or a series of related changes exceeds \$100,000. Under change order accounting, the contractor must maintain separate accounts, by job order or other suitable accounting procedure, of all incurred segregable direct costs (less allocable credits) for work, both changed and unchanged, allocable to the change order. The contractor must maintain the accounts until the parties agree to an equitable adjustment or the matter is conclusively disposed of in accordance with the Disputes clause.

If the contract does not include the Change Order Accounting clause, assure that the contractor knows that accurate records of actual costs can be extremely valuable in pursuing any request for equitable adjustment.

Resolution and Release ([FAR 43.204\(c\)](#)). To avoid later controversy, ensure that the equitable adjustment addresses all elements that require adjustment as a result of the contract modification.

If the modification definitizes a change order, assure that the modification includes a release similar to the following:

Contractor's Statement Of Release

In consideration of the modification(s) agreed to herein as complete equitable adjustment(s) for the Contractor's _____ (describe) _____ "proposal(s) for adjustment," the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments attributable to such facts and circumstances giving rise to the "proposal(s) for adjustment" (except for _____).

6.3 Other Situations Requiring Adjustment

Other Equitable Adjustment Situations. Contracts contain other clauses that provide for an equitable adjustment for Government action or inaction that affects contract performance. This section examines adjustments related to: Government property; suspension of work; Government delay of work; or a stop-work order.

Clauses Providing Basis for Adjustment		
Clause	Use ...	The contractor may be due an equitable adjustment if...
Government Property (Fixed-Price Contract Contracts) FAR 52.245-1	Required for all non-commercial-item fixed-price contracts.	<ul style="list-style-type: none"> • The property is not delivered to the contractor by the scheduled time. • The property is received by the contractor in a condition not suitable for the intended use. • The Government decreases the property provided or provides substitute property. • The Government fails to repair or replace Government property for which the Government is responsible.
Government Property (Cost-Reimbursement Contract, Time-and-Material, or Labor-Hour Contracts) FAR 52.245-1	Required for all cost-reimbursement, time-and-material, and labor-hour contracts.	<ul style="list-style-type: none"> • The property is not delivered to the contractor by the scheduled time. • The property is received by the contractor in a condition not suitable for the intended use. • The Government decreases the property provided or provides substitute property. • The Government fails to repair or replace Government property for which the Government is responsible.
Suspension of Work FAR 52.242-14	Required for non-commercial-item fixed-price construction or architect-engineer contract	Performance of all or any part of the contract work is, for an unreasonable time, suspended, delayed, or interrupted: <ul style="list-style-type: none"> • By an act of the contracting officer in administration of the contract, or • By the contracting officer's failure to act with the time specified in the contract, or within a reasonable time if not specified. • A claim shall not be allowed for any costs incurred more than 20 days before the contractor notifies the contracting officer in writing and the claim is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption but not later than the final payment under the contract.

Clauses Providing Basis for Adjustment		
Clause	Use ...	The contractor may be due an equitable adjustment if...
Government Delay of Work FAR 52.242-17	Required for non-commercial-item fixed-price supply contracts. Optional for non-commercial-item fixed-price service contracts.	Performance of all or any part of the work is delayed or interrupted: <ul style="list-style-type: none"> • By an act of the contracting officer that is not expressly or implicitly authorized by the contract; or • By the failure of the contracting officer to act within the time specified in the contract, or within a reasonable time if not specified. • A claim shall not be allowed for any costs incurred more than 20 days before the contractor notifies the contracting officer in writing and the claim is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption but not later than the final payment under the contract.
Stop-Work Order FAR 52.242-15	Non-commercial-item fixed-price contracts for supplies, services, or research and development Required: (Alt I) for cost-reimbursement contracts	The stop-work order results in an increase in the time required for, or in the contractor's cost properly allocated to, the performance of any part of the contract; and The contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; or if the facts justify the contracting officer may receive and act on a claim any time before final payment.

Government Property Clause ([FAR 52.245-1](#)). As shown in the table above, the Government property clause listed provides for an equitable adjustment when the Government fails to provide required Government-furnished property (GFP). In general, any equitable adjustment under the Government property clause must follow the same procedures outlined earlier in the chapter for pricing contract changes.

A contractor may be entitled to an equitable adjustment and guidelines affecting that adjustment:

- If Government furnished property (GFP) is received by the contractor in a condition not suitable for the intended use:
 - The contractor must notify the contracting officer, detailing the facts.
 - As directed by the contracting officer, the contractor must either repair, modify, return, or otherwise dispose of the property.
 - After completing the directed action, the contractor can submit a written request for an equitable adjustment.
- If the GFP is not delivered to the contractor by the required time, the contractor can submit a written request to the contracting officer requesting an equitable adjustment for any delay caused the contractor in performing the contract.
- If the contracting officer, decreases the GFP provided or to be provided to the contractor, or substitutes other GFP for the property to be provided by the Government, or acquired by the contractor, under the contract:

- The contractor must promptly take action as directed by the contracting officer regarding the removal, shipment, or disposal of the property.
- The contractor can submit a written request for an equitable adjustment based on the contracting officer's action.
- If the contracting officer withdraws authority for the contractor to use Government property provided under another contract or lease, the contractor can submit a written request for an equitable adjustment.
- If damage occurs to Government property and the risk has been assumed by the Government under the contract:
 - The contractor must repair the property as directed by the contracting officer.
 - If the contractor cannot make required repairs within the time required, the contractor must dispose of the property as directed by the contracting officer.
 - When any property for which the Government is responsible is replaced or repaired by the contractor, the contracting officer must make an appropriate equitable adjustment.

Similar Coverage Under the Suspension of Work and Government Delay of Work Clauses ([FAR 52.242-14](#) and [FAR 52.242-17](#)).

Note from the table above that the Suspension of Work and Government Delay of Work clauses both:

- Provide for equitable adjustments as a result of similar acts or failures on the part of the contracting officer.
- Require an equitable adjustment for a performance cost (**excluding profit**) increase necessarily caused by the suspension, delay, or interruption.
- Preclude an equitable adjustment under the clause for any suspension, delay, or interruption:
 - To the extent that performance would have been suspended, delayed, or interrupted by any other cause, including the fault or negligence of the contractor, or
 - For which an equitable adjustment is provided for or excluded under any other term or condition of the contract.
 - For any costs incurred more than 20 days before the contractor notifies the contracting officer in writing of the act or failure involved (but this requirement shall not apply to a claim resulting from a suspension order under the Suspension of Work clause).
 - Unless the claim, in a stated amount, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

Unique Government Delay of Work Clause Coverage ([FAR 42.1304\(b\)](#) and FAR 52.242-17). The Government Delay of Work clause (unlike the Suspension of Work clause) does not authorize the contracting officer to order a suspension, delay, or interruption of contract work, and the FAR specifically forbids use of the clause for that purpose.

Stop-Work Order ([FAR 52.242-15](#)). The Stop-Work Order clause provides for an equitable adjustment (**including profit**), if:

- The contracting officer issues a stop-work order;
- The order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of the contract; and
- The contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage. However, the contracting officer may receive and act upon the claim submitted at any time before final payment under the contract.

Adjustment for Unabsorbed Indirect Cost ([DCAM 12.803](#) and [DCAM 12.804](#), Togo D. West, Jr., Secretary of Veterans Affairs v. All State Boiler; and All State Boiler v. Togo D. West, Jr., Secretary of Veterans Affairs; US-CT-APP-FC, 42 CCF 77,323).

Any of the clauses examined in this subsection could result in an equitable adjustment related to Government delay of contractor performance. When a delay occurs, contractors will often request an equitable adjustment for unabsorbed indirect cost.

- Consider an equitable adjustment for unabsorbed indirect cost when the contractor shows that it was required to stand by during the Government-caused delay and that it was impractical to take on additional work during that period.
 - A contractor is on standby when contract work is suspended for a period of uncertain duration and the contractor can at any time be required to return to work immediately.
 - The contractor can use any relevant information to demonstrate that it was impractical to replace the contract effort in the allocation base. To prevent recovery, the Government must either show that:
 - It was not impractical for the contractor to obtain other work to which it could re-allocate its indirect costs; or
 - The contractor's inability to obtain other work was caused by some circumstance other than the Government-caused delay.
- Consider whether the Eichleay formula results are equitable. BCAs and Courts have generally ruled that the Eichleay formula is **the acceptable method** for computing unabsorbed overhead resulting from Government-caused delay.
 - The Court of Appeals for the Federal Circuit has specifically ruled that the Eichleay formula is the exclusive means for calculating unabsorbed overhead in cases arising out of construction contracts.
 - The Armed Services Board of Contract Appeals (ASBCA) has supported the application of the Eichleay formula for the recovery of unabsorbed overhead on manufacturing/supply contracts.
- If the basic Eichleay formula produces inequitable results, consider adjustments to the formula.
- If the use of the Eichleay formula is not appropriate, consider other approaches to estimating unabsorbed indirect cost.

Eichleay Formula. The basic Eichleay formula was originally developed to allocate home office expenses on construction contracts when there is an assumption that almost all overhead is fixed rather than variable. Under the basic Eichleay formula, the normal fixed overhead allocable to a contract is identified and expressed in terms of a daily rate. The daily rate is then multiplied by the days of delay to arrive at the total amount of unabsorbed overhead.

Using the Eichleay formula, the unabsorbed indirect cost of a delayed contract is calculated as follows:

$$\text{Unabsorbed Indirect Cost Adjustment} = \frac{\left(\frac{A}{B}\right) \times C}{D} \times E$$

Where:

A = Total billings for the delayed contract between the date of delayed-contract award and the date of delayed-contract completion.

B = Total company billings for all contracts between the date of delayed-contract award and the date of delayed-contract completion

C = Total fixed overhead between the date of delayed-contract award and the date of delayed-contract completion.

D = Number of days of actual performance between the date of delayed-contract award and the date of delayed-contract completion.

E = Number of days that performance was delayed.

Note: You may use estimates for A, B, C, and D above when the equitable adjustment is negotiated before contract completion and actual values are not known.

Calculation example: Assume that you are administering a contract to remodel office space at your facility. The contractor is denied access to the area for ten days because of a terrorist threat. An equitable adjustment can be calculated using the Eichleay Formula.

A = Total billings on the remodeling contract.	\$954,800
B = Total billings on all contracts between award and completion of the remodeling contract.	\$3,410,000
C = Total fixed overhead between award and completion of the remodeling contract.	\$411,431
D = Number of days between award and completion of the remodeling contract, including the delay.	180
E = Number of days that performance was delayed.	10

$$\begin{aligned}
 \text{Unabsorbed Indirect Cost Adjustment} &= \frac{\left(\frac{A}{B}\right) \times C}{D} \times E \\
 &= \frac{\left(\frac{\$954,800}{\$3,410,000}\right) \times \$411,430}{180} \times 10 \\
 &= \frac{.28 \times \$411,430}{180} \times 10 \\
 &= \frac{\$115,200}{180} \times 10 \\
 &= \$640 \times 10 \\
 &= \$6,400 \text{ equitable adjustment for the delay}
 \end{aligned}$$

Inequitable Eichleay Formula Results (DCAM 12-805). Use of the Eichleay formula is based on the assumptions presented below. If the current situation does not meet these assumptions, consider use of a modified form of the formula or an alternative approach:

- Overhead costs include only fixed costs.
- The contractor cannot replace the suspended work with other work.
- There is a total work stoppage.
- The cost of the delay is the same regardless of the percentage of contract completion. (The formula will produce the same result whether the contract is 1 percent or 99 percent complete.)
- The facilities are operating at or near capacity.

Eichleay Formula Adjustments ([DCAM 12-805](#)). The following adjustments to the Eichleay formula may produce more equitable results in the situations identified. Carefully document your rationale for using any of these adjustments.

- **Eichleay Formula Adjusted for a Partial Replacement of Work.** If the contractor replaced a portion of the work involved, consider adjusting the number of delay days to compensate. For example, assume that there is a 40-day delay period and that the contractor cannot replace 75 percent of the work while 25 percent is replaced. Using the basic Eichleay method, the number of delay days would be 40. However, you can compensate for the partial loss by only considering 30 delay days (75 percent of the 40).
- **Eichleay Formula Adjusted for a Partial Work Stoppage.** In cases of a partial work stoppage, the number of days of the stoppage may be adjusted. For example, consider a 50 percent work stoppage for 30 days. Using the basic Eichleay method, the number of days would be 30. You can adjust for the partial stoppage by only considering 15 delay days (50 percent of 30).
- **Eichleay Formula Adjusted for Less Than Capacity Operation.** If the value of total contractor billings during the contract period has been depressed from full capacity, consider adjusting the value of the billings upward to approximate what the value would have been.

Other Methods. If you can document why use of the Eichleay formula is not appropriate, even with adjustments, you may consider other approaches to estimating unabsorbed indirect cost.

- **Allegheny Formula** ([DCAM 12-808](#)). This method visualizes the impact of a delay as a time line. It involves an attempt to recreate what would have happened had the delay not occurred. The difference between the recreated indirect cost rate and the rate actually incurred is the effect on indirect cost expense caused by the Government delay. Only consider this method in situations where:
 - The contractor has the capacity to perform the delayed work simultaneously with other scheduled work.
 - The contractor did not turn down other work during the period of extended contract performance.
- **Simulation Method.** Under the simulation method:
 - Contract billings are divided by the actual days worked to determine average contract billings per day worked.
 - The daily average is then multiplied by the number of days of delay to simulate the work that would have been performed had the delay not occurred.
 - This amount is added to both contract billings and total billings, the resulting ratio is used to allocate total overhead to the contract.
 - The total amount so allocated, less the amount allocated to actual work performed, yields the cost of the delay.
- **Burden Fluctuation Method.** Do not use this method if you believe that the original contract offer may have been underestimated. Under this method:
 - The difference between the experienced rates and the rates used by the contractor in its bid/proposal is calculated, and this difference is multiplied by the value of residual labor costs.
 - The residual labor costs represent the difference between the incurred total direct labor dollars and the labor dollars incurred on the contract.
 - The result is designated as unabsorbed overhead.

- **Total Cost Method.** This method is seldom used by BCAs. In the rare cases where this method must be used, a price adjustment would represent the difference between the total cost used to estimate total contract price and the costs actually incurred in contract performance. Before considering this method require the contractor to prove that:
 - The nature of the delay/disruption makes it impossible or highly impracticable to directly determine actual delay costs with a reasonable degree of accuracy.
 - The original offer was realistic.
 - The actual incurred costs were reasonable.
 - The Government was responsible for the differences between the offered and incurred costs.

Other Cost Considerations. Other unique costs that you will encounter in considering equitable adjustments related to suspensions, delays, or interruptions will include the following:

- **Labor stand-by cost.** During the suspension, delay, or interruption, there may have been a period of time when the contractor had to pay workers for non-productive effort.
 - To the extent the contractor could not eliminate the cost, the Government is liable.
 - If the contractor simply kept the work force standing by and did not take prudent steps to reassign work or release workers, then the Government would not be liable for the excess costs.
- **Rental equipment stand-by.** Rental equipment may be required to stand by during the suspension, delay, or interruption:
 - If the contractor has rented equipment for use on the contract, and must incur additional rental costs, the Government is liable.
 - If the contractor had the opportunity to use the equipment on another job or return it to the rental company during the period of delay, then the Government would not be liable for the excess costs.
- **Loss of efficiency.** While more abstract than the previous examples, the contractor may be entitled to compensation for increased costs due to inefficiencies resulting from the suspension, delay, or interruption. For example, the layoff and rehiring of skilled tradesmen can create inefficiencies due to different people than the original work force members being rehired and retrained. In this case, a technical evaluation and cost/price analysis must be used to determine if inefficiency exists, and what the difference is between the actual cost of performance and what the costs would have been if not for the suspension, delay, or interruption.

6.4 Definitizing Undefined Contract Actions

Undefined Contract Action ([FAR 16.603](#), [DFARS 217.7401](#), and [DFARS 217.7601](#)). An undefined contract action (UCA) is any contract action for which the contract terms, specifications, or price are not agreed upon before performance is begun under the action. As used here:

- The term includes:
 - Letter contracts -- written preliminary contractual instruments that authorize the contractor to begin immediately manufacturing supplies or performing services;
 - Unpriced orders under basic ordering agreements; and
 - Provisioned item orders -- an undefined order issued under a contract which includes the Government's requirements for an established range and quantity of spare parts, repair parts, support equipment, and test equipment required to operate and maintain an end item for an initial period of service.
- The term does not include:
 - Unilateral changes under the contract Changes clause;
 - Administrative changes;
 - Funding modifications; or
 - Any other modifications that are within the scope and under the terms of the contract (e.g., engineering change proposals or value engineering proposals, and over and above work requests).

Undefined Contract Action Use ([FAR 16.603-2\(a\)](#) and [DFARS 217.7403](#)). Only consider UCA use when:

- The negotiation of a definitive contract action is not possible in sufficient time to meet Government requirements, and
- The Government interest demands that the contractor be given a binding commitment so that contract performance can begin immediately.

UCAs must be as complete and definite as practicable under the particular circumstances.

Definitization ([DFARS 217.7401](#)). Definitization is the agreement on, or determination of, contract terms, specifications, and price, which converts an undefined contract action to a definitive contract.

Ceiling Price ([FAR 16.603-2\(b\)](#) and [DFARS 217.7404-2](#)). Each UCA should include a not-to-exceed price.

- All letter contracts awarded based on price competition must include a not-to-exceed price.
- All UCAs issued by DoD activities must include a not-to-exceed price.

Definitization Schedule ([FAR 16.603-2](#), [FAR 52.216-25](#), and [DFARS 217.7404-3\(a\)](#)). Each letter contract must include a definitization schedule, including the following:

- Dates for submission of the contractor's:
 - Price proposal;
 - Required cost or pricing data;
 - Make-or-buy plan (if required); and
 - Subcontracting plan (if required).
- A date for the start of negotiations.

- A target date for definitization. Establish the earliest practicable target date for definitization.
 - Unless the period is extended following agency procedures, letter contracts must be definitized no later than
 - 180 days after the date of the letter contract; or
 - Before completion of 40 percent of the work, whichever occurs first.
 - In the DoD, all UCAs must provide for definitization by the earlier of the following dates:
 - 180 days after UCA issuance (this date may be extended but may not exceed 180 days after the contractor submits a qualifying proposal), or
 - The date on which the amount of funds obligated under the contract action is equal to more than 50 percent of the not-to-exceed price.

Maximum Liability ([FAR 16.603-2\(d\)](#), [FAR 52.216-24](#), and [DFARS 217.7406\(a\)](#)). Use the Limitation of Government Liability clause to limit Government contract liability prior to definitization. Under that clause, liability is restricted to a maximum of 50 percent of the estimated cost of the definitive contract (unless a higher maximum is approved in advance by the official that authorized the letter contract).

Provisional Billing Prices. In some cases contractors have asked the Government for billing prices for use on items delivered under UCAs. Take care to ensure that such requests are appropriate under the unique circumstance of the contract action. Further, the billing price should be set at a level where the contractor will still be motivated to negotiate within the definitization schedule and within the funding limits established in the contract action.

6.5 Special Considerations For Pricing Claims

Introduction ([FAR 52.233-1](#)). Any of the pricing actions considered in this chapter may result in a claim against the Government.

- A claim is a written demand or assertion by one of the contracting parties seeking, as a matter of right:
 - The payment of money in a sum certain;
 - The adjustment or interpretation of contract terms; or
 - Other relief arising under or relating to the contract.
- A written demand or written assertion by the contractor seeking the payment of money exceeding \$100,000 is not a claim under the Disputes clause until it is certified (see Claim Requirements below).
- A voucher, invoice, or other routine request for payment may be converted to a claim under the Contract Disputes Act, by complying with the submission and certification requirements.

Contractor Claim Submission ([FAR 33.206\(a\)](#)). A contractor claim must be made in writing and submitted to the contracting officer for written decision within six years after accrual of the claim, unless the contracting parties agreed to a shorter time period. This 6-year time period does not apply to contracts awarded prior to October 1, 1995.

Government Claims ([FAR 33.206\(b\)](#)). The contracting officer must issue a written decision on any claim initiated by the Government against the contractor within six years after accrual of the claim, unless the contracting parties agree to a shorter period. This 6-year time period does not apply to contracts awarded prior to October 1, 1995, or to a Government claim based on a contractor claim involving fraud.

Requirement for Claim Certification. Contractors must certify any claim:

- Exceeding \$100,000. Increased costs and decreased costs must be added to determine if the dollar threshold has been met.
- Regardless of amount when using:
 - Arbitration conducted pursuant to 5 U.S.C. 575-580; or
 - Any other Alternate Dispute Resolution (ADR) technique that the agency elects to handle in accordance with the Alternate Dispute Resolution Act (ADRA)

Certificate Execution ([FAR 33.207](#)). The certification must:

- Read as follows:

"I certify that the claim is made in good faith; that the supporting data are accurate complete and current to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the contractor."

- Be executed by a person duly authorized to bind the contractor with respect to the claim. That person should have knowledge of the:
 - Basis of the claim;
 - Accuracy and completeness of the support data; and
 - Claim itself.

Defective Certification ([FAR 33.207\(f\)](#)). A claim certification that does not meet the above requirements is defective. A defective certification will not deprive a Court or BCA of jurisdiction over the claim. However, the Court or BCA must require correction of a defective certification before entry of final judgment.

Fraudulent Claims ([FAR 33.209](#)). If the contractor is unable to support any part of a claim and there is evidence that the inability is attributable to contractor misinterpretation of fact or contractor fraud, you must refer the matter to the agency official responsible for investigating fraud.

Contracting Officer's Authority ([FAR 33.210](#)). As a contracting officer, you have authority, within the limits of your warrant to decide or settle all claims arising under or relating to a contract subject to the Contract Disputes Act. This authority does not extend to:

- A claim or dispute for penalties or forfeitures prescribed by statute or regulation that another Federal agency is specifically authorized to administer, settle, or determine; or
- The settlement, compromise, payment, or adjustment of any claim involving fraud.

Contracting Officer's Decision ([FAR 33.211](#)). When a claim cannot be resolved by mutual agreement and a decision on the claim is necessary, you must:

- Review the facts pertinent to the claim.
- Secure assistance from legal and other advisors.
- Coordinate with the contract administration office or contracting office as appropriate.
- Prepare a written decision following FAR requirements. If the decision results in a finding that the contractor is indebted to the Government, the decision must include a Demand for Payment.
- Furnish a copy of the decision to the contractor by certified mail, return receipt requested, or by other method that provides evidence of receipt.

This shall apply to decisions on claims initiated by or against the contractor.

Interest on Contractor Claims ([FAR 33.208](#)). The Government must pay interest on any amount found due under a contractor's claim.

- Interest must be on the amount found due and unpaid from:
 - The date the contracting officer receives the claim (properly certified, if required); or
 - The date payment otherwise would have been due, if that date is later.
- If the contractor submits a claim with a defective certification:
 - Interest must be paid from the either the date that the contracting officer initially received the claim or October 29, 1992, whichever is later.
 - If a contractor has provided a proper certificate prior to October 29, 1992, after submission of a defective certificate, interest must be paid from the date the proper certificate was received by the Government.
- Simple interest is calculated from the proper date above until the date of payment. The rate shall be the rate determined by the Secretary of the Treasury which is applicable to the period during which the contracting officer receives the claim and then at the rate applicable for each 6-month period that the claim is pending.

Interest on Government Claims ([FAR 52.232-17](#)). The contractor may also be required to pay interest on an amount found due under a Government claim.

- The FAR Interest clause requires interest on any contractor debt unpaid after 30 days from issuance of a demand unless the contract:
 - Specifies another due date or procedure for charging or collecting interest;
 - Is a kind excluded from the requirement to include the Interest clause;
 - The contract or its debt has been exempted from interest charges under agency procedures.

- If interest is not already applicable under the contract terms, interest in contractor debt must be made an element of any agreement entered into on deferment of collection.
- Unless otherwise specified in the Interest clause, the interest charge must be at the rate established by the Secretary of the Treasury under Public Law 95-563 for the period in which the amount becomes due. The interest charge must be computed for the actual number of days involved beginning with the due date and ending on the date:
 - On which the designated office receives payment from the contractor;
 - Of issuance of the Government check to the contractor from which an amount otherwise payable has been withheld as a credit against the contract debt;
 - On which an amount withheld and applied to the contract debt would otherwise have become payable to the contractor
- The interest charge may be reduced under procedures prescribed in FAR 32.608-2 in effect on the date of the contract.

Chapter 7

Pricing Termination Settlements

7.0 - Chapter Introduction

7.1 - Commercial Item Contract Termination for Convenience

7.2 - Commercial Item Contract Termination for Cause

7.3 - Noncommercial-Item Fixed-Price Contract Termination For Convenience

7.4 - Noncommercial-Item Fixed-Price Contract Termination For Default

7.5 - Cost-Reimbursement Contract Termination For Convenience

7.6 - Cost-Reimbursement Contract Termination For Default

7.7 - Equitable Adjustment For Continued Portion Of A Fixed-Price Contract

7.0 Chapter Introduction

7.1 Commercial Item Contract Termination for Convenience

[FAR 12.403\(a\)](#) *General*. Clause FAR 52.212-4(l) permits the Government to terminate a contract for commercial items for the convenience of the Government. This clause governs the rights and obligations of the contracting parties in the event the contracting officer terminates the contract for convenience.

[FAR 12.403\(b\)](#) *Policy*. The contracting officer should exercise the Government's right to terminate a contract for commercial items for convenience only when such a termination would be in the best interests of the Government.

[FAR 12.403\(d\)\(2\)](#) Generally, the parties should mutually agree upon the requirements for the termination proposal. The parties must balance the Government's need to obtain sufficient documentation to support payment to the contractor against the goal of having a simple and expeditious settlement.

[FAR 52.212-4](#) *Contract Terms and Conditions-Commercial Items*.

(l) *Termination for the Government's convenience*. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination:

- The Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work.
- Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination.
- The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose.
- This paragraph does not give the Government any right to audit the Contractor's records.
- The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

7.2 Commercial-Item Contract Termination For Cause

Simplified Clause ([FAR 12.403\(c\)](#) and [FAR 52.212-4\(m\)](#)). The FAR Contract Terms and Conditions -- Commercial Items clause also includes a paragraph that permits the Government to terminate the contract for cause. That paragraph prescribes a settlement process that is much shorter and less complex than the noncommercial-item fixed-price contract clause.

Government Right to Terminate for Cause ([FAR 52.212-4\(m\)](#)). . The Government may terminate a commercial-item contract, or any part thereof, for cause if the contractor:

- Defaults;
- Fails to comply with any contract terms and conditions; or
- Fails to provide the Government, upon request, with adequate assurances of future performance.

Government Rights After Termination for Cause ([FAR 12.403\(c\)\(2\)](#) and [FAR 52.212-4\(m\)](#)). Under the clause, the Government's rights after a termination for cause includes all remedies available to any buyer in the marketplace.

- The Government is liable to the Contractor for any amount for supplies or services accepted.
- The contractor is liable to the Government for any and all remedies provided by law. The Government's preferred remedy will be to acquire similar items from another contractor and to charge the defaulted contractor with any excess procurement costs together with any incidental or consequential damages incurred because of the termination.
 - Incidental damages are damages that result from a breach of contract, including all reasonable expenses incurred because of the breach, and reasonable costs incurred by the Government in an attempt to avoid further loss.
 - Consequential damages are damages that do not flow directly and immediately from the termination but rather flow from the results of the termination.

Notice of Remedies ([FAR 12.403\(c\)\(3\)](#)). As part of the termination notice, indicate which remedies the Government intends to seek or provide, and a date by which the Government will inform the contractor of the remedy.

Consult with your legal counsel before issuing the termination notice.

7.3 Noncommercial-Item Fixed-Price Contract Termination For Convenience

Pricing Objective ([FAR 49.201](#)). When pricing noncommercial-item fixed-price terminations for convenience, your primary objective should be to negotiate a reasonable settlement by agreement. The settlement should compensate the contractor fairly for the work done and the preparations made for the terminated portions of the contract, including a reasonable allowance for profit.

- Use judgment in arriving at the amount of reasonable compensation.
- Use cost and accounting data as guides, not rigid measures of reasonable compensation.
- May use other types of data, criteria, or standards as guides to fair contractor compensation.
- Agree on the total amount to be paid the contractor. There is no requirement to agree on the particular elements of cost or profit included in the agreement.

Key Points to Consider. As you establish a settlement amount, consider the following key points:

- Maximum settlement amount;
- General settlement proposal requirements;
- Basis used to develop the settlement proposal (inventory, total cost, or other);
- Settlement expenses;
- Settlement for profit;
- Adjustment for loss contracts; and
- Deductions from gross settlement amount.

Maximum Settlement Amount ([FAR 52.249-2\(f\)](#) and [\(g\)](#)). The maximum amount of a termination settlement may not exceed the sum of:

- Total contract price as reduced by:
 - The amount of any payments previously made, and
 - The contract price of any work not terminated; plus
- Reasonable settlement costs including:
 - Accounting, legal, clerical, and other expenses reasonably necessary for preparation of termination settlement proposals and supporting data;
 - The termination and settlement of subcontracts (excluding the amounts of such settlements); and
 - Storage, transportation, and other incurred costs reasonably necessary for the preservation, protection, or disposition of the termination inventory.

General Proposal Requirements ([FAR 49.206-1](#) and [FAR 49.602](#)). Subject to the provisions of the termination clause, the contractor should promptly submit a settlement proposal for the amount claimed because of the termination. Settlement proposals:

- Must be submitted within one year from the effective date of the termination, unless the period is extended by the termination contracting officer (TCO).
- May include termination charges from two or more divisions or units of the prime contractor under a single prime contract consolidated and included in a single settlement proposal.
- Must cover all cost elements including settlements with subcontractors and any proposed profit.
 - With TCO consent, proposals may be filed in successive steps covering separate portions of the contractor's costs.
 - Each interim proposal must include all costs of a particular type, unless otherwise authorized by the TCO.

- Must be on the FAR-prescribed forms unless the forms are inadequate for the contract involved.
- Must be made in reasonable detail and supported by adequate accounting information.
 - Actual, standard (appropriately adjusted), or average costs may be used in preparing settlement proposals if they are determined under generally recognized accounting principles consistently followed by the contractor.
 - When actual, standard, or average costs are not reasonably available, estimated costs may be used if the TCO approves the method of arriving at the estimates.
 - Never require contractor to maintain an unduly elaborate cost accounting system merely because its contracts may be terminated.
- Must include one [SF 1439](#), Schedule of Accounting Information, per termination, unless the contractor uses a [SF 1438](#), Settlement Proposal (Short Form).
 - Unless otherwise instructed by the TCO, the contractor may use the SF 1438 for any total proposal less than \$10,000.
 - Settlements that would normally be included in a single proposal (e.g., a series of separate orders for the same item under one contract), should be consolidated whenever possible and not divided to bring them below the threshold for SF 1438 use.

Inventory Basis ([FAR 49.206-2\(a\)](#)). The inventory basis is the preferred basis for settling most complete and partial terminations for convenience. Under the inventory basis, the settlement proposal:

- May only propose costs allocable to the terminated portion of the contract, and the settlement proposal must separately itemize all of the following costs:
 - Raw materials, purchased parts, metals, work in process, finished parts, components, dies, jigs, fixtures, and tooling at purchase or manufacturing cost;
 - Charges such as engineering costs, initial or start-up costs, and general and administrative costs;
 - Costs of settlements with subcontractors;
 - Settlement expenses; and
 - Other properly allocable charges.
- Must make an allowance for profit (or adjustment for loss) to complete the gross settlement proposal.
- Must deduct all unliquidated advance and progress payments and all disposal and other credits known when the proposal is developed from the gross settlement proposal.

Total Cost Basis ([FAR 49.206-2](#)). The total cost basis of settlement pricing is preferred for complete terminations of construction and lump-sum professional services contracts (FAR 49.206-2(b)(4)). For other terminations, the TCO may approve contractor use of the total cost basis, when use of the inventory basis is not practical or will unduly delay settlement.

- Consider use of the total cost basis in situations such as those where:
 - Production has not begun and the accumulated costs represent planning and preproduction (get ready) costs.
 - The contractor's accounting system cannot readily establish the unit costs for work in process and finished products.
 - The contract does not specify unit prices.
 - The termination involves complete termination of a letter contract.

- For complete terminations, the contractor must:
 - Itemize all costs incurred under the contract up to the effective date of the termination.
 - Add the costs of settlements with subcontractors and applicable settlement expenses.
 - Make allowance for profit (or adjustment for loss).
 - Deduct the contract price for all end items which have been or are to be delivered and accepted.
 - Deduct all unliquidated advance and progress payments, as well as disposal and other credits known when the proposal is submitted.
- For partial terminations, the contractor must:
 - Not submit the settlement proposal until completion of the continued portion of the contract.
 - Prepare the settlement proposal in accordance with the procedures for a complete termination except that all costs incurred to the date of completion of the continued portion of the contract must be included.

Other Basis ([FAR 49.206-2\(c\)](#)). Contractor use of any basis for termination settlement other than the inventory basis or the total cost basis must be approved in advance by the chief of the cognizant contracting activity or contract administration office.

Settlement Profit ([FAR 49.202](#)). Profit consideration is an integral part of the settlement process whether you are using the inventory basis or the total cost basis.

- Allow profit on preparations made and work accomplished by the contractor on the terminated portion of the contract, considering the following factors:
 - The extent and difficulty of the work done by the contractor as compared with the total work required by the contract (engineering estimates of the percentage of completion ordinarily should not be required, but if available should be considered).
 - Engineering work, production scheduling, planning, technical study and supervision, and other necessary services.
 - Efficiency of the contractor, with particular regard to:
 - Attainment of quantity and quality production.
 - Reduction of costs.
 - Economic use of materials, facilities, and manpower.
 - Disposition of termination inventory.
 - Amount and source of capital and the extent of risk assumed.
 - Inventive and developmental contributions, and cooperation with the Government and other contractors in supplying technical assistance.
 - Character of the business, including the source and nature of materials and the complexity of manufacturing techniques.
 - The rate of profit that the contractor would have earned had the contract been completed.
 - The rate of profit both parties contemplated at the time the contract was negotiated.
 - Character and difficulty of subcontracting, including selection, placement and management of subcontracts, and effort in negotiating settlements of terminated subcontracts.

- For construction contracts:
 - Allow profit on the prime contractor's settlements with construction subcontractors for actual work in place at the job site, but
 - Exclude profit on the prime contractor's settlements with construction subcontractors for materials on hand and for preparations made to complete the work.
- Do not:
 - Allow profit on settlement expenses.
 - Allow anticipatory profits on work not accomplished or consequential damages.
 - Base profit for contractor effort in settling subcontractor proposals on the dollar amount of the subcontract settlement, but you should consider the contractor's efforts when determining the overall profit rate allowed.
 - Allow the contractor profit for material or services that, as of the effective date of the termination, had not been delivered by a subcontractor, regardless of the completion percentage.

Inventory Basis Adjustment for Loss Contracts (FAR 49.203). If the contractor was performing the contract at a loss, the contractor should not be able to "get well" due to a termination for convenience. If the termination is being settled using the inventory basis, calculate the adjusted settlement using the following formula, less all disposal credits and unliquidated advance and progress payments:

$$S = E + D + \left(I \times \frac{P}{C + F} \right)$$

Where:

S = Adjusted Settlement -- still subject to the deductions described later in this section

E = Settlement Expenses -- negotiated or determined

D = Contract Price (as adjusted) for acceptable completed end items

I = Remainder of the inventory basis settlement amount otherwise agreed upon or determined

P = Contract Price

C = Incurred Costs before contract termination

F = Estimated Cost to complete the contract

Note: The expression $\frac{P}{C + F}$ is referred to as the loss ratio. It is to the contractor's advantage to understate the estimate to complete, to avoid application of the loss ratio and possibly earn profit. Review the estimate carefully to ensure that it is reasonable and accurately reflects the current contract status.

For example: What would be the settlement given the following information?

E = Settlement Expenses	\$ 7,000
D = Price of Items Delivered and Accepted	\$ 50,000
I = Remainder of Settlement	\$350,000
P = Contract Price	\$700,000
C = Costs Incurred Prior to Termination	\$400,000
F = Estimate to Complete	\$450,000

$$\begin{aligned}
 S &= E + D + \left(I \times \frac{P}{C + F} \right) \\
 &= \$7,000 + \$50,000 + \left(\$350,000 \times \frac{\$700,000}{\$400,000 + \$450,000} \right) \\
 &= \$7,000 + \$50,000 + \left(\$350,000 \times \frac{\$700,000}{\$850,000} \right) \\
 &= \$7,000 + \$50,000 + (\$350,000 \times .82) \\
 &= \$7,000 + \$50,000 + \$287,000 \\
 &= \$344,000 \text{ adjusted settlement amount}
 \end{aligned}$$

Total Cost Basis Adjustment for Loss Contracts ([FAR 49.203\(c\)](#)). If the termination is being settled using the total cost basis, calculate the adjusted settlement using the following formula, less all disposal credits, unliquidated advance and progress payments, and all other amounts previously paid under the contract:

$$S = E + \left(T \times \frac{P}{C + F} \right)$$

Where:

S = Adjusted Settlement -- still subject to the deductions described later in this section

E = Settlement Expenses -- negotiated or determined

T = Remainder of the total cost basis settlement amount otherwise agreed upon or determined (includes price of items delivered)

P = Contract Price

C = Incurred Costs before contract termination

F = Estimated Cost to Complete the contract

For example: What would be the settlement given the following information?

P = Contract Price	\$800,000
E = Settlement Expenses	\$10,000
T = Remainder of Settlement (including price of items delivered and accepted)	\$500,000
C = Costs Incurred Prior to Termination	\$500,000
F = Estimate to Complete	\$450,000

$$\begin{aligned}
 S &= E + \left(T \times \frac{P}{C + F} \right) \\
 &= \$10,000 + \left(\$500,000 \times \frac{\$800,000}{\$500,000 + \$450,000} \right) \\
 &= \$10,000 + \left(\$500,000 \times \frac{\$800,000}{\$950,000} \right) \\
 &= \$10,000 + (\$500,000 \times .84) \\
 &= \$10,000 + \$420,000 \\
 &= \$430,000 \text{ adjusted settlement amount}
 \end{aligned}$$

Note: Under the inventory basis for settlement, the loss ratio is only applied to the cost of the items not accepted. Under the total cost basis, it is applied to all costs incurred before termination. Therefore the ratio adjustment will have a greater effect on the adjusted settlement amount.

Deductions From Gross Settlement Amount. From the gross settlement amount payable to the contractor, you must deduct:

- The agreed price for any part of the termination inventory purchased or retained by the contractor, and the proceeds from any materials sold that have not been paid or credited to the Government;
- The fair value, of any part of the termination inventory that, before transfer of title to the Government or to a buyer, is destroyed, lost, stolen, or so damaged as to become undeliverable (normal spoilage is excepted, as is inventory for which the Government has expressly assumed the risk of loss); and
- Any other amounts as appropriate for the particular termination.

7.4 Noncommercial-Item Fixed-Price Contract Termination For Default

Government Right to Terminate for Default ([FAR 49.402-1](#) and [FAR 52.249-8](#)). When the noncommercial-items fixed-price contract contains the Default clause, the Government has the right, subject to the notice requirements of the clause, to terminate the contract completely or partially for default if the contractor fails to:

- Make delivery of the supplies or perform the services in the time specified in the contract.
- Perform any other provision of the contract.
- Make progress and that failure endangers performance of the contract.

Key Points to Consider. When you are involved in the administration of a noncommercial-items fixed-price termination for default, consider the following key points:

- Government rights;
- Amounts due the contractor;
- Government protection from overpayment; and
- Repurchase against the contractor's account.

Government Rights ([FAR 49.402-2](#)). Under a noncommercial-item fixed-price contract termination for default:

- The Government is not liable for the contractor's costs on undelivered work.
- The Government is entitled to the repayment of advance and progress payments (if any) applicable to the terminated portion of the contract.
- The Government may elect to require the contractor to transfer title and deliver to the Government completed supplies and manufacturing materials as directed by the contracting officer.
 - Never use the Default clause as authority to acquire any complete supplies or manufacturing materials when the Government has title under some other contract clause.
 - Only acquire manufacturing materials under the Default clause for furnishing to another contractor, after considering the difficulties the new contractor may have in using the materials.
- The contractor is liable to the Government for any excess costs incurred in acquiring supplies or services similar to those required by the contract terminated for default.
- The contractor is liable to the Government for any other damages, whether or not repurchase is affected.

Amounts Due the Contractor ([FAR 52.249-8\(f\)](#)). Under a fixed-price termination for default, the Government:

- Must pay the contract price for completed supplies delivered and accepted.
- Must negotiate an agreement on the amount of payment for:
 - Manufacturing materials (if any) delivered to and accepted by the Government.
 - Protecting and preserving property in which the Government has an interest.
- May withhold from the amounts above any sum necessary to protect the Government against loss because of outstanding liens or claims of former lien holders.

Government Protection From Overpayment ([FAR 49.402-2\(d\)](#)). Protect the Government from overpayment that might result from failure to provide for the Government's potential liability to laborers

and material suppliers for lien rights outstanding against the completed supplies or materials after the Government has paid the contractor for them. To accomplish this, take one or more of the following actions before paying for the supplies or materials.

- Ascertain whether payment bonds (if any) provided by the contractor are adequate to satisfy all lienors' claims or whether it is reasonable to obtain similar bonds to cover outstanding liens.
- Require the contractor to furnish appropriate statements from laborers and material suppliers disclaiming any lien rights they may have to the supplies or materials.
- Obtain appropriate agreement by the Government, the contractor, and lienors ensuring release of the Government from any potential liability to the contractor or lienors.
- Withhold from the amount due for the supplies or materials any amount that you determine is necessary to protect the Government's interest, but only if the above measures cannot be accomplished or are considered inadequate.
- Take other appropriate action considering the circumstances and the degree of contractor solvency.

Repurchase Against the Contractor's Account ([FAR 49.402-6](#)). Generally, the contracting officer will decide before issuing the default termination notice whether or not the supplies or services required by the contract will be repurchased.

- When supplies or services are still required after contract termination, repurchase the same or similar supplies or services against the contractor's account as soon as practicable.
- Repurchase at as reasonable a price as practicable, considering the quality and delivery requirements.
- If the repurchase is for a quantity not over the undelivered quantity terminated for default, the contracting officer is authorized to use any appropriate terms and acquisition method.
 - Obtain competition to the maximum extent practicable for the repurchase.
 - Cite the Default clause as the authority.
- You may repurchase a quantity in excess of the undelivered quantity terminated for default when the excess quantity is needed:
 - Treat the entire quantity as a new acquisition.
 - The excess cost may not be charged against the defaulting contractor's account for more than the undelivered quantity terminated for default (including variations in quantity permitted by the terminated contract).
- If you repurchase at a price over the price of the supplies or services terminated, after completion and final payment of the repurchase contract, make written demand on the contractor for the total amount of the excess, giving consideration to any increases or decreases in other costs such as transportation, discounts, etc.
- If the contractor fails to make payment, follow the FAR procedures for collecting contract debts due the Government.

7.5 Cost-Reimbursement Contract Termination For Convenience

Cost Allowability. Terminations for convenience under a cost-reimbursement contract are subject to the same general rules of allowability as other contract costs.

Key Points to Consider. As you establish a settlement costs and related fee (if any), consider the following key points:

- Complete termination settlement limits;
- Complete termination cost voucher treatment;
- Complete termination settlement proposal;
- Complete termination proposal audit;
- Complete termination indirect cost;
- Complete termination final settlement;
- Partial termination settlement limits;
- Partial termination cost voucher treatment;
- Partial termination settlement proposal; and
- Partial termination final settlement.

Complete Termination Settlement Limits (FAR 49.301). Pricing actions with a cost-reimbursement contract termination for convenience, are limited to the settlement of costs and fee (if any) associated with the termination. Consult the contract clauses governing costs to determine what costs are allowable.

Complete Termination Cost Voucher Treatment (FAR 49.302). When the contract is completely terminated, the contractor may continue submitting cost vouchers until the last day of the sixth month following the month in which the termination is effective. The contractor may elect to stop using vouchers at any time during the 6-month period.

Complete Termination Settlement Proposal (FAR 49.303-1). The contractor must submit a final settlement proposal covering unvouchered costs and any proposed fee within one year of the effective date of the contract termination, unless the period is extended by the TCO.

- The proposal must not include costs that have been:
 - Finally disallowed by the contracting officer.
 - Previously vouchered and formally questioned by the Government but not yet resolved.
- If the contractor has vouchered all costs within the 6-month period, it may limit the settlement proposal to the related fee.

Complete Termination Proposal Audit (FAR 49.303-3). Unless the proposal is limited to fee only, refer the proposal to the cognizant auditor for review. If the proposal is limited to fee, no referral is required.

Complete Termination Indirect Cost (FAR 49.303-4). If the contract contains the clause, Allowable Cost and Payment, and it appears that waiting for final indirect costs will unduly delay final settlement, the TCO may (after obtaining information from the cognizant auditor) agree with the contractor to:

- Negotiate the amount of indirect costs for the contract period for which final indirect cost rates have not been negotiated, or to use billing rates as final rates for the period if the billing rates appear reasonable, or
- Reserve any indirect cost adjustment in the final settlement agreement, pending establishment of negotiated rates.

Complete Termination Final Settlement ([FAR 49.303-5](#) and [FAR 49.305-1](#)). Proceed with the settlement and execution of a settlement upon receipt of the audit report (if applicable) and the contract audit closing statement covering vouchered costs.

- You may include in the final settlement agreement, all demands of the Government and proposals of the contractor under the terminated contract. However, do not allow any disallowed cost or any other cost of the same nature.
- If you and the contractor can reach an overall settlement, agreement on each element of cost is not necessary.
 - Differences may be compromised and doubtful questions settled by agreement.
 - Do not include costs that are clearly unallowable under the terms of the contract.
- Adjust fee in the manner prescribed by the contract. Generally, you should base fee on the percentage of completion of the contract or terminated portion. Consider factors such as:
 - The extent and difficulty of the work performed the contract.
 - Work performed by the contractor in stopping performance, settling terminated subcontracts, and disposition of termination inventory.
 - The contractor's adjusted fee shall not include an allowance for fee for subcontract performance included in subcontracts' settlement proposals.

Partial Termination Settlement Limits ([FAR 49.304-1](#)). In a partial termination, limit the settlement to adjustment of contract fee (if any). With contracting officer concurrence, the TCO may also reduce estimated contract cost to reflect the reduced contract effort.

However, you should process the partial termination following the guidelines for a complete termination, when either of the following situations exist:

- The terminated portion is clearly severable from the balance of the contract; or
- Performance of the contract is virtually complete, performance of any continued portion is only on subsidiary items or spare parts, or performance is otherwise not substantial.

Partial Termination Cost Voucher Treatment ([FAR 49.304-3](#)). When the contractor's proposed partial termination settlement is limited to adjustment of fee, the contractor must continue to submit the [SF 1034](#), Public Voucher for Purchases and Services Other than Personal, for costs that are reimbursable under the contract. Never reimburse the contractor for costs of settlements with subcontractors unless required approvals or ratifications are received.

Partial Termination Settlement Proposal ([FAR 49.304-2](#)). The contractor must submit a final settlement proposal covering unvouchered costs and any proposed fee within one year of the effective date of the contract termination, unless the period is extended by the TCO. The contractor must:

- The proposal in the form prescribed in FAR 49.602-1 or by certified letter.
- Substantiate the amount of fee claimed.

Partial Termination Final Settlement ([FAR 49.304-1](#)). As described above, the final settlement is limited to a fee adjustment and a concurrence of the contracting office to a reduction in the estimated contract costs. The TCO shall adjust the fee as provided in FAR 49.304-2 and FAR 49.305 unless-

- The terminated portion is clearly severable from the balance of the contract; or
- Performance of the contract is virtually complete or performance of any continued portion is otherwise not substantial.

7.6 Cost-Reimbursement Contract Termination For Default

Principles for Settlement ([FAR 49.403](#)). Settlement of a cost-reimbursement contract terminated for default is subject to the principles for settlement of a termination for convenience, except that:

- The costs of preparing the contractor's settlement proposal are not allowable; and
- The contractor is reimbursed the allowable costs, and an appropriate reduction is made in the total fee (if any).

No Repurchase Against the Contractor's Account ([FAR 49.403\(c\)](#)). A cost-reimbursement contract does not contain any provision for Government recovery of excess repurchase costs after termination for default.

7.7 Equitable Adjustment For Continued Portion Of A Fixed-Price Contract

Need for Equitable Adjustment ([FAR 49.208](#)). After a partial termination of a fixed-price contract, the contractor may request an equitable adjustment in the price or prices of the continued portion. This is not part of the actual termination settlement.

The purpose of an equitable adjustment is to provide for any increases in the unit costs of the continued portion of the contract as a result of the reduction in volume. For example, start-up costs may not have been fully amortized at the time of the termination because of a significant decrease in volume, or the average labor hours necessary to produce each unit may not have decreased as anticipated because of learning or efficiency improvements.

Proposal for Equitable Adjustment ([FAR 52.249-2\(l\)](#)). The contractor may file a request with the contracting officer for an equitable adjustment of the price(s) of the continued portion of a fixed-price contract partially terminated for the convenience of the Government. Any contractor proposal for an equitable adjustment, must be submitted within 90 days from the effective date of the partial termination unless the period is extended in writing by the contracting officer.

Cost Adjustment. Consider a proposed equitable adjustment related to a partial termination following the same guidelines that you would follow when considering any other equitable adjustment.

Profit Adjustment ([FAR 15.404-4](#)). Consider reasonable adjustments in contractor profit as part of the equitable adjustment.

- Base profit analysis on the cost effects considered in the equitable adjustment.
- Develop a profit objective considering the FAR profit factors and applicable agency guidance.

No Settlement/Adjustment Duplication ([FAR 49.208](#)). When the contracting officer responsible for negotiating the equitable adjustment and executing a supplemental agreement is not the TCO, the contracting officer must ensure that no part of the equitable adjustment is included in a termination settlement made or in process.

The TCO must also ensure that no portion of the costs included in an equitable adjustment is included in a termination settlement.

Timing. Although the termination settlement and the equitable adjustment, may be negotiated by separate contracting officers and require separate agreements, both negotiations should normally be completed at the same time.

Clear separation of the costs associated with the termination settlement and costs associated with the equitable adjustment may be difficult at any point of time. The different contracting officers involved may have differing opinions about which costs should be considered where. Communication between contracting officers should be ongoing to prevent inclusion of duplicate settlement costs.

Chapter 8

Conducting Cost Realism Analysis

8.0 - Chapter Introduction

8.1 - Evaluating Cost Realism

8.2 - Considering The Uncompensated Overtime Effect On Cost Realism

8.3 - Considering Cost Realism In Cost-Reimbursement Proposal Evaluation

8.4 - Considering Cost Realism In Fixed-Price Proposal Evaluation

8.0 Chapter Introduction

8.1 Evaluating Cost Realism

Pricing Responsibility ([FAR 15.402\(a\)](#), [FAR 15.405\(b\)](#), and [FAR 16.103\(a\)](#)). When negotiating a contract price, the primary concern should be the price the Government is willing to pay to obtain the required supplies or services from a responsible contractor. The objective should be to negotiate a contract type and price (or estimated fee and cost) resulting in reasonable contractor risk and provide the contractor with the greatest incentive for efficient and economical contract performance.

Cost Realism Analysis is the process of evaluating specific elements of each offeror's proposed cost estimate to determine whether the estimated proposed cost elements are realistic for the work to be performed. It is important to determine the proposed cost elements are (labor-hours and material) realistic in order to determine the probable cost of performance as it relates to the technical approach proposed by each offeror.

Unrealistically Low Offers (Buying In, [FAR 3.501](#)). Unrealistically low offers can generally occur, because the offeror:

- **May have a Lack of Understanding of the Contract Requirements.** Government requirements may not be clearly stated or the offeror may be unfamiliar with common product terminology. If the offeror underestimates the magnitude or complexity of a proposed task, the estimated costs could be far below the probable cost of successful contract performance.
- **Did Not Properly Coordinate Proposal Preparation.** The cost proposal may not be consistent with the offeror's technical proposal. The inconsistency may occur as the result of inadequate coordination between the team preparing the technical proposal and the team preparing the cost proposal.
- **Consciously Understated The Proposed Cost/Price.** In the face of competitive pressure, an offeror may submit an unrealistically low price in order to win a contract (i.e., use a buy-in pricing strategy).
 - On cost-reimbursement contracts, the contractor may expect to recoup all or most of the costs related to any cost overrun that may occur.
 - On fixed-price contracts, the contractor may hope to:
 - Increase the contract amount after award (e.g., through unnecessary or excessively priced contract modifications), or
 - Receive follow-on contracts at unrealistically high prices to recover losses on the buy-in contract.

Cost Realism Analysis ([FAR 15.404-1\(d\)](#)). Cost realism analysis is the process of independently reviewing and evaluating specific elements of each offeror's proposed cost estimate to determine whether the estimated proposed cost elements:

- Are realistic for the work to be performed;
- Reflect a clear understanding of contract requirements; and
- Are consistent with the unique methods of performances and materials described in the offeror's technical proposal.

Based on the evaluation criteria stated in the solicitation, you can then use the results of your analysis in selecting the offer that provides best value to the Government.

Situations for Cost Realism Analysis ([FAR 15.404-1\(d\)](#)). When evaluating competitive offers for a:

- Cost-reimbursement contract, you must use cost realism analysis to determine the probable cost of performance for each offeror.
- Fixed-price incentive contract or (in exceptional cases) other fixed-price contract, you may use

cost realism analysis to assess offeror responsibility and contract performance risk when:

- New requirements may not be fully understood by competing offerors;
- There are quality concerns; or
- Past experience indicates that contractors proposed costs have resulted in quality or service shortfalls.

Standard for Cost Realism Analysis (Cardinal Scientific, Inc., CGEN B-270309, Feb. 12, 1996 and ManTech Envir. Tech., Inc., CGEN B-271002.3, June 3, 1996).

Many protests to the Comptroller General (CGEN) have challenged Government cost realism analyses. The CGEN has generally sustained the contracting officer's judgment on cost realism -- as long as that judgment is:

- Informed;
- Accurate;
- Sufficiently thorough for the acquisition situation;
- Reasonable -- not arbitrary; and
- In accordance with evaluation criteria stated in the solicitation.

Clear, complete, accurate, and validated documentation is essential, because it is the documentation that demonstrates to others the basis for your analysis. You can use clear documentation to guide your efforts to resolve offeror disagreement with the results of your analysis, before that disagreement becomes a formal protest. If you are faced with a protest, clear documentation will greatly affect your chances of success in a sustaining an award decision.

Although a low offer may indicate a lack of understanding of the requirement, or that the cost proposal does not match the cost elements in the technical proposal. It is also possible that the offeror may have a more efficient technical solution to perform the required tasks in the technical proposal. If the technical proposal is found to be realistic for the work to be performed the analyst must compare the cost proposal to the technical proposal cost elements to determine whether, for example, direct material and/or direct labor categories and labor hours match and no discrepancies exist.

Cost Realism Analysis Process. Consider the following process whenever you perform cost realism analysis:

- Assure that the solicitation states how cost realism analysis will be used in the contract award decision.
- Obtain information other than cost or pricing data needed to support cost realism analysis.
- Obtain other information necessary to support analysis.
- Obtain analysis support from other members of the Government Acquisition Team.
- Identify costs/prices that are understated for the required contract effort.
- Estimate the probable cost of contract performance (when necessary).
- Use your cost realism analysis in offer evaluation.

Award Criteria and Cost Realism Analysis ([FAR 9.103\(c\)](#), [FAR 9.104-1](#), [FAR 15.101-1](#), [FAR 15.206](#), [FAR 15.404-1\(d\)](#), and [DCAM 9-311.4](#)). If you plan to consider cost realism in evaluating offers for contract award, your solicitation must define how it will be considered. Normally, you should make this decision during acquisition planning. However, you may decide that cost realism analysis is necessary after evaluating the offers received. At that point, you may issue an amendment revising offer evaluation criteria for contract award and requiring each offeror to submit the information required for analysis.

However, remember that changing award criteria after receipt of proposals is likely to raise questions about the fairness of the proposal evaluation process.

- For cost-reimbursement contracts, you:
 - Must use the probable cost of contract performance developed in cost realism analysis to determine best value. An award based on an unreasonably low cost proposal would be false economy, because the final price paid by the Government will depend on final contract cost.
 - May also use cost realism analysis as a factor in evaluating the offeror's understanding of contract technical requirements and the risk associated with the offeror's technical proposal.
- For fixed-price contracts, you must not adjust offered prices as a result of your analysis. However, you may use cost realism analysis in assessing:
 - Contract performance risk. An unrealistic price will normally increase the risk of successful contract completion. Evaluators should consider this increased level of risk when assessing best value.
 - Offeror responsibility. An unrealistic price:
 - Will put additional pressure on the offeror's financial resources available to support contract performance.
 - May indicate that an offeror cannot comply with the required or proposed schedule for contract performance.
 - May indicate that an offeror does not have the organization, experience, and technical skills needed to perform the contract.

Obtain Necessary Data Other Than Certified Cost or Pricing Data ([FAR 15.403-5 \(b\)](#)).

Once you decide to use cost realism analysis, you must decide what information other than cost or pricing data you will need to complete your analysis. In particular, you must decide what information to require from offerors. Normally, you should make this decision during acquisition planning and identify necessary cost information requirements in the solicitation. You may establish the requirement after receipt of offers, but the acquisition will be delayed while offerors gather and submit the information required.

The solicitation requirement for information other than cost or pricing data:

- Should be limited to the data that you anticipate will be needed for cost realism analysis. For example, if you are primarily concerned about the realism of labor estimates, you may limit the information requirement to labor rate and labor hour estimates. In that situation, you need not require submission of information on material, indirect costs, or profit.
- Should permit each offeror to determine its submission format unless you need a specific format for efficient and effective analysis. For a commercial item acquisition, limit information requirements, to the maximum extent practicable, to information in the form regularly maintained by the offeror in its commercial operations.
- Should require each offeror to submit information that is sufficiently current to permit effective cost realism analysis.
- May include specific information requirements adapted from [FAR Table 15-2](#).

Obtain Other Information Necessary to Support Analysis ([FAR 15.403-3\(a\)](#), [FAR 22.404](#), & [FAR 22.1002](#)).

You should not require offerors to provide more information than necessary. Obtain additional information from other sources to support your analysis.

- A detailed and well documented Independent Government Estimate (IGE) is a valuable tool for supporting cost realism analysis. It provides a:
 - Model to identify the offeror information required for cost realism analysis, and
 - Primary benchmark for cost realism analysis.

- Sources of market cost information include:
 - Cost estimating relationships or pricing models; or
 - Wage determinations under the Davis-Bacon Act or Service Contract Act; and
 - Published cost/price indexes.
 - Ensure the information in the IGE can be validated.

Obtain Other Information Necessary to Support Analysis ([FAR 15.306\(e\)\(2\)](#) and [FAR 15.404](#)).

- Sources of information about specific offerors include:
 - Technical evaluations of offeror proposals for similar contract requirements;
 - Audit reports on recent proposals;
 - Forward pricing rate proposals and any forward pricing rate recommendations, or current forward pricing rate agreements;
 - Contract and program histories related to the current acquisition; and
 - Results from related cost estimating system reviews.
- DO NOT use data from one offeror's proposal to question the realism of another offeror's proposal. The two proposals are based on different cost accounting systems and may be based on entirely different technical approaches.

Obtain Government Acquisition Team Support ([FAR 3.104-5\(a\)](#), [FAR 15.207](#), [FAR 15.306\(e\)](#), and [FAR 15.404-2\(a\)\(3\)](#)).

The contracting officer is ultimately responsible for performing the cost realism analysis, but the contracting officer cannot be an expert in all the disciplines involved in proposal preparation and analysis. Support from both in-house and field members of the Government Acquisition Team can be invaluable in evaluating proposal cost realism. Communicate with team members early in the acquisition process to determine the information already available, extent of assistance required, specific areas where assistance is needed, and information necessary for an efficient and effective review.

Assure that the Government personnel supporting the analysis are aware of their responsibility to safeguard sensitive contractor information. During the evaluation process, disclosure of proprietary offeror information must be governed by FAR procedures and applicable agency regulations governing the disclosure, protection, and marking of proprietary and source selection information. Government personnel must not visit any offeror or discuss the proposal with any offeror without proper approval.

Only request the support needed to evaluate the offers received. As the number of personnel involved in the evaluation process increases, the chance of unauthorized disclosure of proprietary proposal information also increases.

- **In-House Support.** Technical specialists and others familiar with specific contract requirements, are typically the Government personnel best qualified to evaluate technical proposals. They can also raise key questions about apparent inconsistencies between offeror's technical and pricing proposals. For example, the technical proposal describes the type of work typically performed by a top scientist, but the pricing proposal is based on using journeyman engineers. Are journeyman engineers likely to be able to perform the required tasks normally in a timely and cost effective manner?
- **Audit Support.** Their familiarity with offeror cost accounting information, puts auditors in a unique position to question inconsistencies in proposed costs. For example, an auditor may question proposed indirect cost rates that are significantly lower than the rate projections supported by available cost data.

Before requesting an audit, contact the auditor to determine how the audit office can efficiently and effectively support the cost realism analysis. A proposal audit may not even be necessary to meet your analysis objectives. For example, you may be able to verify the realism of proposed labor rates over the

telephone, based on information already available to the auditor. If an audit is necessary, only request audit support in areas where adequate analysis information not already available.

- **Field Support.** The contract administration team can include administrative contracting officers, price analysts, quality assurance personnel, engineers, plus small business and legal specialists. These specialists can use their unique understanding of offeror operations to raise questions about the proposal or help answer questions raised by in-house personnel.

Before requesting field pricing support, contact field Acquisition Team members to determine how they can efficiently and effectively support the cost realism analysis. Only request field support in areas where adequate analysis information is not already available.

Identify Understated Costs/Prices (DCAM 9-311.4). Ask the following questions to determine whether proposed costs/prices are significantly understated for the required contract effort.

- ***Does the data other than certified cost or pricing data submitted by the offeror satisfy the solicitation requirements?***

The information submitted must be adequate for proposal analysis. Inadequate information could indicate a lack of understanding of contract requirements or an attempt to hide weaknesses in proposal development.

- ***Does the offeror's cost and or price appear realistic based on a comparison with the Independent Government Estimate?***

A valid and well documented Independent Government Estimate (IGE) serves as the **initial benchmark** against which all proposals are measured.

- Analyze any significant differences between the proposal and the IGE.
- If you believe that the IGE is complete, accurate, and therefore reasonable, require the offeror to demonstrate why its proposal is appropriate for the contract.
- If you determine that the IGE is not reasonable (e.g., a major element was omitted), you should take action to correct the estimate before completing your analysis.
- ***Do the proposed costs/prices reflect an accurate understanding of contract requirements?***

With the assistance of other Government Acquisition Team members, determine if the proposal is consistent with the technical and other solicitation requirements. Inconsistencies need to be identified and clarified. A lack of understanding of the technical requirements can lead to severe contract over or under pricing. Further, a lack of understanding can jeopardize successful contract completion.

- ***Are the proposed costs/prices consistent with the various elements of the technical proposal?***

The cost/price proposal should be a dollars and cents representation of the technical proposal and must be consistent with the technical proposal. Inconsistencies may be identified in any element of the offeror's cost estimate (e.g., direct labor cost, direct material cost, or indirect cost).

- **Example 1.** The offeror has submitted a proposal on a contract that is part of a complex on-going research program to develop and test a state-of-the-art analysis system. In the technical proposal, the offeror has proposed to use 10 doctoral level engineers in completing the effort over a 12-month period. Instead of the market labor rate for doctoral engineers, the offeror has proposed the market labor rate for engineering assistants. It appears impossible to hire the proposed types of engineers at that labor rate.
- **Example 2.** The offeror has proposed to integrate a top-of-the-line material handling unit into a new system being designed for the Government. However, the price proposed is 50 percent less than the lowest known sales price for the item.
- **Example 3.** The offeror has proposed to conduct a stringent test program in a special test facility located in the contractor's plant. However, the proposal does not include the overhead cost normally applied to test units using the test facility.

- **How have the offeror's actual contract costs incurred on previous contracts compared with the price proposed?**

Past performance can be a strong indicator of future performance. However, if records indicate historically poor cost performance, provide the offeror an opportunity to demonstrate that past problems were beyond the firm's control or that improvements have been made in the firm's cost estimating system.

- **Is the offeror likely to satisfactorily meet all contract requirements at the proposed price?**

Even if the proposal is internally consistent and reflects an accurate understanding of the work, the offeror may still have underestimated the cost of completing the contract. Assess the probability that the offer can complete the contract on time at the proposed price.

Estimate Probable Cost ([FAR 15.404-1\(d\)\(2\)](#)), Ryan Assoc., Inc., CGEN B-274194.3, Nov. 26, 1996, and The Jonathan Corp & Metro Mach. Corp, CGEN B-251698.4, May 17, 1993).

The probable cost is the Government's estimate of what it will cost for the offeror to complete the contract based on the Government's evaluation of the offeror's technical proposal and proposed costs.

- **Decide If A Probable Cost Estimate Is Necessary.** Depending on the solicitation award criteria and the offeror's proposal, you may or may not need to develop a probable cost estimate.
 - If you are performing a cost realism analysis of a proposal for a cost-reimbursement contract, you must develop a probable cost estimate to support your analysis of best value.
 - If you are performing a cost realism analysis of a proposal for a fixed-price contract, you may develop a probable cost estimate to assess contract performance risk or contractor responsibility. However, you may be able to analyze key areas of performance risk without a probable cost estimate.
- **Consider General Points For Probable Cost Development.** Whenever you develop a probable cost estimate, consider the following points.
 - As you collect the information required to evaluate the realism of the offeror's cost/price estimate, you are also collecting the information required to develop your own estimate of the most probable contract cost.
 - In developing your estimate, adopt the portion of the offeror's estimate that appears realistic and modify the portion of the estimate that you believe is unrealistic. For example, you may accept proposed labor hours and adjust the labor rate based on an audit recommendation. Adjustments may increase or decrease cost estimates
 - Use relevant estimating tools and techniques.
 - As you complete your estimate, assure that you clearly document your rationale for any adjustment.
- **Assure That Assessment Is Reasonable.** The Comptroller General has repeatedly found that cost realism analysis is a judgmental process and review should be limited to assuring that the analysis is reasonable and not arbitrary.
- **Develop A Probable Cost Estimate For Each Offer.** Each probable cost estimate must consider the unique characteristics of the offeror and the technical proposal. For example, in 1993, the Comptroller General rejected a cost-plus-fixed-fee contract award decision based on probable cost, because the agency failed to consider each offeror's individualized approach and instead mechanically adjusted proposed labor hours and material costs. In that case, the Comptroller General found that:
 - The agency's cost analyst entered into a computer each offeror's labor hour and material cost estimate for the 100 work items in a work package.
 - The computer was programmed to compare the offeror's proposed labor hours and material costs with the Government's labor hour and material cost estimates for each work item.

- The computer automatically accepted those offeror estimates that were within a predefined percentage of the Government's estimate. For all offeror estimates outside the predefined percentage range, the computer adjusted the offeror's estimate by means of a mathematical formula which approximately split the difference between the contractor estimate and the Government estimate.

Contract Decision Making. Consider the results of your cost realism analysis in offer evaluation, in accordance with the contract award criteria identified in the solicitation. Later sections of this chapter provide examples of how you can consider cost realism analysis in contract award decisions.

8.2 Considering The Uncompensated Overtime Effect On Cost Realism

Uncompensated Overtime Affects Analysis (Fair Labor Standards Act, § 213). The Fair Labor Standards Act (FLSA) establishes the national minimum wage and maximum hour requirements that apply to firms involved in interstate commerce. However, the FLSA exempts numerous labor categories in a wide range of industries from its mandatory requirements. Cost realism analyses for services acquired based on the number of labor-hours to be provided rather than the task to be performed are particularly affected by the FLSA's exemption of bona fide executive, administrative, and professional workers from wage and maximum labor-hour requirements.

- Many service companies strongly encourage or even require FLSA-exempt employees to accept "uncompensated overtime" -- work in excess of an average of 40 hours per week by FLSA-exempt employees without additional compensation. Compensated personal absences (e.g., such as holidays, vacations, and sick leave) are included in the normal work-week for purposes of computing uncompensated overtime.
- Not all of the firms that encourage or require uncompensated overtime account for it in the same way.
- Other firms compensate each person working overtime with overtime pay or compensatory overtime.

These differences in use and accounting for uncompensated overtime can complicate cost realism analysis of both direct labor cost and the allocation of related indirect cost. Accordingly, the issues surrounding the analysis of uncompensated overtime are given special attention here.

Forty-Hour Accounting System. Here, the term "forty-hour accounting system" refers to a labor accounting system that only charges cost objectives for forty hours per week of each employees time no matter how many hours the employee works. The hourly labor rate is based on one/fortieth of the employees weekly salary. When an employee works more than 40 hours, only 40 hours of labor cost can be charged to cost objectives.

- Some forty-hour accounting systems charge labor costs only to cost objectives worked on during the first eight hours of the work-day.
- Others permit employees to select which cost objectives will be charged.

Forty-Hour Accounting System Gaming.

- Either method for distributing labor costs under a forty-hour accounting system provides the opportunity for employees or management to manipulate the allocation of labor costs and the indirect costs allocated based on labor hours or labor dollars.

For example: Suppose an employee works ten hours a day five days a week. One day the employee spends five hours working on a firm fixed-price contract and five hours working on a cost-reimbursement contract. If the employee can only charge eight hours, where should they be charged?

- **Method 1.** The firm requires employees to distribute labor costs only to cost objectives worked on during the first eight hours of the work-day. If the firm fixed-price contract were scheduled first:
 - The cost of five hours would be allocated to the fixed-price contract;
 - The cost of three hours would be allocated to the cost-reimbursement contract; and
 - The final two (uncompensated) hours would not be charged.
- **Method 2.** Given the same situation, the contract charges could be manipulated by scheduling the employee to work on the cost-reimbursement contract first. Then, the cost of:
 - Five hours would be allocated to the cost-reimbursement contract;
 - Three hours to the fixed price contract; and
 - The final two (uncompensated) hours would still not be charged.

- **Method 3.** The opportunity for cost manipulation would be even greater if the employee could choose which contract to charge. In that situation, the five hours would almost certainly be charged to the cost-reimbursement contract, because that would maximize contractor income.

Full-Time Accounting ([FAR 31.201-4](#), [DCAM 6-410.4](#), and [DCAM 6-410.5](#)). Other contractors require their employees to charge for every hour worked. The Defense Contract Audit Agency (DCAA) and others contend that total time accounting is required for compliance with [FAR 31.201-4](#), Determining Allocability; [CAS 401](#), Consistency in Estimating, Accumulating, and Reporting Costs; and [CAS 418](#), Allocation of Direct and Indirect Costs.

- The DCAA Audit Manual recognizes three acceptable methods of accounting for uncompensated overtime:
 - Calculating a separate average labor rate for each labor period, based on the salary paid divided by the total hours worked, and distributing the salary costs to all cost objectives based on that rate.
 - Determining the percentage of total hours worked on each cost objective during the labor period and distributing salary cost based on the percentage allocation. For example, if an employee was paid on a weekly basis and worked 20 hours on one project and 30 hours on another, 40 percent of the employee's salary would be charged to the first cost objective and 60 percent to the other.
 - Computing an estimated hourly rate for each employee for the entire year based on the total hours the employee is expected to work during the year and distributing the salary costs using the estimated hourly rates. Any variance between the actual salary costs and the amount distributed, is charged/credited to overhead.
- The DCAA Audit Manual also recognizes that other methods of uncompensated overtime accounting may be acceptable -- subject to audit review. Examples include:
 - Distributing the salary cost to all cost objectives based on a labor rate calculated based on an 8-hour day and 40-hour week, with the excess amount distributed to overhead.
 - Determining a percentage allocation of hours worked on each cost objective each day and distributing the daily salary cost using the calculated percentages. However, the manual warns that the daily allocation may increase the possibility of employee or management manipulation of the allocation.

Forward Pricing With Full-Time Accounting. If the salary and overhead costs are always the same, how should the contractor calculate the labor and indirect cost rates for forward pricing? Most firms that use this method use average historical experience for forward pricing rate development.

Solicitation Uncompensated Overtime Requirements ([FAR 37.115-2](#) and [FAR 37.115-3](#)). Labor accounting differences can create substantial problems in the evaluation of offeror projections of the cost and quality of contract performance. For example, given the same annual salary, overhead costs, and indirect cost rates based on labor hours or labor cost, a firm basing its estimate on 50-hours week could offer a lower contract cost than a firm basing its estimate on a 40-hour week. Would the quality of product be the same? It is difficult or impossible to tell. Is a person working a 50-hour week as productive as a person working a 40-hour week? Are the employees of the contractor with the estimate based on the 40-hour week actually working 50 hours a week?

To improve competitive proposal evaluation, solicitations for professional or technical services based on the number of hours provided (rather than the task to be performed) must require offerors to identify uncompensated overtime hours and the uncompensated overtime rate for direct-charge FLSA-exempt personnel included in the prime and subcontract proposals. This includes uncompensated overtime hours that are in indirect cost pools for personnel whose regular hours are normally charged as a direct cost.

For solicitations above the simplified acquisition threshold for such services, you must use the following provision ([FAR 52.237-10](#)):

IDENTIFICATION OF UNCOMPENSATED OVERTIME (MAR 2015)

(a) *Definitions.* As used in this provision--

Adjusted hourly rate (including uncompensated overtime) is the rate that results from multiplying the hourly rate for a 40-hour work week by 40, and then dividing by the proposed hours per week. For example, 45 hour proposed on a 40-hour work week basis at \$20.00 would be converted to an uncompensated overtime rate of \$17.78 per hour. ($\20×40 divided by 45 = \$17.78)

Uncompensated overtime means the hours worked without additional compensation in excess of an average of 40 hours per week by direct charge employees who are exempt from the Fair Labor Standards Act. Compensated personal absences, such as holidays, vacations, and sick leave, shall be included in the normal work week for purposes of computing uncompensated overtime hours.

(b) (1) Whenever there is uncompensated overtime, the adjusted hourly rate (including uncompensated overtime), rather than the hourly rate, shall be applied to all proposed hours, whether regular or overtime hours.

(2) All proposed labor hours subject to the adjusted hourly rate (including uncompensated overtime) shall be identified as either regular or overtime hours, by labor categories, and described at the same level of detail. This is applicable to all proposals whether the labor hours are at the prime or subcontract level. This includes uncompensated overtime hours that are in indirect cost pools for personnel whose regular hours are normally charged direct.

(c) The offeror's accounting practices used to estimate uncompensated overtime must be consistent with its cost accounting practices used to accumulate and report uncompensated overtime hours.

(d) Proposals that include unrealistically low labor rates, or which do not otherwise demonstrate cost realism, will be considered in a risk assessment and evaluated for award in accordance with that assessment.

(e) The offeror shall include a copy of its policy addressing uncompensated overtime with its proposal.

Evaluate Uncompensated Overtime Proposals. As you perform cost realism analysis, use the information provided by the offeror to consider the risks to contract performance associated with proposed uncompensated overtime. In particular, consider risks associated with:

- Unrealistically low rates, direct or indirect, that may result in quality or performance shortfalls.
- Unbalanced distribution of costs, direct or indirect, associated with uncompensated overtime accounting practices.

Solicitation Professional Employee Compensation Requirements ([FAR 22.1102](#), [FAR 22.1103](#), and [FAR 52.222-46](#)).

Include the FAR provision, Evaluation of Compensation for Professional Employees, in any solicitation for a negotiated service contract expected to exceed \$750,000 and when contract performance will require meaningful numbers of professional employees.

A professional employee is any employee who is a member of a profession having a recognized status based upon acquiring professional knowledge through prolonged study. Examples include accountancy, actuarial computation, architecture, dentistry, engineering, law, medicine, nursing, pharmacy, the sciences (e.g., biology, chemistry, and physics), and teaching. To be a professional employee, a person must be a professional and must be involved essentially in the discharging of professional duties.

This provision requires offerors to submit total compensation plan setting forth proposed salaries and fringe benefits for professional employees working on the contract. Supporting information should include data -- such as recognized national and regional compensation studies of professional, public and private organizations -- that were used in establishing the total compensation structure.

Evaluate Professional Employee Compensation Plans ([FAR 52.222-46](#)). The offerors compensation plan should provide valuable information for your cost realism analysis of proposed labor rates. Evaluate the plan to assure that it reflects a sound management approach and understanding of the contract requirements.

- Assess the offeror's ability to provide uninterrupted high-quality work.
- Consider the professional compensation in terms of its:
 - Impact upon recruiting and retention,
 - Cost realism, and
 - Consistency with a total plan.
- Assess whether the proposed compensation levels reflect:
 - A clear understanding of the contract effort, and
 - The capability of the proposed compensation structure to obtain and retain suitably qualified personnel.
- Evaluate the ability of offerors proposing compensation levels lower than those of predecessor contractors for the same work to maintain program continuity.

8.3 Considering Cost Realism In Cost-Reimbursement Proposal Evaluation

Cost Realism Analysis in Cost-Reimbursement Proposal Analysis ([FAR 15.404-1\(d\)\(2\)](#)).

- For cost-reimbursement contracts, you:
- Must use the probable cost of contract performance developed in cost realism analysis to determine best value. An award based on an unreasonably low cost proposal would be false economy, because the final price paid by the Government will depend on final contract cost.
- May also use cost realism analysis as a factor in evaluating the offeror's understanding of contract technical requirements and the risk associated with the offeror's technical proposal.

Not Limited to Downward Adjustment ([DCAM 9-311.4](#) and EDAW, Inc., CGEN B-272884, Nov. 1, 1996).

Even though the primary objective of cost realism analysis is to ensure proposed cost elements are realistic and not understated, you are not limited to making upward adjustments as you develop a probable cost estimate.

For example: In a 1996 case, EDAW, Inc. protested the award of a contract to Dames & Moore (D&M) under a request for proposal (RFP) issued by the Department of the Interior, Bureau of Reclamation (Reclamation), for the preparation of resource management plans (RMPs) in the Columbia Basin Area of Washington State.

- EDAW contended that:
 - The agency arbitrarily deleted proposed contingency labor hours and costs from D&M's proposal.
 - It was improper for the agency to eliminate D&M's contingent labor costs because under the terms of the RFP, offerors could include contingency labor costs in their proposals and D&M certified that its proposed costs for contingency hours were consistent with its cost accounting standards.
 - Without this "contrived" reduction, EDAW's proposal rather than D&M's would have had the lowest evaluated costs.
- The Comptroller General found that:
 - While EDAW was correct that the RFP allowed an offeror to propose contingency labor hours, there was nothing in the solicitation which precluded the agency from deleting these labor hours.
 - The record showed that in conducting a cost realism analysis of D&M's proposed costs, the agency considered the extent to which D&M's proposed costs represented a reasonable estimation of future costs.
 - In the agency's judgment, the contingency hours were not related to D&M's ability to successfully perform the various RMP tasks. Stated differently, the agency concluded that proposed total labor hours were all that were necessary, given D&M's technical approach to accomplishing the work.
 - The agency's position was bolstered by the fact that, even without these contingent hours, D&M's proposal contained more labor hours than EDAW proposed.
 - It did not make sense for the agency to include contingent labor hours and costs, which it believed were not necessary for contract performance, simply because D&M certified that these costs were consistent with its cost accounting standards. D&M's certification that the costs proposed are consistent with its cost accounting standards simply was not relevant to the issue of whether the proposed contingency hours will actually be necessary for contract performance.
 - The protester did not show that the deletion of the contingency hours was unreasonable.

- The Comptroller General denied the protest.

Adjustments May Be Large Relative to Proposed Costs (Westinghouse Electric Corp., CGEN B-250486, Feb. 4, 1993).

Even firms with sophisticated estimating systems can submit unrealistic cost proposals. As you estimate probable cost, the difference between the probable cost and the offeror's proposed costs may be quite large as long as the difference is supported by the facts of your analysis.

For example: In a 1993 case, Westinghouse Electric Corporation protested award of a cost-reimbursement contract to Raytheon Company under a request for proposals issued by the Department of the Army for ground-based radar.

- Westinghouse challenged the agency's cost realism methodology, contending that the agency used a flawed, inaccurate, and out of date tri-service cost model in estimating certain costs. The protester stated that:
 - The agency admitted the flaws in its cost model; and
 - The unreasonableness of the methodology was evidenced by the agency's conclusion that three sophisticated offerors had all submitted unrealistically low cost proposals.
- The Comptroller General found that:
 - The agency report established that the cost model did not constitute the agency's primary methodology for evaluating cost realism.
 - The agency had performed a "bottoms-up" analysis, by which evaluators assigned to specific portions of the proposals estimated the cost of performance as proposed for each offeror.
 - The cost model, which the agency contends is not flawed, was only used along with other models to verify the "bottoms-up" analysis.
 - The agency adjusted the protester's \$943 million proposal upward over by \$520 million (over 55 percent). Of the \$520 million, \$470 million came in three areas -- \$105 million in material cost; \$69 million in subcontract costs; and \$296 million in interdivisional transfer costs.
 - Extensive agency documentation and hearing testimony supported the agency probable cost estimates.
- The Comptroller General denied the protest.

Analysis May Be Limited to Substantial Costs (Allied Tech. Grp., Inc., CGEN B-271302.2; Jul. 3, 1996).

You may reasonably exclude costs that are not a substantial part of total contract cost from your probable cost estimate for performance when the solicitation did not specifically state that these costs would be included.

For example: In a 1996 case, Allied Technology Group, Inc. (ATG) protested an award of a cost-plus-incentive-fee contract to Weiss Associates under a request for proposals issued by the Department of Energy for environmental restoration, decontamination and decommissioning, and waste management activities at the Laboratory for Energy Related Health Research (LEHR) and other selected sites in California.

- ATG contended that the agency's cost realism analysis was nonexistent or flawed, specifically contending that in evaluating Weiss's probable costs, the agency improperly failed to consider \$1.5 million attributable to Weiss's subcontractors.
- The Comptroller General found that:
 - The agency evaluated cost proposals on the basis of the specified labor mix and level of effort.

- The agency specified the level of effort and the skill mix necessary to perform the contract in the RFP and the offerors proposed costs on that basis.
- Evaluators analyzed personnel labor rates, subcontractor costs, overhead rates, and general and administrative (G&A) rates, to determine whether they were reasonable or understated.
- Evaluators took no exceptions to the costs proposed by Weiss or ATG.
- The only issue identified by ATG with respect to Weiss's costs concerned the agency's evaluation of certain subcontract costs.
- Weiss identified five subcontractors, two for which costs were proposed and three for which costs were not.
- Weiss estimated that the cost for these three subcontracts would be "significantly less than \$100,000."
- Cost evaluators noted this and estimated the maximum potential impact as \$1.5 million (\$300,000 per year for 5 years), but did not include this cost in the probable cost estimate.
- The cost evaluation board did advise the source selection official of its assessment that the subcontracts were currently unnecessary and if used, would not cost nearly the \$1.5 million estimate.
- The Comptroller General denied the protest, because:
 - An agency is not required to verify each and every item in conducting its cost realism analysis.
 - An agency may rely on information contained in offeror's cost proposals in performing a cost evaluation without seeking additional independent verification of each item of proposed cost.
 - ATG was not prejudiced by the omission of these subcontractor costs in the cost realism assessment.
 - Reasonably construed, Weiss's proposal estimates the collective effort of these subcontractors as less than \$100,000 per year, not \$100,000 per subcontractor.
 - Accordingly, less than \$500,000 (\$100,000 for the five contract years) would be added to Weiss's proposal.
 - Since ATG's proposal was more than \$2 million higher than Weiss's, the selection decision would not change.

Analysis in Technical Proposal Assessment (JWK Internat. Corp., CGEN B-256609.4, Sep. 1, 1994).

Cost realism analysis is most commonly used to evaluate specific elements of each offeror's cost estimates, and reflect a clear understanding of the requirement as described in the offeror's technical proposal.

For example: In a 1994 case, JWK International Corporation protested the award of a contract to Value Systems Services (VSS), a division of VSE Corporation, under a request for proposals issued by the Naval Air Systems Command (NAVAIR) for the acquisition of logistics support services for Navy and Marine avionics weapons systems.

- JWK contended that the Navy's determination that JWK's proposal presented a high performance risk was unreasonable because the Navy unreasonably determined that JWK's proposed salaries were too low and that JWK proposed excessive uncompensated overtime.
- The Comptroller General found that:
 - Offerors were required to propose fully-burdened, fixed hourly rates for each labor category set forth in the RFP.

- The solicitation provided that proposed labor rates would be evaluated for realism and that a proposal determined to have unrealistic rates would be assessed as having high performance risk.
 - The agency determined that JWK's proposed salaries were too low to retain a qualified work force, based on comparisons of proposed labor rates and salaries with the rates and salaries on:
 - JWK's incumbent contract;
 - Other JWK contracts;
 - The Independent Government Estimate; and
 - The general schedule (GS) salaries of comparable civil service employees.
 - The agency found that JWK proposed to have its employees work 47 hours per week including 7 hours per week of uncompensated overtime.
 - The agency reached its conclusion that JWK would require its employees to work 47 hours per week despite representations in the JWK proposal that its employees would work 45 hours per week
 - The 2-hour difference related to understated indirect labor hours for leave and holidays.
 - The agency viewed 7 hours per week of uncompensated overtime as excessive and as contributing to the risk that JWK would be unable to retain its employees.
 - The Navy concluded JWK's proposed cost was unrealistic and its proposal presented a high performance risk, because of JWK's low salaries and excessive uncompensated overtime.
- The Comptroller General denied the protest.

Failure to Perform an Adequate Cost Realism Analysis (ManTech Envir. Tech., Inc., CGEN B-271002.3, June 3, 1996).

Whenever the resulting contract will be flexibly-priced, the contracting officer has a responsibility to conduct a cost realism analysis. If the contracting officer fails to perform an analysis or the results of that analysis are not reasonable, it is unlikely that the contract award decision will withstand scrutiny by The Comptroller General

For example: In a 1996 case, ManTech Environmental Technology, Inc. protested the award of a cost-plus-fixed-fee contract to Dynamac Corporation under a request for proposals issued by the Environmental Protection Agency (EPA) for technical support services.

- ManTech raised a number of evaluation issues, primarily contending that the EPA failed to properly evaluate the realism of Dynamac's proposed costs. For example:
 - Dynamac's overall proposed costs were significantly lower than the Independent Government Estimate and the costs proposed by the other offerors.
 - Although the technical proposal reflected Dynamac's intent to hire "as many of the incumbent staff as possible," the direct labor rates proposed for "new hires" were lower than:
 - Those paid incumbent ManTech personnel; and
 - Current Dynamac personnel in comparable positions.
- The Comptroller General found that:
 - The agency cost advisory report, pre/post negotiation memorandum, and source selection decision were all based on the written and oral DCAA analyses which purportedly found Dynamac's direct labor rates to be realistic. However, the DCAA audit and cost advisory report were qualified and the information on which they were based was incorrect.

- Notwithstanding the agency's reliance on DCAA, there is no evidence that the agency cost evaluators considered DCAA's qualification of its usual recommendation that the proposal was acceptable as a basis for negotiation of a fair and reasonable price.
- This qualification was based on DCAA's need for technical assistance in mapping the proposed labor rates to the RFP and evaluating Dynamac's weighted labor rates.
- DCAA had requested assistance from the agency in determining whether the personnel, at the rates proposed, were appropriate for the positions identified in the RFP.
- The agency did not provide any assistance.
- Dynamac advised DCAA that its proposal manager had reviewed the RFP and had selected qualified individuals for the proposal.
- DCAA verified that the labor rates for individuals named the cost proposal represented actual Dynamac 1995 labor rates.
- While this DCAA assessment provides a reasonable basis for accepting labor rates for the named individuals, EPA accepted DCAA's limited statement as verification of all direct rates.
- Since Dynamac had provided verifiable personnel rates for less than half of the 54 labor categories listed in its cost proposal, it was unreasonable for the agency to rely on this aspect of the audit to support a finding of cost realism for all direct rates.
- There was no way to gauge the reasonableness of the proposed rates based on the audit analysis.
- There was no indication that the agency attempted to assess the realism of the new hire rates.
- The agency explained that it had received oral information from DCAA indicating that DCAA had verified the new hire rates.
- During the protest, the agency learned that the DCAA auditor had confused this audit with another Dynamac audit being conducted at about the same time. The auditor did not verify the new hire rates proposed for the agency contract, believing that it was unnecessary because the other audit had verified the proposed rates.
- While agencies may ordinarily rely on the advice of DCAA when performing a cost realism analysis, a contracting officer's determination based on incorrect information is not rendered reasonable because the incorrect information was supplied by another organization such as the DCAA.
- The agency's cost evaluators qualified their evaluation by stating that they did not assess whether the personnel, at the rates proposed, met the RFP requirements.
- The technical evaluation panel (TEP) documented concerns about the low Dynamac labor rates.
- The TEP had noted that the rate proposed for a P-3 (second highest) level ecologist "seems very low" and that all the new hires were listed at low rates suggestive of entry level positions.
- The TEP was concerned that "quality people cannot be hired at these rates" and observed that only a few existing employees worked at the rates identified for new hires.
- Apart from relying on the DCAA audit information, written and oral, the agency apparently conducted no other cost realism analysis of Dynamac's direct labor rates. For example, the agency did not:
 - Conduct any independent reasonableness review of the proposed rates,
 - Question any of the rates in discussions, or

- Seek substantiation of the rates through market surveys or historical cost data from similar contracts.
 - The record does not include any of the "other" information on which the evaluators said they relied and, at the time of the agency's cost review.
 - The only thing that is apparent is that Dynamac's realistic costs are higher than those it proposed, but it is not clear how much higher they should be.
- The Comptroller General sustained the protest and recommended that the agency conduct a reasonable and complete cost realism analysis of Dynamac's direct and indirect costs.

8.4 Considering Cost Realism In Fixed-Price Proposal Evaluation

Cost Realism Analysis in Fixed-Price Proposal Analysis ([FAR 15.404-1\(d\)\(3\)](#)). For fixed-price contracts, you must not adjust offered prices as a result of your analysis. However, you may use cost realism analysis in assessing:

- Contract performance risk. For example, you could use cost realism analysis:
 - As a factor in evaluating the offeror's relative understanding of contract technical requirements and the performance risk associated with the offeror's technical proposal.
 - Technical offer acceptability.
 - In conjunction with price reasonableness as a separate factor for proposal evaluation, using words such as "Among those offers determined to be technically acceptable, award will be made to the responsible offeror who offers the lowest reasonable and realistic price."
- Offeror responsibility.

Cost Realism in Performance Risk Trade-Off Analysis (Cardinal Scientific, Inc., CGEN B-270309, Feb. 12, 1996).

Proposal trade-off evaluation criteria for a firm fixed-price contract may include cost realism analysis as one criterion for evaluation of the offeror's technical proposal. An unrealistic price may indicate deficiencies in the offerors understanding of contract quality and schedule requirements. A contract priced at a loss or at a minimal profit may represent a substantial performance risk.

For example: In 1996, Cardinal Scientific, Inc. (CSI) protested the award of a fixed-price contract to Defiance Electronics Inc. under an RFP issued by the Defense Logistics Agency (DLA), for portable x-ray darkrooms.

- CSI contended that the RFP contained defective evaluation factors and challenged the agency's evaluation of proposals.
- The Comp Gen found that:
 - The RFP stated that the agency would evaluate proposals based on proposed price and three factors (listed in descending order of importance): technical approach, management approach, and corporate experience/past performance.
 - Technical evaluation criteria provided that the agency would evaluate proposals for realism, as it relates to an offeror's demonstration that the proposed price provides an adequate reflection of the offeror's understanding of the requirements of the solicitation.
 - Only CSI and Defiance submitted proposals.
 - The agency was initially concerned about the significant price difference between the two proposals. Accordingly, it requested and obtained information other than cost or pricing data from both offerors.
 - Analysis of final proposal revisions (FPRs) revealed that both offers were technically acceptable:
 - CSI had three strong points under management approach and past performance;
 - Defiance had one strong point under management approach; and
 - Defiance's FPR was \$894,658, approximately half as much as CSI's FPR.
 - A cost realism analysis found that Defiance's proposal demonstrated that its expected costs and overhead would allow it to successfully perform the contract and achieve a reasonable profit.

- The contracting officer:
 - Concluded that Defiance's proposal represented the best value to the Government, because CSI's slight technical advantage did not warrant the payment of the significant price premium associated with CSI's proposal
 - Recommended award to Defiance and the source selection authority (SSA) concurred.
- The Comptroller General denied the protest.

Cost Realism in Evaluating Technical Offer Acceptability. When award will be made to the lowest price, technically acceptable, offeror, each offeror may be required to provide documentation supporting the realism of the prices proposed. If an offeror fails to furnish pricing documentation expressly requested and necessary for the agency to perform a cost realism analysis, the agency may properly reject the proposal, even though the offeror asserts that it could perform the required work at the proposed price.

For example: In a 1989 case, Industrial Maintenance Services, Inc. (IMS) (Ind. Maint. Svs., Inc. & Log. Suprt., Inc., CGEN B-235717.2, Oct. 6, 1989), protested the Department of the Navy's award of a firm fixed-price food service contract to United Food Services (USF).

- IMS contended that:
 - While its offered price did not include certain required fringe benefits, this omission did not warrant the rejection of its offer.
 - The solicitation only required the contractor to provide its employees with these fringe benefits, not that the offeror expressly include the costs for these items in its proposed price.
 - The agency's rejection of its offer must have been based on a finding that it was nonresponsible--i.e., and should have been referred to the Small Business Administration under its certificate of competency (COC) procedures.
- The Comptroller General found that:
 - The solicitation required offerors to submit manning charts indicating the personnel that the contractor would employ to perform the contract.
 - Award criteria stated that award would be made to the low, responsive--that is, technically acceptable--offeror.
 - Twenty-seven firms responded to the RFP, submitting proposals ranging from a low monthly price of \$39,485 to a high of \$286,100.
 - The agency solicited final proposal revisions (FPRs) by amendment, and in view of the wide disparity in initial prices, also cautioned offerors that proposals found unrealistic in terms of price would be rejected.
 - The FPR prices still varied by more than \$150,000 per month, and the agency, concerned that this continued disparity in price reflected a lack of understanding of the solicitation requirements, issued an amendment reopening the competition for a second round of FPRs and requiring offerors to include:
 - A breakdown of the projected daily man-hours necessary to perform the contract, as well as
 - An annotated, loaded compensation rate specifying the wage rates, fringe benefits and insurance to be paid employees as determined by the applicable wage determination.
 - The agency also advised offerors that the estimated minimum staffing level for contract performance was 14,000 man-hours per month, and warned that proposals containing less than 98% of this estimated manning level would be rejected as unrealistic.
 - IMS submitted the third low revised offer at a price of \$114,540 per month, and UFS was seventh low at a price of \$126,585 per month.

- The agency rejected as unrealistic the proposals of the six low offerors (including IMS) finding that each had failed to provide documentation that the agency could use to determine that the proposed prices in fact were realistic.
- For IMS, the agency determined that either IMS's price did not include amounts to pay employees according to the terms of the wage determination, or that if it planned to abide by the terms of the wage determination, its price was insufficient to support its proposed staffing level.
- The agency then made award to USF as the low, acceptable offeror.
- The Comptroller General denied the protest.

Cost Realism as a Separate Evaluation Factor (Culver Health Corp., CGEN B-242902, Jun. 10, 1991).

A solicitation may establish cost realism as a separate evaluation factor to be considered along with price reasonableness in making the contract award decision.

For example: In 1991, Culver Health corporation protested the award of a contract to NES Government Services, Inc. under an RFP issued by the United States Army Health Services Command for the health-care services of General Medical officers at Army Medical Training Facilities across the United States. The award to NES was for Region II, which includes eight locations in the Western United States.

- Culver contended that:
 - Its offer was improperly evaluated.
 - Its prices and compensation rates were compiled after an extensive industry evaluation and discussions with prospective physicians and were realistic.
 - Because this is a fixed-price contract, all of the risk of Culver's alleged low prices would fall entirely on the contractor and that it was simply not reasonable to reject its low offer.
 - The contracting officer in evaluating the Region II proposals improperly relied upon the Government estimates which it points out were considered by the evaluators to be questionable in Region I due to the fact that all of the offers received for that region were below the estimate.
- The Comptroller General found that:
 - The RFP stated that cost/price would be one of three evaluation criteria considered in making contract award. It also stated that "Price will be evaluated, but not scored, for reasonableness and realism."
 - Fifteen offerors responded to the solicitation.
 - During subsequent written discussions and the agency expressed its concern regarding Culver's compensation rates by stating: "At this time, the compensation rates you proposed appear to be unrealistically low. Request a complete review of your offer with cost realism in mind."
 - After three rounds of discussion and FPRs, Culver's was the lowest offer at a total price of \$6,300,714, while NES's \$7,215,410 offer was the next low of the seven offerors remaining. Both of the offers were considered acceptable under the two technical evaluation factors.
 - The evaluators were concerned that Culver's proposed hourly physician compensation for the Fort Hood, Carson, Polk, and Ord locations was significantly below the agency's estimates and thus recruitment and retention of physicians would become a problem. Further, the evaluators noted that Culver's total amount allowed for compensation in Region II, \$5,167,959, was significantly lower than the agency's estimate of \$5,860,900 and that its total price of \$6,300,714 was also much lower than the overall agency estimate of \$8,099,658 for Region II.

- The evaluators concluded that Culver's "overall rates are not realistic and would have an adverse effect on much needed performance" and the agency rejected the offer as unrealistically priced.
- NES's compensation total of \$6,059,490 was higher than the Government's \$5,860,900 estimate and it was more in line with the other offerors and was considered by the evaluators to be realistic, as was its \$7,215,410 overall price.
- NES was awarded the contract for Region II as the low acceptable offeror with realistic pricing.
- The Comptroller General denied the protest.

Chapter 9

Performing Financial Analysis

9.0 - Chapter Introduction

9.1 - Identifying Sources Of Financial Information

9.2 - Identifying Key Financial Indicators

9.3 - Applying Financial Indicators To Responsibility Decisions

9.4 - Applying Financial Indicators To Contract Financing Decisions

9.4.1 - Commercial-Item Financing

9.4.2 - Noncommercial-Item Financing

9.5 - Applying Financial Indicators To Performance Bond Decisions

9.6 - Applying Financial Indicators To Progress Payment Administration

9.6.1 - Government Rights In Adjustment Situations

9.6.2 - Adjustment For Loss Contracts

9.6.3 - Liquidation Rate Adjustment

9.7 - Applying Financial Indicators To Subordination Agreement Need Decisions

9.0 Chapter Introduction

This chapter examines the application of financial analysis to contracting decisions.

Government Financial Analysis ([FAR 9.104-1](#), [FAR 28.103-2\(a\)\(3\)](#), [FAR 32.006-4\(d\)\(3\)](#), [DFARS 232.072](#)). In Government contracting, financial analysis involves analysis of the:

- Financial capability of potential contractors. Decisions on contractor responsibility must consider whether the offeror has adequate financial resources or the ability to obtain them.
- Effect that Government financing decisions will have on contractor financial management. Decisions on Government financing, including progress payments or performance based payments must consider the contractor's financial condition.
- Need for Government protection from performance problems that may result from contractor financial problems. Decisions on whether to require performance bonds for contracts other than construction contracts or require subordination agreements should consider the financial risk associated with Government financing.
- Financial condition of current and potential contractors as part of Defense Industrial Capability Assessments. These assessments are performed to determine if there is a need for government action to preserve a critical defense capability and often focus on the profitability of a specific operating location or product line as well as the company's overall financial condition. Unique requirements related to these assessments are contained in DoDi 5000.60 (Defense Industrial Capabilities Assessments) and DoD 5000.60 (Assessing Defense Industrial Capabilities).

Analysis Responsibility. Whether you must perform the analysis yourself or interpret the analysis of specialists (e.g., auditors, financial analysts, price/cost analysts), you must understand the basic concepts of financial analysis. Financial analysis typically provides information, not clear-cut answers. To do your job effectively, you must be able to ask the right questions and make the right decisions. If challenged by the contractor or others involved in the acquisition process, you must be able to defend that decision. Keep in mind that your objective when performing financial analysis is to determine the impact of weak finances on contract performance or, in the case of Industrial Capability Assessments, the company's desire to continue producing a critical defense product or service.

Relationship Between Assets, Liabilities, and Owner's Equity. To effectively perform a financial analysis, you must understand the relationship between assets, liabilities, and owner's equity. Assets are the economic resources of the firm which are capable of giving service benefits to future operations and which can be measured objectively in monetary terms. The sources of these assets are the liabilities of the firm and owner's equity. The "basic accounting equation" is

$$\text{Assets} = \text{Liabilities} + \text{Owner's Equity}$$

Liabilities are the claims by parties outside the firm against the assets of the firm. Owner's equity is the owner's (sole proprietor's, partners', or stockholders') financial claim against the assets of the firm.

For example: Two people each invest \$10,000 in a business partnership. At that point in time, the firm's assets are \$20,000; liabilities are zero; and owner's equity is \$20,000. The next day they borrow \$5,000 and purchase new equipment for \$25,000. Now, the firm's assets are \$25,000; liabilities are \$5,000; and owner's equity is \$20,000. Note that the firm's assets always equal the firm's liabilities plus owner's equity.

Tangible and Intangible Assets. Assets are the economic resources that are either tangible or intangible:

- **Tangible Assets.** Most assets are tangible -- they have physical substance, and their value comes from the use of that physical substance. Examples include: land, buildings, and equipment.
- **Intangible Assets.** Other assets are intangible-they do not have physical substance but nevertheless have value. Their value comes from a legal claim or excess earning power caused by a business transaction (e.g., goodwill, patents, or trademarks).

Current and Long-Term Assets. For financial analysis, assets are most often classified as current or long-term:

- **Current Assets.** These are assets that can be converted into cash within one year. They include:
 - Cash in the bank and on hand. However, only unrestricted cash that is freely available for withdrawal to meet company liabilities shall be classified as a current asset.
 - Marketable securities listed for trade through a licensed brokerage firm. They may include U.S. Government obligations, State and Municipal obligations, Corporate Securities, and Money Market Instruments.
 - Accounts receivable from sales made and billed to customers on credit terms. Only customer accounts receivable arising from the sale of company products shall be classified as a current asset.
 - Inventory that is good and salable.
 - A merchandising company typically only has one class of inventory, items purchased from suppliers that are awaiting resale.
 - Service companies also typically have one class of inventory, production supplies.
 - Manufacturers typically show three different classes of inventory: raw materials, work-in-process, and finished goods.
 - Other Current Assets, which typically include prepaid insurance, taxes, rent, and interest. Normally, this category is not large in relation to other balance sheet items.
- **Long-Term Assets.** These are items that a business cannot easily turn into cash and are not consumed within one year. They include:
 - Fixed assets, the materials, goods, services, and land used in production.
 - Examples include: real estate, buildings, plant equipment, tools and machinery, furniture, fixtures, office or store equipment, and transportation equipment.
 - The book value of all fixed assets, except for land, is depreciated (reduced) annually to consider the reduction in value over the asset's useful life.
 - Other long-term assets, including:
 - Marketable securities not listed for trade through a licensed brokerage firm.
 - Land, equipment, or buildings not used to produce customer goods or services.
 - Investment in subsidiary companies.
 - Intangible assets or assets usually not available for payment of the debts of a going concern (e.g., goodwill, patents, copyrights, mailing lists, catalogues, trademarks, organization expense, drawings, dies, cuts, patterns, and stock expenses)
 - Amounts due from officers or stockholders.
 - Mortgages and real estate contracts held by the contractor.
 - Claims and miscellaneous accounts.

Current and Long-Term Liabilities. Most liabilities require the payment of a specific sum of money to a particular party at a specified time in the future. However, some liabilities may be indefinite; the debt may be settled by some means other than the payment of money; the creditor may not be known; or the due date may be uncertain.

- **Current Liabilities.** Current liabilities are obligations that a business must pay within a year. Generally, they are obligations that are due by a specific date (usually within 30 to 90 days). However, trade practices may permit the exclusion of certain accounts such as customer's deposits and deferred income, provided the firm's records include an appropriate explanation.

Current liabilities include:

- Notes payable, including notes payable to banks, notes payable to officers or stockholders of affiliated companies, notes payable to the trade, and notes payable to others.
 - Accounts payable for merchandise or material requirements purchased on credit terms and not paid.
 - Accrued expenses including: reserve for taxes; amounts due officers, stockholders, etc.; amounts due affiliated companies; dividends unpaid; and funded current debt.
 - Currently due portion of long-term liabilities.
- Long -Term Liabilities. Long-term liabilities are liabilities that will mature in excess of one year from the balance sheet date. Normally, items in this area are retired in annual installments. Long-term liabilities include:
 - Funded debt including serial bonds; notes on mortgage installments, mortgages; and other funded debts due after one year. This is the most common type of long-term debt.
 - Miscellaneous deferred liabilities including such accounts as reserves for insurance and reserves for contingencies.
 - Deferred credit such as unearned income carried as a liability until the related product is completed and delivered.

Owners' Equity. Owners' equity is often referred to as net worth, because it is the net difference between the total assets and the total liabilities of the firm. It represents the owners' claims against the assets of the firm, but it is not a claim against a specific asset (e.g., cash). There are two sources:

- Owner's Contribution. These contributions, sometimes referred to as capital stock, include cash or other assets.
- Retained Earnings. These are the accumulated profits in excess of losses and payments to the owners. Earnings are retained by the firm to finance operations and growth.

Special Considerations: Parent/Subsidiary Relationships, Organizational Risk Assessments, and Parent Guaranty Agreements

- Divisions and operating segments are not legal entities separate from the corporate entity; a risk rating assigned to the corporate entity is applicable to its divisions and operating segments. Conversely, subsidiaries are legal entities separate from their parent companies, and they may have different levels of financial risk than their parents. Because a parent company can exercise significant control over the financial condition of its subsidiaries (through cash sweeps, sales of subsidiary assets, and other means), a subsidiary should not be assessed at a lower level of risk than that of its parent company.
- To mitigate the government's risk, you should consider requiring a financial guaranty from the parent corporation when a contract will be awarded to a subsidiary.
 - If the parent is willing to provide such an agreement, the analysis should be performed at the parent level without requiring financial data from the subsidiary.
 - If the parent is unwilling to provide a guaranty, the analysis should be performed at the subsidiary level. Because, as noted above, a subsidiary should not be assessed at a lower level of risk than that of its parent, you should attempt to obtain parent financial data if possible.
 - If the financial data of the parent indicates a lower level of risk than that of the subsidiary, the subsidiary should be assigned the higher level of risk associated with its own financial condition.
 - If the financial data of the parent indicates a higher level of risk than that of the subsidiary, the subsidiary should be assigned the higher level of risk associated with the parent.

9.1 Identifying Sources Of Financial Information

Analysis Comparisons. Analysis of the financial strength of a particular firm always involves comparison.

- Comparisons To Consider. The most common are comparisons with the:
 - Same company over time to identify trends in financial capability. Normally, you should consider trends in a firm's financial capabilities over a period of at least three years.
 - Same Industry to see how the firm compares with industry averages. If the same type comparison is not available, consider one very similar and then allow/adjust for known or assumed differences.
- Comparisons Not To Consider. Do not make comparisons between:
 - Individual companies.
 - Two firms being compared may both be financially unsound. In that case, you might judge them to be equally sound and capable of performing the contract. Instead, neither should be considered for award.
 - One of the firms being compared may be the strongest firm in industry. A second firm might look poor by comparison but still be one of the soundest firms in the industry.
 - A company and averages for firms in a different industry or averages for all firms in all industries. Different industries require different financial structures. For example, you would not expect an engineering services firm to have the investment and assets required of a firm involved in the manufacture of heavy equipment.

Data Available on Individual Entities. To perform financial analysis, you must obtain financial data concerning the entity under analysis. Key sources of information include:

- The Entity Itself. The entity that you are about to analyze should be your primary source of information.
 - Publicly traded corporations must prepare annual reports. These reports include several items of information that will be useful in performing a financial analysis:
 - Balance sheets that identify major categories of assets, liabilities, and owner's equity.
 - Profit and loss statements for the fiscal year.
 - Statement of cash flows for the fiscal year.
 - Other information such as problems encountered during the just-completed fiscal year; plans for the future; contingent liabilities; off-balance sheet matters; and auditors notes to the financial statements.
 - Sole proprietorships, partnerships, and other privately held companies are not generally required to prepare annual reports. Normally, you should require these firms to submit financial statements (balance sheets, profit and loss statements, and cash flow statements). Because sole proprietorships and partnerships are not legally separate from the owners of the firm, these documents will include personal as well as business assets. It is desirable to have certified financial statements prepared by an independent Certified Public Accountant (CPA), but preparing certified statements would require an audit, which can be expensive. If certified financial statements from a CPA are not available, certification of their accuracy by the sole proprietor, partner, or an appropriate officer of the firm may be acceptable.
 - Additional useful information that the firm can provide includes accounts receivable and payable aging reports; lines of credit; and bank references.
 - Information about both publicly traded and privately held companies may also be available on the company's website.

The Government.

- The Securities and Exchange Commission (SEC). The SEC publishes the filings required of publicly traded companies on its website at <http://www.sec.gov/>. In addition to annual and quarterly financial reporting, filings include notices related to large stock transactions, compensation of officers, and other information useful for a complete analysis. The annual and quarterly financial filings may include
 - Financial Statements (balance sheet, income statement, and cash flow statement) and their accompanying auditor's notes,
 - A statement from the company's public accounting firm on the reliability of the information provided,
 - A complete description of all business lines,
 - Corporate financial data broken down by operating division,
 - Description of any significant developments in the corporation that could impact earnings,
 - List of major debt holders and when debt is due, and
 - Executive compensation
 - In addition to the information on individual companies available on the SEC website, the site also provides a wealth of educational information. Though it is the primary overseer and regulator of the U.S. securities markets, the SEC works closely with many other institutions, including Congress, other federal departments and agencies, the self-regulatory organizations (e.g. the stock exchanges), state securities regulators, and various private sector organizations.
- Federal Reserve Bank Credit Reports. Contractors who apply for guaranteed loans on Government contracts submit to a thorough credit investigation by the Federal Reserve Bank. The reports of these investigations are available to the contracting officer.
- Commercial Sources. There are many excellent sources available; some have a fee or require membership but some information is free. These include:
 - [Dun and Bradstreet](http://www.dnb.com) (www.dnb.com): provides individual reports on current developments concerning size, credit, etc., for many United States and foreign companies. Examples of types of reports available from D&B include
 - Industry Norms and Key Business Ratios
 - Business Information Reports - the most widely used type report
 - Comprehensive Reports
 - [Moody's Investor Services](#): publishes financial data for a wide variety of companies as well as other financial products and services.
 - Hoovers (a D&B company): provides company and industry reports and other financial data.

The International Directory of Corporate Affiliations provides information on foreign corporations. www.columbia.edu/cu/lweb/indiv/business/guides/intldoccompany.html

[Standard and Poor's](#) (a McGraw-Hill subsidiary) provides

- Corporate Records-provides information on over 12,000 corporations.
- Stock Reports-provides information on over 4,000 corporations.

[Thomas Register](#) provides Company Profiles.

[The Value Line Investment Survey](#)-provides an analysis of approximately 1,700 companies and 90 industries. It contains historical data on earnings, dividends, sales, working capital, and appraisals of the future prospects for the company. Although mainly a manual for investors, it includes valuable general information for financial analysis.

- The Risk Management Association (RMA) eStatement Studies-provides composite financial data on manufacturing, wholesaling, retailing, service, and contracting lines of business. Financial statements on each industry are shown in common size form, and widely used ratios are calculated to enable comparison of an individual company with norms for its particular line of business. RMA also offers training and electronic tools on its website at: <http://www.rmahq.org/RMA>

9.2 Identifying Key Financial Indicators

Financial Ratios. Most financial analysis involves the use of ratios. There are numerous ratios that you can calculate to support financial analysis. You should determine which ratios provide you with the type of information that you need to support your analysis. This section examines common examples of four types of ratios: short-term solvency ratios; long-term solvency ratios; efficiency ratios; and profitability ratios. In addition, this section also delineates a model that combines the results of several ratios to provide an indication of financial distress and possible bankruptcy.

Use Caution in Financial Analysis.

- Changes in accounting practices may make it difficult to compare financial ratios calculated in different time periods. For example, if material costs are increasing, a change from first-in-first-out (FIFO) to last-in-first-out (LIFO) inventory accounting could substantially decrease inventory value with no change in the actual units in inventory. That will affect every ratio that includes inventory value. One source of information about accounting system changes is the corporate financial report. Another is the cognizant Government auditor.
- Financial ratios of companies reporting in accordance with financial standards other than U.S. Generally Accepted Accounting Principals (GAAP), such as International Financial Reporting Standards (IFRS) or foreign country-specific financial reporting standards, may not be comparable with industry norms of companies whose ratios are calculated in accordance with U.S. GAAP. Note, however, that efforts are underway for convergence of U.S. GAAP and IFRS, and the SEC is exploring the potential use of financial statements prepared in accordance with IFRS by U.S. issuers.
- Financial statements represent only one source of financial information concerning a firm and its environment. Other information (i.e. changes in costs or market demand) not disclosed in financial statements may have an impact on the evaluation of financial capabilities.
- Historically, most financial statements were not adjusted either for changes in market values or in the general price level. This could seriously affect comparability between firms and industry averages. In an effort to address this issue, since late 2007 companies reporting in accordance with U.S. GAAP have been required to “mark to market” and report the “fair value” of their assets.
- As ratio analysis has increased in popularity, there has sometimes been a tendency to develop ratios which have little or no significance. A meaningful ratio can be developed only from items which have a logical relationship.
- The importance of particular ratios and acceptable norms may vary widely among industries due to differences in sales patterns, unique financing arrangements, or other factors.

Short-Term Solvency Ratios ([FAR 9.106-4\(a\)](#) and [FAR 53.301-1407 \[SF1407 – Pre-Award Survey of Prospective Contractor Financial Capability\]](#)). In most financial analyses, you will primarily be concerned with the contractor's ability to meet its current obligations, because most contracts take less than one year to complete. Solvency, or liquidity, ratios provide you with measures of the contractor's ability to meet current obligations. Any preaward survey of an offeror's financial capability should consider both the acid test ratio and the current ratio in every analysis of contractor financial responsibility.

Current Ratio: This is the ratio of current assets to current liabilities. It provides an indication as to the degree to which an entity has sufficient current assets to pay its current liabilities. If it does not have sufficient current assets, it may be forced to liquidate some of its long-term assets, take on additional long-term debt, or acquire additional capital investment to enable it to pay its current obligations.

$$\text{Current Assets to Current Liabilities Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

In general, a current ratio of 2 to 1 (2.0) or higher is desirable. However, the norm may vary from industry to industry. A high current ratio in comparison with other firms in the industry indicates a greater ability to satisfy current liabilities. However, a ratio that is too high may signify management inefficiency, because too large a proportion of the firm's assets is being held as nonproductive assets. Also, be careful when

inventory is a large portion of current assets. Values may be inflated by obsolete inventory that has a high book value, but no value in the marketplace.

Acid Test Ratio. (also known as the quick ratio) This is a more stringent test of an entity's ability to meet its current liabilities than is the current ratio. While the current ratio includes all current assets in the numerator, the acid test only includes the most liquid assets in the numerator – those which the company can most easily convert to cash if necessary to enable it to pay its current liabilities. A commonly used definition of the acid test ratio is “current assets less inventory” divided by “current liabilities”.

$$\text{Acid Test Ratio} = \frac{\text{Cash} - \text{Current Inventory}}{\text{Current Liabilities}}$$

Other definitions also exclude prepaid expenses from the numerator or only include cash plus marketable securities. In comparing a particular company's acid test ratio against industry benchmarks, it is important to ensure that the ratios are calculated in the same manner. In general, a company with an acid test ratio of 1 to 1 (1.0) or higher is considered to be in liquid condition. However, the norm may vary from industry to industry. A high ratio in comparison with industry averages indicates a greater ability to satisfy current liabilities but too high a ratio may signify management inefficiency, because too large a share of the firm's assets is being held as nonproductive assets.

Long-Term Solvency Ratios ([FAR 9.106-4\(a\)](#) and [53.301-1407](#)). A firm with long-term solvency problems may find it difficult to obtain financing for short-term operations. If it is able to secure short-term financing, it may have to pay higher than market rates, further worsening its financial situation. Long-term solvency is particularly important for contracts and programs extending beyond one year.

Long-term solvency ratios, also known as leverage ratios, measure the firm's long-term ability to meet its financial obligations. Consider the Total Liabilities to Net Worth Ratio in every preaward survey of contractor financial responsibility. You may also wish to consider the Debt Ratio.

- **Total Liabilities to Net Worth Ratio.** Also known as the Debt to Equity Ratio, this ratio measures the relative shares of debt and owner's equity used to finance the operations of the firm. Depending on the source, you may find this ratio expressed either as a decimal or a percentage.

$$\text{Total Liabilities to Net Worth Ratio} = \frac{\text{Total Liabilities}}{\text{Net Worth}}$$

Or written another way:

$$\text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Owner's Equity}}$$

Note that these are the same ratios, as Total Liabilities is simply another name for Total Debt, and Net Worth is another name for Owner's Equity. A ratio that is lower than industry averages indicates a relatively lower reliance on debt as a source of funds. This would normally place the firm in a relatively favorable position to borrow money. However, a higher ratio may be desirable at times, especially when a firm is expanding operations. Expanding operations might require increased production and expanded inventories. Debt may be the best source of funds. As operations stabilize at the higher level, cash flow should improve -- permitting reduced reliance on debt as a source of funds.

- **Debt Ratio.** This ratio measures the percentage of total assets supplied by creditors.

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

This ratio is a different way of looking at the same facts considered in the Total Liabilities to Net Worth Ratio. A Debt ratio of .50 would mean that half the funds required to finance total assets came from debt. A Total Liabilities to Net Worth Ratio of 1.00 would have the same meaning. A Debt Ratio that is low when compared to other firms in the industry indicates that the firm has less reliance on debt as a source of funds. That also indicates lower risk and greater financial stability.

Efficiency Ratios. Efficiency or operating ratios are measures of the firm's intensity of asset use. Among the principle efficiency ratios are measures of asset turnover, the average length of time required into cash. The less time required, the more efficiently the firm is operating. Other efficiency ratios, such as accounts payable turnover, indicate how effectively the firm is using liabilities to generate revenue. Higher efficiency normally indicates higher profitability.

Contractor trends over time are particularly important. A contractor that is becoming less efficient in using its assets will likely face declining profits and an increasing reliance on borrowing as a source of funds. Declining ratios may also indicate that the contractor is not reacting to a changing market place (e.g., a failure to reduce inventories even though sales are declining).

- Inventory Turnover Ratio. This ratio provides an indication of the time required to turn inventories into cash.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$

A ratio that is lower than the industry average may indicate that too much cash has been invested in inventory. Excessive inventories tie up funds that could be used elsewhere in operations. They also increase operating costs associated with holding inventory. A ratio that is higher than other firms in the industry may indicate that the firm has insufficient inventories to meet demand. However, it may also indicate that the firm has developed more efficient inventory management methods.

- Sales to Assets Ratio. This ratio, also known as the asset turnover ratio, measures the intensity with which assets are used to produce sales revenues.

$$\text{Sales to Assets Ratio} = \frac{\text{Net Sales}}{\text{Average Total Assets}}$$

Average total assets are calculated by adding beginning total assets plus ending total assets and dividing the sum by two. The higher the ratio the more sales dollars are produced by each asset dollar and the more efficiently the firm is operating.

Profitability Ratios. Profitability ratios examine management's overall effectiveness in earning profits. Profitable companies are generating additional funds that can be used to finance company operations.

Gross profit is the difference between net sales and the cost of sales, which is the sum of the expenses required to manufacture, purchase, or service customers.

Net profit is gross profit less all expenses directly related to the firm's operations, including income taxes. Net profit after taxes is the basic measure of a firm's operating success. It is net profit that is added to retained earnings or distributed to shareholders as dividends. When a loss occurs (a negative net profit), the loss is charged against net worth as a reduction to the equity account.

- Gross Profit on Net Sales Ratio. This ratio, also known as the gross margin ratio, calculates the average profit margin on sales. It can help identify trends in a firm's credit policy, purchasing, and general merchandising.

$$\text{Gross Profit on Net Sales Ratio} = \frac{\text{Net Sales} - \text{Cost of Goods Sold}}{\text{Net Sales}}$$

It may vary widely among firms in the same industry, according to sales, location, size, and competition. Firms with a higher ratio are generally more attractive to potential creditors and investors.

- Rate of Return. This ratio quantifies the company's return on investment.

$$\text{Rate of Return} = \frac{\text{Gross Profit}}{\text{Fixed Assets} + \text{Net Working Capital}}$$

This ratio is commonly used to compare both companies and potential investments within a single company. A higher ratio indicates a relatively more profitable use of assets.

Failure Prediction Model. In addition to your analysis of the ratios delineated above, you should consider the failure prediction model developed by Edward I. Altman. This model employs the sum of five weighted financial ratios to calculate a Z-Score which is used to predict the possibility of future bankruptcy and indicate the need for further analysis. The Z-Score model is somewhat dated in that it does not address current business practices, such as the use of just-in-time inventory, and it should not be relied upon exclusively to form an opinion about contractor financial capability. Nevertheless, it may provide an initial alert of financial problems.

- Ratios Used In Z-Score Calculation. The ratios used in Z-Score calculation provide a broad view of the firm's financial health.

$$A = \text{Working Capital to Total Assets Ratio} = \frac{\text{Net Working Capital}}{\text{Total Assets}}$$

Net working capital is current assets less current liabilities. This ratio measures a firm's ability to pay off its short-term liabilities.

$$B = \text{Retained Earnings Total Assets Ratio} = \frac{\text{Retained Earnings}}{\text{Total Assets}}$$

This ratio measures a firm's use of its total asset base to generate earnings. However, manipulated retained earnings data can distort the numerical results.

$$C = \text{EBIT to Total Assets Ratio} = \frac{\text{EBIT}}{\text{Total Assets}}$$

The earnings before interest and taxes (EBIT) to total assets ratio, or the rate of return on assets, measures the productivity of a firm's assets.

$$D = \text{Equity to Debt Ratio} = \frac{\text{Market Value of Common Stock} + \text{Preferred Stock}}{\text{Total Current Debt} + \text{Long-Term Debt}}$$

This is the inverse of the Debt to Equity ratio. It shows the amount a firm's assets can decline in value before liabilities exceed assets.

$$E = \text{Sales to Total Assets Ratio} = \frac{\text{Total Sales}}{\text{Total Assets}}$$

This ratio is a measure of the firm's ability to generate sales.

Ratio Weights For Z-Score Calculation			
Ratio	Publicly Traded Manufacturing Firm	Privately Held Manufacturing Firm	Other Firm
A	1.2	.717	6.56
B	1.4	.847	3.26
C	3.3	3.107	6.72
D	.6	.420	1.05
E	1.0	1.000	N/A

- Weights Assigned Each Ratio In Z-Score Calculation. Because of differences in financing and other factors, the weight assigned each ratio in Z-Score calculation should vary based on the type of firm under analysis.

- Z-Score Analysis. Examine the current Z-Score, changes over time (3 to 5 completed fiscal years), and other available information to develop Z-Score projections for the contract period. Use the following table to interpret historical and projected Z-Scores:

Prediction Based On Z-Score	
If the Z-Score is ...	Then there is...
3.00 or more	Little chance of bankruptcy.
1.81 to 2.99	Some chance of bankruptcy.
1.80 or less	Large chance of bankruptcy.

9.3 Applying Financial Indicators To Responsibility Decisions

Responsibility Standard ([FAR 9.104-1](#) and [FAR 9.105-1](#)). The general FAR standards for contractor responsibility, include the requirement that the prospective contractor have adequate financial resources to perform the contract or the ability to obtain them.

Before making a determination of offeror responsibility, you must possess or obtain information sufficient to satisfy you that the prospective contractor meets this standard and the other FAR standards for contractor responsibility.

- Normally, the contracting officer must obtain this information, including preaward surveys, promptly after bid opening or receipt of offers. Limit requests for information to the low bidder or those offerors in range for award.
- However, in negotiated contracting (especially when research and development is involved), the contracting officer may obtain this information prior to issuing the request for proposals.

Preaward Survey ([FAR 9.106-1\(a\)](#)). Generally, you should obtain a preaward survey, including analysis of financial capability, when the information on hand or readily available is not sufficient for making a determination regarding responsibility. However, unless circumstances justify its cost, you should not request a preaward survey for:

- Fixed-price contracts at or below the simplified acquisition threshold, or
- Contracts involving the acquisition of commercial items.

Contract Financing ([FAR 32.107](#)). If the contractor or offeror meets the standards prescribed for a responsible prospective contractor, do not treat the contractor's need for contract financing as a handicap for a contract award (e.g., a responsibility factor or an evaluation criterion). Do not disqualify a contractor from contract financing because the contractor failed to indicate a need for contract financing before the contract was awarded.

Financial Capability Requirements ([FAR 53.301-1407](#)). The Standard Form (SF) 1407, Preaward Survey of Prospective Contractor Financial Capability, provides insight into some of the areas that you should consider in evaluating a firm's financial capability. Financial capability reviews requested from DCMA are processed through its electronic Preaward Survey System (PASS) e-tools application rather than the SF 1407 itself. However, data reported in the PASS is consistent with that contained in the SF 1407.

- Current financial position from the latest balance sheet.
- Current assets to current liabilities ratio.
- Acid test ratio.
- Total liabilities to net worth ratio.
- Current and projected sales.
- Latest profit and loss statement.
- Working capital.
- Most recent credit rating.
- Business and financial reputation.

Current Financial Position Analysis. The balance sheet of the firm will provide you information on the firm's current financial position. The balance sheet is a report that summarizes the firm's assets and liabilities, as well as its net worth (owner's equity). The report is known as a balance sheet because the sum of all assets must equal (balance) the sum of liabilities and net worth.

For example, Lloyd's Manufacturing has provided you with the following information for the years 20X6 to 20X8:

Lloyd's Manufacturing Financial Position			
Accounts	20X6	20X7	20X8
Cash	\$82,000	\$80,000	\$85,000
Accounts Receivable	\$190,000	\$200,000	\$180,000
Inventory	\$65,000	\$55,000	\$60,400
Other Current Assets	\$0	\$0	\$0
Fixed Assets	\$970,200	\$975,500	\$976,000
Total Assets	\$1,307,200	\$1,310,500	\$1,301,400
Current Liabilities	\$125,000	\$120,500	\$101,600
Long-Term Liabilities	\$275,400	\$295,800	\$300,000
Total Liabilities	\$400,400	\$416,300	\$401,600
Net Worth	\$906,800	\$894,200	\$899,800

Taken alone, the balance sheets provide little insight into the firm's financial capabilities. You must analyze the data presented.

The SF 1407 identifies three key ratios for analysis: the Current Assets to Current Liabilities (Current) Ratio, the Acid Test Ratio (Quick) Ratio, and the Total Liabilities to Net Worth Ratio.

In making your analysis, you should consider the 3-year trend in the ratios and a comparison between the ratios and the industry averages.

If analysis of these ratios raises a question or the use of other ratios seems appropriate, you should calculate the appropriate ratios and perform any additional analysis required.

Current Assets to Current Liabilities Ratio Analysis. As described earlier in the chapter, the current assets to current liabilities (current) ratio is calculated as follows:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

For example: Using the data from the Lloyd's Manufacturing financial position presented above:

- Calculate 20X8 current assets. For Lloyd's Manufacturing, current assets will be the sum of cash (\$85,000), accounts receivable (\$180,000), inventories (\$60,400), and other current assets (\$0). That sum is \$325,400.

- Calculate 20X8 current liabilities. For Lloyd's Manufacturing, current liabilities are \$101,600.

Calculate the 20X8 current ratio.

$$\begin{aligned} \text{Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\ &= \frac{\$325,400}{\$101,600} \\ &= 3.2 \end{aligned}$$

- Compare with Industry Averages and Related Information. To evaluate Lloyd's Manufacturing 20X8 Current Assets to Current Liabilities Ratio, you should compare it with the industry. One source of industry averages is D&B's Industry Norms and Key Business Ratios, which indicates that the upper quartile of manufacturing firms in Lloyd's industry have an average current ratio of 2.8. The middle half have a current ratio of 1.3 and the lower quartile a ratio of .8. Lloyd's ratio of 3.2 appears to indicate that it is more financially secure than most of the firms in its industry.

Acid Test Ratio Analysis. As described earlier in the chapter, the acid test ratio is calculated as follows:

$$\text{Acid Test Ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

For example: Using the data from the Lloyd's Manufacturing financial position presented above:

- Calculate 20X8 Sum of Cash, Marketable Securities, and Net Accounts Receivable. For Lloyd's Manufacturing, current assets are \$325,400. Inventory is \$60,400 of that total.
- Calculate 20X8 Current Liabilities. For Lloyd's Manufacturing, current liabilities are \$101,600.

Calculate the 20X8 Ratio.

$$\begin{aligned} \text{Acid Test Ratio} &= \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}} \\ &= \frac{\$325,400 - \$60,400}{\$101,600} \\ &= \frac{\$265,000}{\$101,600} \\ &= 2.61 \end{aligned}$$

- Compare with Industry Averages and Related Information. Industry statistics indicate that the upper quartile of manufacturing firms in Lloyd's industry have an average Acid Test ratio of 2.7. The middle half have an acid test ratio of 1.0 and the lower quartile a ratio of .5. Again, Lloyd's 20X8 ratio of 2.61 appears to indicate that it is as financially secure as the most secure firms in its industry.

Total Liabilities to Net Worth Ratio Analysis. One way to improve the current and acid test ratios is long-term borrowing. For example, long-term borrowing could increase cash without increasing current liabilities. However, too much long-term borrowing could jeopardize the long-term survival of the firm. The Total Liabilities to Net Worth Ratio compares total liabilities to owner's equity as a source of funds. It provides insight into the firm's ability to cover debt and, if necessary, borrow additional funds.

$$\text{Total Liabilities to Net Worth Ratio} = \frac{\text{Total Liabilities}}{\text{Tangible Net Worth}}$$

For example: Using the data from the Lloyd's Manufacturing financial position presented above:

- Calculate 20X8 Total Liabilities. Total liabilities are the sum of current (\$101,600) and long-term liabilities (\$300,000). The sum is \$401,600.
- Calculate 20X8 Net Worth. Net worth has already been calculated as \$899,800.

Calculate the Ratio.

$$\begin{aligned} \text{Total Liabilities to Net Worth Ratio} &= \frac{\text{Total Liabilities}}{\text{Tangible Net Worth}} \\ &= \frac{\$401,600}{\$899,800} \\ &= .446 \end{aligned}$$

- Compare with Industry Averages and Related Information. Industry statistics indicate that the upper quartile of manufacturing firms in Lloyd's industry have a Total Liabilities to Net Worth Ratio of .195 (19.5 percent). The middle half have a total liabilities to net worth ratio of 66.9 percent and the lower quartile a ratio of 1.470 (147.0 percent). While Lloyd's ratio is not among the lowest in the industry, it is lower than the average.

Analysis of Ratios for Possible Trends. After you have calculated the appropriate ratios for the most recent year, examine data for earlier years for a possible trend. You should normally consider at least three years of data.

For example: Using the data from the Lloyd's Manufacturing financial position presented above:

Lloyd's Manufacturing Financial Position			
Ratio	20X6	20X7	20X8
Current Assets to Current Liabilities	2.70	2.78	3.20
Acid Test	2.18	2.32	2.61
Total Liabilities to Net Worth	0.442	0.466	0.446

For Lloyd's Manufacturing, analysis reveals that the Current Assets to Current Liabilities and the Acid Test Ratios have been improving over the last three years. Examination of the Total Liabilities to Net Worth Ratio does not reveal a trend.

Current and Projected Sales Analysis. The ratios above provide an insight into the firm's current financial status. Analysis of sales data for the current period and past two periods can provide insight into the circumstances affecting the firm's financial position. For example, as a firm increases sales, current liabilities may increase as the firm borrows money to finance additional inventories and accounts receivable. As sales decrease, inventories and material purchases may decrease reducing current assets and current liabilities.

In addition, the size of the proposed contract relative to current and recent sales provides insight into the firm's need for additional funds to support the proposed contract. For example, a firm proposing on a contract that is much larger than current annual sales would likely be a greater financial risk than a firm proposing on a contract that is only a small fraction of current sales.

Profit/Loss Statement Analysis. Profits are essential to a firm's long-term survival. Profits can be retained to finance operations. In addition, a profitable company is a more desirable investment for both potential owners and lenders. Continuing losses will lead to a deteriorating financial position and liabilities will likely increase relative to owner's equity to finance current operations. It will also become increasingly difficult

for a firm to obtain additional funds because investors will be unwilling to invest in the firm and lenders less likely to loan money.

Working Capital Analysis. Net working capital is calculated by subtracting current liabilities from current assets. Working capital therefore represents assets funded by long-term debt and owner's equity, sources that do not require near-term repayment. The greater the working capital, the greater the assurance that short-term debts will be paid when due. A large amount of working capital (relative to the size of the contract) should increase the likelihood that the firm will be able to obtain any cash needed to finance contract operations. A small amount of working capital may raise serious questions about the firm's ability to obtain any additional funds necessary to complete the contract.

Credit Rating Analysis. Credit ratings are an important indicator of a firm's financial health. One of the first steps a struggling firm will take to remain in business is to delay paying its creditors.

Credit ratings are available from a number of commercial services. Typically, these ratings use codes (e.g., "AAA" or "AA") to compare the financial strength of a company against the financial strength of all other companies rated.

To use a financial rating, you must consider several questions:

- What does the rating mean?

For example a rating of "A" may seem impressive, but it may mean that the firm's financial rating is only a little better than average for the firms rated.

- How does the rating compare with the norm for the industry?

The rating systems are designed to compare the financial strength of firms across industries. However, various business factors may have depressed the credit ratings of all firms in a particular industry. In other words, a firm's rating could be weak compared with all industries, but relatively strong for a firm in its industry.

- How is the rating changing over time?

The current credit rating is a single evaluation at a particular point of time. Examine how the rating has changed over the past three years. Given the same current rating, a firm with a history of declining ratings is probably a greater risk than a firm with increasing ratings.

Business and Financial Reputation Analysis. Any other pertinent data that is uncovered in examining the firm's financial position should also be considered. Examples of additional data that may provide valuable insight include:

- Additional financial ratios highlighting information that is particularly relevant to firms in the industry
- Information indicating an anticipated loss on the proposed contract or other contracts.
- Information indicating a financial restructuring such as the sale or acquisition of facilities.

Analysis Conclusion. When you complete your analysis you must make a clear determination on contractor responsibility based on your findings:

- Responsible.
- Responsible with Government contract financing.
- Nonresponsible

For example: Examination of the three ratios above indicates that Lloyd's is in a strong financial position. All three ratios are better than the average firms in the industry. The Current Assets to Current Liabilities and the Acid Test Ratios have improved over the last three years. Unless other data about the firm revealed very negative information, it appears that Lloyd's is financially responsible.

9.4 Applying Financial Indicators To Contract Financing Decisions

This section examines some of the points that you should consider when evaluating the need to finance an acquisition.

- 9.4.1 - [Commercial-Item Financing](#)
- 9.4.2 - [Noncommercial-Item Financing](#)

Tailor Contract Financing ([FAR 32.202-1\(c\)](#)). Tailor contract financing to the product and contracting selection.

Over the years, the Government has developed financing practices to meet its unique needs in acquiring non-commercial items. These practices work well for noncommercial items, but do not always correspond with the practices used in commercial trade.

When Government financing is required for a commercial-item contract, carefully analyze current commercial-market practices. Study the contracting environment and commonly-used commercial methods of contract financing. Tailor contract financing based on the results of your analysis.

Commercial Item Identification ([FAR 2.101](#)). A commercial item is:

1. Any item, other than real property, that is of a type customarily used for nongovernmental purposes and that has been sold, leased, or licensed to the general public; or, offered for sale, lease, or license to the general public;
2. Performance that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;
3. Any item that would satisfy a criterion expressed in Paragraphs 1 or 2 of this definition, but for:
 - Modifications of a type customarily available in the commercial marketplace; or
 - Minor modifications of a type not customarily available in the commercial marketplace made to meet Government requirements. A "minor" modification is any modification that does not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. When you determine whether a modification is minor consider the value and size of the modification and the comparative value and size of the final product. Use dollar values and percentages as guideposts, but they are not conclusive evidence that a modification is minor;
4. Any combination of items meeting the requirements of Paragraphs 1, 2, 3, or 5 of this definition that are of a type customarily combined and sold in combination to the general public;
5. Installation services, maintenance services, repair services, training services, and other services if such services are procured for support of an item referred to in Paragraphs 1, 2, 3, or 4 above, and if the source of such services:
 - Offers such services to the general public and the Government contemporaneously and under similar terms and conditions; and
 - Offers to use the same work force for providing the Government with such services as the source uses for providing such services to the general public;
6. Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed under standard commercial terms and conditions. This does not include services that are sold based on hourly rates without an established catalog or market price for a specific service performed;
7. Any item, combination of items, or service referred to in Paragraphs 1 through 6, notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a contractor; or

8. A nondevelopmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local governments.

Nondevelopmental Item Identification ([FAR 2.101](#)). A nondevelopmental item is:

1. Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;
2. Any item described in Paragraph 1 of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or
3. Any item of supply being produced that does not meet the requirements of Paragraph 1 or 2 solely because the item is not yet in use.

9.4.1 Commercial-Item Financing

Commercial Financing Situations ([FAR 32.202-1](#) and [FAR 32.206\(f\)](#)). For purchases of commercial supplies or services, financing is normally the contractor's responsibility. However, in some markets, buyers commonly finance commercial-item contracts. In these markets, the contracting officer may specify commercial financing terms in the solicitation or permit each offeror to propose its own financing terms.

Only consider commercial-item contract financing when all of the following requirements are met:

- The contract item financed is a commercial supply or service.
- The contract price exceeds the simplified acquisition threshold.
- The contracting officer determines that financing is appropriate or customary in the commercial marketplace.
- The particular form of financing under consideration is in the best interest of the Government.
- Adequate financial security is obtained.
- Aggregate commercial advance payments will not exceed 15 percent of the contract price.
- The contract is awarded competitively, or if only one offer is solicited, adequate consideration is obtained if the financing is expected to be substantially more advantageous to the offeror than the offeror's normal method or customer financing.
- The payment office concurs with the contract liquidation provisions.
 - Liquidation of contract financing payments must be made on the same basis as the computation of financing payments (e.g., financing payment computed on a whole contract basis must be liquidated on a whole contract basis, financing payment computed on a line item basis must be liquidated against that line item).
 - Liquidation on a whole contract basis must use a uniform liquidation percentage as the liquidation method, unless:
 - The cognizant payment office agrees that proposed liquidation provisions can be executed by that office, or
 - Agency regulations provide alternative liquidation methods.

Types of Commercial Payments ([FAR 32.202-2](#) and [FAR 32.206\(g\)](#)). There are four types of payments for commercial-item purchases:

- Commercial Advance Payments. These payments:
 - Are made before there is any performance of work under the contract.
 - In aggregate, must not exceed 15 percent of the contract price.
 - Are contract financing for prompt payment purposes (e.g., not subject to interest payments under the Prompt Payment Act).
 - Are not subject to FAR requirements related to advance payments for noncommercial items.
- Commercial Interim Payments. These payments:
 - Are made after some work has been accomplished but before final delivery and acceptance.
 - Are contract financing for prompt payment purposes (e.g., not subject to interest payments under the Prompt Payment Act).
 - May be made:
 - Based on the achievement or occurrence of specified events,

- Based on the passage of time, or
- At specified times prior to delivery dates.
- Installment Payments. This form of financing is payment to a contractor of a fixed number or equal interim financing payments prior to delivery and acceptance of a contract item.
 - The installment payment arrangement is designed to reduce administrative costs .
 - However, if a contract will have a large number of deliveries, the administrative costs may increase to the point where installment payments are not in the best interest of the Government.
 - The sum of all installment payments must not exceed 70 percent of the price of the unit(s) financed.
- Delivery Payment. This is payment for accepted supplies or services (including partial deliveries). Financing payments (advance, interim, or installment) are liquidated by deducting the amounts previously paid for an item from the item delivery payment.

Market Research on Commercial Financing ([FAR 32.202-3](#)). If you are considering the use of commercial financing, make commercial financing a part of your market research. Consider:

- The extent to which other buyers provide contract financing for products in the market involved;
- The overall level of financing normally provided;
- The amount or percentages of any payments equivalent to commercial advance payments,
- The basis for any payments equivalent to interim payments, as well as the frequency, and amounts or percentages; and
- Methods of contract financing payment liquidation and any special or unusual payment terms applicable to delivery payments.

Security for Commercial Financing ([FAR 32.202-4](#)). By law, you must obtain adequate security for Government financing. Accordingly, you must specify acceptable types of security in the solicitation. If more than one type of security is acceptable, require each offeror to specify the security that it will provide and assure that security is identified in the final contract.

- Require security that is at least equivalent to the maximum unliquidated amount of contract financing payments to be made to the contractor. The contracting officer may adjust the required security value periodically during contract performance, as long as it is always equal to or greater than the amount of unliquidated financing.
- Consider the offeror's financial condition as security. Subject to agency regulations, the contracting officer may determine that the offeror's financial condition is adequate security, provided the offeror agrees to provide additional security should its financial condition become inadequate security.
 - Consider both net worth and liquidity in assessing the offeror's financial condition.
 - Require additional security if the offeror's financial condition is not adequate security.
- Consider other types of security including the following:
 - Paramount lien. A lien is the legal claim by one person (in this case the Government) over the property of another for the payment of a debt or the settlement of an obligation.
 - Statutes specify that any liens provided as security for Government financing are paramount over all other liens in effect over contractor property. This right is effective with the first payment to the contractor, and requires no filing, notice, or other action by the Government.

- The contract must specify what assets are subject to the lien (e.g., work in progress, the plant, inventory), and give the Government the right to verify the existence and value of those assets.
- Financing must be conditioned upon a contractor certification that the assets subject to the lien are free from any prior encumbrances.
- United States bonds or notes.
- Currency, certified or cashier's checks, bank drafts, or money orders.
- Irrevocable letter of credit.
- A bond from a surety.
- A guarantee of repayment from a person or corporation of demonstrated liquid net worth, connected by significant ownership to the contractor.
- Title to identified contractor assets of adequate worth.
- Consider the risks associated with requiring security.
 - Identify the risks to the Government of providing very high amounts of Government financing early in the contract (front-end loading).
 - Analyze security requirements and the amounts and timing of financing payments to determine whether a particular financing arrangement is in the Government's best interest.

Contracting Officer- Specified Commercial Contract Financing ([FAR 32.203](#) and [FAR 32.204](#)). When market research provides sufficient information to identify the customary financing terms in the relevant industry, you may specify the appropriate terms in the solicitation. If you do:

- Assure that contract financing is not used as a factor to evaluate competing offers for contract award.
- Assure that no proposal offering alternative financing is accepted.
- Do not permit an offeror's decision not to use Government-specified financing to alter the Government's evaluation of the offer. That decision does not render the offer nonresponsive or otherwise unacceptable.
- If you make award to an offeror that declined the Government-specified financing, assure that contract financing provisions are not included in the resulting contract.
- Do not accept contract financing as a basis for adjusting an offeror's proposed prices, because the effect of contract financing is reflected in each offeror's prices.

Offeror-Proposed Commercial Contract Financing ([FAR 32.205](#) and [OMB Circular A-94](#)). Market research may permit the contracting officer to determine that commercial-item financing is appropriate, but not which financing terms are in the best interest of the Government. In this situation, the solicitation should permit each offeror to propose financing terms. The contracting officer must then determine which offer is in the best interests of the Government. If you take this approach:

- Assure that the solicitation
 - Includes the FAR provision, Invitation to Propose Financing Terms.
 - Specifies the delivery payment (invoice) dates and interest rate that will be used in financing proposal evaluation.

- Evaluate the total cost to the Government for each proposal by adjusting each proposed price to reflect the costs of providing the proposed financing. For each financing payment:
 - The amount financed is the proposed financing payment under the offeror's proposal.
 - The financing period is the time (in years) between the date of the proposed financing payment and the date that the amount would be paid as a delivery payment.
 - The interest rate is the Nominal Discount Rate identified in [Appendix C of OMB Circular A-94](#), Benefit-Cost Analysis of Federal Programs; Guidelines and Discounts.

9.4.2 Noncommercial-Item Financing

General Policy on Providing Noncommercial Item Financing ([FAR 32.104\(a\)](#)). Prudent noncommercial-item contract financing can be a useful tool for Government acquisition, but you must limit the use of this tool to situations where it is needed for prompt and efficient contract performance. When used:

- Administer it in a way that aids the acquisition.
- Avoid any undue risk of Government monetary loss.
- Monitor the contractor's use of the financing provided.

Dollar Limitations on Noncommercial Item Financing ([FAR 32.104\(d\)](#)). Consider contract financing for contracts with:

- Small business concerns, when the contract price will be greater than the simplified acquisition threshold, or
- Other than small business concerns, when:
 - The contract price will be \$3 million or more, or
 - For an indefinite-delivery contract, a basic ordering agreement, or a similar ordering instrument, the contracting officer expects the aggregate value of orders or contracts that individually exceed the simplified acquisition threshold to have a total value of \$3 million or more. The contracting officer must limit financing to those orders or contracts that exceed the simplified acquisition threshold.

Need for Contract Financing Not a Deterrent ([FAR 32.107](#)). If the contractor or offeror meets the standards prescribed for contractor responsibility, never allow the contractor's need for contract financing to affect the contract award decision (e.g., as a responsibility factor or evaluation criterion.). After award, you should not disqualify a contractor from contract financing solely because the contractor failed to indicate a need for contract financing before contract award.

Uses of Noncommercial Contract Financing ([FAR 32.105](#)). Noncommercial contract financing methods are intended to be self-liquidating through contract performance. Accordingly, you must normally limit their use to financing contractor working capital and not for financing expansion of contractor-owned facilities or the acquisition of fixed assets. However, under loan guarantees, exceptions can be made for:

- Facilities expansion of a minor or incidental nature, if a relatively small part of the guaranteed loan is used for the expansion and the contractor's repayment would not be delayed or impaired; or
- Other instances of facilities expansion for which contract financing is appropriate under agency procedures.

Order of Financing Preference ([FAR 32.102](#), [FAR 32.106](#), and [FAR 32.113](#)). When a contractor requests contract financing, consider the following order of preference (unless an exception would be in the Government's best interest):

- Private financing without Government guarantee. However, you should not require the contractor to obtain private financing at unreasonable terms or from other agencies.
- Partial payments;
- Customary contract financing, including:
 - Progress payments based on the percentage or stage of completion;
 - Performance-based payments; or
 - Customary progress payments based on costs.
- Loan guarantees.

- Unusual contract financing -- any contract financing arrangement that deviates from those found in the FAR -- including unusual progress payments based on costs. Use of unusual contract financing must be approved by the head of the agency or as provided for in agency regulations.
- Advance Payments

Partial Payments ([FAR 32.102\(d\)](#), [FAR 32.903](#), and [OMB Prompt Payment Regulations](#) at 5 CFR ¶1315. OMB Prompt Payment regulations require agencies to pay for partial delivery of supplies or partial performance of services unless specifically prohibited by the contract. Although partial payments are generally treated as a method of payment, not a method of contract financing, using partial payments can assist contractors to participate in Government contracts without, or with minimal, contract financing.

- When appropriate, design contract statements of work and pricing arrangements to permit acceptance and payment for discrete portions of work, as soon as it is accepted.
- Unless specifically prohibited by the contract, the contractor is entitled to payment for accepted partial deliveries of supplies or partial performance of services that comply with all applicable contract requirements and for which prices can be calculated from the contract terms.

Progress Payments Based on Percentage or Stage of Completion ([FAR 32.102\(e\)](#), [FAR 52.232-5](#), and [DFARS 232.102\(e\)\(2\)](#)).

You may use progress payments based on the percentage or stage of contract completion following agency procedures. The most common application of this financing method is construction. However, IAW FAR 32.500(b), FAR 32.5 is not applicable when using Progress Payments Based on Percentage or Stage of Completion. Other applications include: shipbuilding and ship conversion, alteration, or repair.

Under construction contracts:

- Progress payments are typically made monthly as work proceeds, based on estimates of work accomplished which meets the standards of quality established in the contract. When satisfactory progress has not been achieved by a contractor during any period for which a progress payment is to be made, a percentage of the progress payment may be retained. Retainage should not be used as a substitute for good contract management, and the contracting officer should not withhold funds without cause. Determinations to retain and the specific amount to be withheld shall be made by the contracting officers on a case-by-case basis. Such decisions will be based on the contracting officer's assessment of past performance and the likelihood that such performance will continue. The amount of retainage withheld shall not exceed 10 percent of the approved estimated amount in accordance with the terms of the contract and may be adjusted as the contract approaches completion to recognize better than expected performance, the ability to rely on alternative safeguards, and other factors. Upon completion of all contract requirements, retained amounts shall be paid promptly.
- On completion and acceptance of each separate building, public work, or other separately-priced division of the contract, payment must be made for the completed work without retention of a percentage.

Customary Progress Payments Based on Costs ([FAR 32.501-1](#), [FAR 32.502-1](#), and [DFARS 232.501-1](#))

Customary progress payments are those made using the customary progress payment rate, cost base, and frequency of payment established in the FAR Progress Payments clause. Any other progress payments are considered unusual.

The current FAR customary progress payment rate is 80%, applicable to the total cost of performing the contract. For small business concerns, the rate is 85%. Rates vary from time to time and from agency to agency. For example in DFARS [232.501-1](#), the DoD has established customary rates for DoD contracts at 80% for large businesses and 90% for small businesses, as such rates may be revised from time-to-time by DoD Class Deviations issued by the OSD Principal Director of Defense Pricing and Contracting.

Unless otherwise authorized by agency procedures, the contracting officer may provide contract financing in the form of performance-based payments or customary progress payments if the following conditions are met:

- The contractor:
 - The contractor will not be able to bill for the first delivery of products, or other performance milestones, for a substantial time after work must begin (normally four months or more for a small business; six months or more for others) and
 - The contractor will make expenditures for contract performance during the pre-delivery period that have a significant impact on the contractor's working capital; and
 - The contractor (particularly if the contractor is a small supplier) demonstrates actual financial need or unavailability of private financing.
- The contracting officer:
 - May provide for progress payments for contracts of less than \$3,000,000 if the following conditions exist:
 - The contractor is a small business and the contract will be equal to or greater than the simplified acquisition threshold;
 - The contractor will perform a group of small contracts at the same time and the total impact on working capital is equivalent to a single contract of \$1,000,000 or more; or
 - Agency regulations provide for such progress payments.

The contracting officer must decide whether to provide for progress payments when a series of orders are awarded (e.g., under an indefinite delivery contract), based on:

- An estimate of the total work to be done (per FAR 32.503-5(c) the administration of progress payments under each order is a separate contract), and
- The probable impact on working capital of the predelivery expenditures and production lead times of the majority of the individual orders.
- Must obtain contract finance office or other agency-designated approval before providing progress payments to a contractor:
 - Whose financial condition is in doubt;
 - Who has had an advance payment request or loan guarantee denied (or approved but withdrawn or lapsed) within the previous 12 months; or
 - Who is named in the consolidated list of contractors indebted to the United States (the "Hold-Up List").

Performance-Based Payments ([FAR 32.102\(f\)](#), [FAR 32.1000](#), [FAR 32.1001](#), [FAR 32.1002](#), [FAR 32.1003](#), and [FAR 32.1004](#)).

Performance-based payments are noncommercial contract financing based on contractor achievement of performance goals established in the contract. They are the preferred financing method, when the contracting officer finds them practical and the contractor agrees to use them.

The contracting officer:

- Must not apply performance-based payment to cost-reimbursement contracts.
- Must not apply performance-based payment to contracts:
 - For architect-engineer services or construction;
 - For shipbuilding or ship conversion, alteration, or repair, when the contracts provide for progress payments based upon a percentage or stage of completion;
 - For research and development;
 - Awarded through sealed bidding or competitive negotiation;

- Must assure that the following conditions are met before using performance-based payments:
 - The contracting officer and the offeror agree on the performance-based payment terms.
 - The contract is a definitized fixed-price contract. However, an undefinitized contract may include the FAR Performance-Based clause with the provision that the clause is not effective until the contract is definitized and the performance-based schedule is included in the contract.
 - The contract does not provide for other methods of contract financing, except advance payments or guaranteed loans.
- May provide for payments based on any of the following:
 - Performance measured by objective and quantifiable methods,
 - Accomplishment of defined events, or
 - Other quantifiable measures of results.
- May provide for performance-based payments to be made on a:
 - Whole contract, or
 - Deliverable line item (e.g., a single line item with 10 units priced at \$1,000,000 each has 10 deliverable items, but a line item for a lot of 10 units priced at \$10,000,000 has one deliverable item -- the lot).
- May base performance-based payments on either specifically described events (e.g., milestones) or some measurable performance criterion.
 - Each event or performance criterion used to trigger a finance payment:
 - Must be an integral and necessary part of contract performance, and
 - Must be identified in the contract, along with a description of what constitutes successful performance of the event or attainment of the performance criterion.
 - The signing of contracts or modifications, the exercise of options, or other such action must not be events or criteria for performance-based payments.
 - An event need not be a critical event in order to trigger a payment, but successful performance of each identified event or performance criterion must be readily verifiable.
 - Events or criterion may be either severable or cumulative:
 - The successful completion of a severable event or criterion is independent of the accomplishment of any other event or criterion.
 - The successful completion of a cumulative event or criterion is dependent upon the previous accomplishment of another event.
- Must assure that the contract:
 - Does not permit payment for a cumulative event or criterion until each dependent event or criterion has been successfully completed.
 - Specifically identifies severable events or performance criterion that will trigger payments.
 - Identifies which events or criteria are preconditions for the successful achievement of each cumulative event or criterion.
 - When performance-based payments are made on a deliverable item basis, identifies trigger events or performance criteria that are:
 - Part of the performance necessary for that item, and
 - Specifically identified with that item or subline item.

- Identifies the dollar payment (or percentage of contract/item price) associated with each trigger event or criterion. Amounts may be established on any rational basis, including:
- Engineering estimates of stages of completion;
- Engineering estimates of hours or other measures of effort to be expended in performance of an event or achievement of a performance criterion; or
- The estimated cost of performance of particular events.
- Does not provide for performance-based payments exceeding:
- 90 percent of contract price if payments are based on the whole contract, or
- 90 percent of the delivery item price if payments are based on delivery items.
- Specifies a liquidation rate or dollar amount for the delivery item or whole contract depending on which is used for performance-based payments.

Loan Guarantees for Defense Production: Discussed in detail at the following FAR citation references: ([FAR 32.302](#), [FAR 32.303](#), [FAR 32.304-1](#), and [FAR 32.304-2](#)).

However, this FAR guidance is superseded for DoD by the following DFARS citation that renders the use of loan guarantees to be inapplicable for financing of Department of Defense contracts.

[DFARS subpart 232.3](#) — Loan Guarantees for Defense Production

[DFARS 232.302 Authority](#).

(a) The use of guaranteed loans as a contract financing mechanism requires the availability of certain congressional authority. The DoD has not requested such authority in recent years, and none is now available.

Unusual Progress Payments Based on Costs ([FAR 32.501-2](#) and [FAR 32.502-2](#)). Progress payments may be customary or unusual. Customary progress payments are those made under the general guidance in [FAR 32.501](#) using the customary progress payment rate, the cost base, and frequency of payment established in the Progress Payments clause, and either the ordinary liquidation method or the alternate method as provided in [FAR 32.503-8](#) and [FAR 32.503-9](#). Any other progress payments are considered unusual, and may be used only in exceptional cases when authorized in accordance with [FAR 32.501-2](#).

When considering the use of progress payments with unusual terms, the contracting officer:

- May only provide such progress payments if the following conditions are met:
 - The contract necessitates pre-delivery expenditures that are large in relation to contract price and in relation to the contractor's working capital and credit.
 - The contractor fully documents an actual need to supplement any private financing available, including guaranteed loans.
 - The contractor's request is approved by the head of the contracting activity or a designee.
- Must obtain contract finance office or other agency-designated approval before taking any of the following actions:
 - Providing a progress payment rate higher than the customary rate;
 - Deviating from the progress payment terms prescribed in the FAR; or
 - Providing progress payments to a contractor:
 - Whose financial condition is in doubt;
 - Who has had an advance payment request or loan guarantee denied (or approved but withdrawn or lapsed) within the previous 12 months;
 - Who is named in the consolidated list of contractors indebted to the United States (the "Hold-Up List")

- Should assure that the difference between the unusual progress payment rate and the customary rate is the smallest difference possible under the circumstances.
- Should not consider progress payment terms unusual merely because they are being used on a letter contract or a definitive contract that superseded a letter contract.

[DFARS PGI 232.501-2](#) Unusual progress payments.

Unusual progress payment arrangements require the advance approval of the OSD Principal Director of Defense Pricing and Contracting (DPC). Contracting officers must submit all unusual progress payment requests to the department or agency contract financing office for approval and submission to DPC.

Advance Payments for Noncommercial Items ([FAR 32.402](#), [FAR 32.403](#), [FAR 32.404](#), [FAR 32.408](#), and [FAR 32.409-1](#)).

Advance payments for noncommercial items may be authorized for any type of contract, however they are generally the least preferred method of contract financing and should not be authorized if other types of financing are reasonably available. Loans and credit at excessive interest rates or other exorbitant charges are not considered reasonably available financing.

- You are authorized by law to make advance payments for the following items and the general preference against advance payments does not apply:
 - Rent;
 - Tuition;
 - Insurance premiums;
 - Expenses of investigations in foreign countries;
 - Extension or connection of public utilities for Government buildings or installations;
 - Subscriptions to publications;
 - Purchases of supplies and services in foreign countries, if:
 - The purchase price does not exceed \$10,000; and
 - The advance payment is required by the laws or government regulations of the foreign country concerned;
 - Enforcement of the customs or narcotics laws; or
 - Other transactions authorized by agency procedures under statutory authority.
- You may also find advance payments useful and appropriate for the following:
 - Contracts for experimental, research, or development work with nonprofit educational or research institutions;
 - Contracts solely for the management and operation of Government-owned plants;
 - Contracts for acquisition at cost of facilities for Government ownership;
 - Contracts of such highly classified nature that the agency considers it undesirable for national security to permit assignment of claims under the contract;
 - Contracts entered into with financially weak contractors whose technical ability is considered essential to the agency;
 - Contracts for which a loan by a private financial institution is not practicable, whether or not a loan guarantee is issued.
 - Contracts with small business concerns under circumstances which make advance payments appropriate.
 - Contracts under which exceptional circumstances make advance payments the most advantageous contract financing method for both Government and the contractor.

- A contractor may apply for advance payments before or after contract award. The contractor must submit any advance payment request to the contracting officer and generally must provide the information below. (Specific requirements may vary for experimental, research, or development contracts with nonprofit educational or research institutions or management and operation contracts for Government-owned plants.)
 - Reference to the contract or solicitation for which advance payment is requested.
 - A cash flow forecast showing estimated disbursements and receipts for the period of contract performance.
 - The proposed total amount of the advance payments.
 - The name and address of the bank at which the contractor expects to establish a special account as a depository for the advance payments.
 - A description of the contractor's efforts to obtain unguaranteed private financing of a guaranteed loan.
 - Other information appropriate to an understanding of the:
 - Contractor's financial condition and need;
 - Contractor's ability to perform the contract without loss to the Government; and
 - Financial safeguards to protect the Government's interest.
- After analysis of the contractor's request, the contracting officer must provide a recommendation to the agency's approving authority.
 - For both approval and disapproval you must transmit the following:
 - Contract related data;
 - The contractor's request and supporting information;
 - A report of the contractor's past performance, responsibility, technical ability, and plant capacity.
 - For a disapproval recommendation, provide the reason for that decision.
 - For an approval recommendation, provide:
 - Comments on the contractor's need for advance payments and potential Government benefits from contract performance;
 - Proposed advance payment contract terms, including proposed security requirements.
 - The findings, determination, and authorization following the FAR-required format.
 - A recommendation for approval of the request.
 - Justification for any proposal for waiver of interest charges.

9.5 Applying Financial Indicators To Performance Bond Decisions

Performance Bond ([FAR 28.001](#)). A performance bond is a written instrument executed by the contractor (the principal) and a second party (the surety or sureties) to assure fulfillment of the contractor's obligations under the contract. If the contractor's obligations are not met, the bond assures payment, to the extent stipulated, of any loss sustained by the Government.

Requirement for Construction Contracts ([FAR 13.005\(a\)\(2\)](#), [FAR 28.102-1](#), [FAR 28.204-1](#), and [FAR 28.204-2](#)).

The Miller Act requires the Government to obtain a performance bond for any construction contract exceeding the simplified acquisition threshold, except that the requirement may be waived:

- By the contracting officer for work performed in a foreign country upon finding that it is impracticable for the contractor to furnish a performance bond, or
- As otherwise authorized by law.

For construction contracts greater than \$25,000 but not greater than the simplified acquisition threshold, you must provide contractors two or more of the payment protection alternatives outlined below. The contractor may then select from the alternatives.

- Payment bond.
- An irrevocable letter of credit (ILC). The FAR requires that you give particular consideration to including this as one of the alternatives.
- A tripartite escrow agreement.
 - The prime contractor establishes an escrow account in a Federally insured financial institution and enters into a tripartite escrow agreement with:
 - The financial institution, as escrow agent, and
 - All of the labor and material suppliers.
 - The escrow agreement establishes the terms of payment under the contract and of resolution of disputes among the parties.
 - The Government makes payments to the contractor's escrow account, and the escrow agent distributes the payments in accordance with the agreement, or triggers the disputes resolution procedures if required.
- Certificates of deposit. The contractor deposits certificates of deposit from a Federally-insured financial institution with the contracting officer.
- Security deposit in the form of:
 - United States bonds or notes in an amount equal to the amount of the contract; or
 - Certified or cashier's check, bank draft, Post Office money order, or currency in the amount of the contract.

Requirement for Other Contracts ([FAR 28.103-1](#) and [FAR 28.103-2](#)). Generally, you must not require performance bonds for contracts other than construction contracts. However, you may require performance bonds for contracts exceeding the simplified acquisition threshold when necessary to protect the Government's interest. The following situations may warrant a performance bond:

- Government property or funds are to be provided to the contractor for use in performing the contract or as partial compensation
- A contractor sells assets to or merges with another concern, and the Government, after recognizing the latter concern as successor in interest, desires to assure that it is financially capable
- Substantial progress payments are made before delivery of end item starts.
- Contracts for dismantling, demolition, or removal of improvements.

Contractor Financial Responsibility ([FAR 28.103-2\(c\)](#)). Concerns about contractor financial responsibility may affect your decision on whether or not to require a performance bond.

However, you must remember that requiring a performance bond does not relieve you from the requirement to assure that a prospective contractor is responsible before making contract award. Also remember, that you must never assume that a contractor is financially responsible, simply because the firm can obtain a performance bond.

Bond Amount ([FAR 28.102-2](#)). When the contract requires a performance bond:

- The original penal amount of the bond must be 100 percent of the original contract price, unless the contracting officer determines that a lesser amount will protect the Government's interest.
- You may require additional performance bond protection when a contract price is increased.
 - The increase in protection generally must equal 100 percent of the increase in contract price.
 - Secure the additional protection by directing the contractor to increase the penal amount of the existing bond or by obtaining an additional bond.

9.6 Applying Financial Indicators To Progress Payment Administration

This section examines some of the points that you should consider in progress payment administration.

- 9.6.1 - [Government Rights In Adjustment Situations](#)
- 9.6.2 - [Adjustment For Loss Contracts](#)
- 9.6.3 - [Liquidation Rate Adjustment](#)

9.6.1 Government Rights In Adjustment Situations

Government Right to Adjust Progress Payments ([FAR 32.503-6](#) and [FAR 52.232-16](#)). The FAR Progress Payments clause provides the Government the right to reduce or suspend progress payments, or to increase the liquidation rate, under specific conditions. Only take action:

- In accordance with the contract terms and never precipitately or arbitrarily.
- After:
 - Notifying the contractor of the intended action and providing an opportunity for discussion.
 - Evaluating the effect of the action on the contractor's operations. In your evaluation, consider the contractor's financial condition, projected cash requirements, and existing or available credit arrangements.
 - Considering the general equities of the particular situation.
- Immediately and unilaterally if warranted by circumstances such as overpayments or unsatisfactory contract performance.
- Fairly and reasonably.
 - Base your decisions on substantial evidence.
 - Document the contract file.
 - Findings supporting the need for the change must be in writing.

Adjustment Situations ([FAR 32.503-6](#) and [FAR 52.232-16\(c\)](#)). You may reduce or suspend progress payments, increase the liquidation rate, or take a combination of these actions, after finding on substantial evidence any of the conditions outlined in the table below.

Situation	If...	Then...
Contractor Noncompliance	The contractor's accounting system or controls are deemed inadequate	Suspend progress payments or suspend the progress payments associated with the unacceptable portion of the accounting system until necessary changes are made.
Contractor Noncompliance	The contractor fails to comply with contract requirements without fault or negligence	Take no action other than to correct overpayments and collect amounts due from the contractor.
Unsatisfactory Financial Condition	The contracting officer finds that contract performance (including liquidation of progress payments) is endangered by the contractor's financial condition, or by a failure to make progress	Require the contractor to make additional operating or financial arrangements adequate for completing the contract without loss to the Government.

Situation	If...	Then...
Unsatisfactory Financial Condition	The contracting officer concludes that further progress payments would increase the probable loss to the Government	Suspend progress payments and all other payments until the unliquidated balance of progress payments is eliminated.
Excessive Inventory	The inventory allocated to the contract exceeds reasonable requirements (including a reasonable accumulation of inventory for continuing operations)	<p>Require the transfer of excessive inventory from the contract and take one or more of the following actions:</p> <ul style="list-style-type: none"> • Eliminate the costs of excessive inventory from the costs of eligible progress payments, with appropriate reduction in progress payments outstanding. • Apply additional deductions to billings for deliveries (increase liquidation)
Delinquency in Payment of Performance Costs	The contractor is delinquent in paying the costs of contract performance in the ordinary course of business	<p>Evaluate whether the delinquency is caused by an unsatisfactory financial condition.</p> <ul style="list-style-type: none"> • If it is, see Unsatisfactory Financial Condition above. • If it is not, do not deny progress payments if the contractor agrees to: cure the payment deficiencies; avoid further delinquencies; and make additional arrangements to complete the contract without loss to the Government.
Delinquency in Payment of Performance Costs	The contractor has in good faith, disputed amounts claimed by subcontractors, suppliers or others	Do not consider the payments delinquent until the amounts due are established by the parties through litigation or arbitration. However, exclude the amounts from costs eligible for progress payments so long as they are disputed.
Delinquency in Payment of Performance Costs	The contractor may be delinquent in making contributions under employee pension, profit sharing, or stock ownership plans	Assure that accrued costs are paid in accordance with the Progress Payments clause.
Fair Value of Undelivered Work	The unliquidated progress payments exceed the fair value of undelivered work	<p>Take appropriate action, considering the:</p> <ul style="list-style-type: none"> • Degree of contract completion. • Quality and amount of work performed on the

Situation	If...	Then...
		undelivered portion of the contract. <ul style="list-style-type: none"> • Amount of work remaining to be done and the estimated cost of completion. • Amount remaining unpaid under the contract.
Loss Contracts	The total costs incurred under the contract plus the estimated cost to complete are likely to exceed the contract price	Compute a loss ratio factor and adjust future progress payments to exclude the element of loss.

9.6.2 Adjustment For Loss Contracts

Supplementary Analysis for Loss Contracts ([FAR 32.503-6\(g\)](#)). Whenever you receive a Contractor Request for Progress Payment, carefully review the figures provided by the contractor. In particular, review Items 5, 12a, and 12b. If the sum of the total costs incurred to date under the contract (SF 1443, Item 12a) plus the estimated additional cost to complete the contract (SF 1443, Item 12b) exceed the contract price (SF 1443, Item 5), perform a supplementary analysis of the progress payment request.

The purpose of the supplementary analysis is to exclude the estimated loss from future progress payments. In your analysis, use the procedure outlined in the following example:

Supplementary Progress Payment Analysis		
Section I -- Calculate Revised Contract Price		
Contract price (SF 1443, Item 5)		\$950,000
Pending change orders and unpriced orders (to extent fund obligated)		+ \$70,000
Revised contract price (including change orders and unpriced orders)		\$1,020,000
Section II -- Calculate Alternate Amount To Be Used For Progress Payments		
Step 1	Total costs incurred to date (SF 1443, Item 12a)	\$900,000
	Add estimated additional cost to complete the contract	+ \$300,000
	Total cost to complete	\$1,200,000
Step 2	Calculate loss ratio factor = $\frac{\text{Revised Contract Price}}{\text{Total Cost to Complete}} = \frac{\$1,020,000}{\$1,200,000} = 85.0\%$	
Step 3	Total costs eligible for progress payments (SF 1443, Item 11) (Note that this figure assumes that all incurred costs are eligible)	\$900,000
	Multiply total costs eligible by the loss ratio factor	x 85.0%
	Recognized costs for progress payments (replaces total costs eligible for progress payments in progress payment calculations)	\$765,000
Step 4	Multiply recognized costs by the progress payment rate	x 80.0%
	Alternate amount to be used for progress payments	\$612,000
Section III -- Calculate Recognized Costs Applicable To Undelivered Items		
Factored costs of items delivered (same as contract price of items delivered)		\$250,000
Recognized costs applicable to undelivered items (\$765,000 - \$250,000)		\$515,000

The following comparison demonstrates how the summary analysis will affect the amount due the contractor under progress payments.

Comparison Before And After Supplementary Analysis			
Contractor Proposed		Supplementary Analysis	
Total cost eligible for progress payments	\$900,000	Recognized costs for progress payments	\$765,000
Progress payment rate	80.0%	Progress payment rate	80.0%
Total amount eligible for progress payment	\$720,000	Total amount eligible for progress payment	\$612,000
Less previous progress payments	- \$500,000	Previous progress payments	- \$500,000
Maximum balance eligible for progress payment	\$220,000	Maximum balance eligible for progress payment	\$112,000

9.6.3 Liquidation Rate Adjustment

Progress Payment Liquidation ([FAR 32.503-8](#) and [FAR 32.503-9](#)). The Government recoups progress payments through the deduction of liquidations from payments that would otherwise be due to the contractor for completed work. To determine the liquidation amount, you must apply a liquidation rate to the contract price of contract items delivered and accepted. This section will examine both the ordinary and alternate methods of liquidation rate application.

Ordinary Method of Liquidation ([FAR 32.503-8](#)). Under the ordinary method the liquidation rate is the same as the progress payment rate. This is the only method that you may use at the beginning of a contract.

For Example: Suppose that you have an \$11 million dollar firm fixed-price contract with four line items priced at \$2.75 million each. The table below depicts the ordinary method of progress payment liquidation throughout the contract when the progress payment and liquidation rates are both 80 percent. In this example, estimated cost is \$10 million and actual cost is equal to estimated cost.

Progress Payment Liquidation									
Month	Monthly Contract Cost	Progress Payment Rate	Monthly Progress Payments	Price of Items Delivered	Liquidation Rate	Progress Payment Liquidation	Price of Delivered Items Less Liquidation	Total Paid	Unliquidated Progress Payment
1	\$100,000	80.0%	\$80,000		80.0%	\$0	\$0	\$80,000	\$80,000
2	\$250,000	80.0%	\$200,000		80.0%	\$0	\$0	\$280,000	\$280,000
3	\$250,000	80.0%	\$200,000		80.0%	\$0	\$0	\$480,000	\$480,000
4	\$400,000	80.0%	\$320,000		80.0%	\$0	\$0	\$800,000	\$800,000
5	\$550,000	80.0%	\$440,000		80.0%	\$0	\$0	\$1,240,000	\$1,240,000
6	\$600,000	80.0%	\$480,000		80.0%	\$0	\$0	\$1,720,000	\$1,720,000
7	\$700,000	80.0%	\$560,000		80.0%	\$0	\$0	\$2,280,000	\$2,280,000
8	\$650,000	80.0%	\$520,000		80.0%	\$0	\$0	\$2,800,000	\$2,800,000
9	\$725,000	80.0%	\$580,000		80.0%	\$0	\$0	\$3,380,000	\$3,380,000
10	\$850,000	80.0%	\$680,000		80.0%	\$0	\$0	\$4,060,000	\$4,060,000
11	\$600,000	80.0%	\$480,000		80.0%	\$0	\$0	\$4,540,000	\$4,540,000
12	\$950,000	80.0%	\$760,000	\$2,750,000	80.0%	\$2,200,000	\$550,000	\$5,850,000	\$3,100,000
13	\$825,000	80.0%	\$660,000		80.0%	\$0	\$0	\$6,510,000	\$3,760,000
14	\$925,000	80.0%	\$740,000	\$2,750,000	80.0%	\$2,200,000	\$550,000	\$7,800,000	\$2,300,000
15	\$550,000	80.0%	\$440,000		80.0%	\$0	\$0	\$8,240,000	\$2,740,000
16	\$450,000	80.0%	\$360,000	\$2,750,000	80.0%	\$2,200,000	\$550,000	\$9,150,000	\$900,000
17	\$375,000	80.0%	\$300,000		80.0%	\$0	\$0	\$9,450,000	\$1,200,000
18	\$250,000	80.0%	\$200,000	\$2,750,000	*	\$1,400,000	\$1,350,000	\$11,000,000	\$0
Total	\$10,000,000		\$8,000,000	\$11,000,000		\$8,000,000	\$3,000,000		

* Remaining unliquidated progress payments.

Limitation on G&A Expense for Progress Payments ([CFR Title 48 Chapter 99, 9904.410](#)). A firm not subject to Cost Accounting Standards Board Cost Accounting Standards (CAS) may use cost of sales as a base for allocation of general and administrative (G&A) expense. A firm subject to full CAS coverage must comply with CAS 410, Allocation of Business Unit General and Administrative Expenses to Final Cost Objectives. That Standard requires the contractor to allocate G&A using a cost input allocation base (e.g., cost of goods manufactured).

- [CAS 410 Appendix A](#) describes use of an inventory suspense account to transition from a cost of sales allocation base to a cost input allocation base. In this account:
 - G&A for new contracts is absorbed using a cost input allocation base. New contracts are the contracts subject to CAS 410 requirements.
 - G&A for old contracts is absorbed using the pre-CAS cost of sales allocation base. Old contracts are those not subject to CAS 410 requirements.
- If the contractor established an inventory suspense account under Appendix A of CAS 410 and the account is \$5 million or more, the following limitations apply to progress payments:
 - Do not include G&A in progress payments until the value of work in process inventories under new contracts exceeds that under the old.
 - The amount of G&A eligible for progress payments under the contract shall be the contractor's pro rata share of G&A calculated in compliance with CAS 410.
 - Calculate the G&A dollars allocable to the CAS-covered contract using the rate calculated in compliance with CAS 410.
 - Reduce the G&A dollars allocated based on the percentage of G&A costs still allocated using the cost of sales allocation base. For example, \$119,000 in G&A expense would be included in progress payments under a CAS-covered contract using the CAS-compliant rate. However, 40 percent of all G&A dollars are still being allocated to other contracts using the pre-CAS rate, so the progress-payment amount must be reduced by 40 percent. The amount allocated to the contract must be reduced by \$47,600 ($\$119,000 \times .40$).
 - Coordinate your analysis with the cognizant Government auditor to assure proper progress payment calculation.

Liquidation Rate Adjustment for G&A Expense Limitation ([FAR 32.503-8](#) and [CFR Title 48 Chapter 99, 9904.410](#)).

Calculate the percentage of contract price that cannot be included as progress payments under the CAS-compliant contract. Divide the dollars that cannot be allowed as progress payments under the CAS-compliant contract by the contract price. For example, if the contract price for the above example is \$1,100,000 the percentage would be 4.33 percent ($\$47,600/\$1,100,000$).

- Calculate the adjustment in the liquidation rate that would permit the contractor to recover the G&A expense dollars not included in progress payments. For example, if the ordinary liquidation rate is 80 percent, the reduction for unbilled G&A would be 3.46 percent (4.33×80.00 percent).
- To calculate the adjusted liquidation rate, subtract the effect of the reduction from the ordinary rate. In the example above, the revised rate would be 76.54 percent (80.00 percent - 3.46 percent).
- Coordinate your analysis with the cognizant Government auditor to assure proper calculation of the revised liquidation rate.
- Situations to Consider the Alternate Method of Liquidation ([FAR 32.503-9\(a\)](#)). Use the ordinary method throughout the contract, unless the contracting officer adjusts the liquidation method. The alternate method permits the contractor to retain the earned profit element of the contract prices for completed items in the liquidation process.

- The contracting officer MAY reduce the liquidation rate (increasing contractor working capital) if ALL of the following requirements are met:

1. The contractor requests a reduction in rate.
2. The liquidation rate has not been reduced in the preceding 12 months.
3. The contract delivery schedule extends at least 18 months from the contract award date.
4. Actual cost data are available:
 - For products delivered, or
 - If no products have been delivered, for a performance period of at least 12 months
5. The reduced liquidation rate would result in the Government recouping under each invoice the full extent of the progress payments applicable to the costs allocable to that invoice.
6. The contractor would not be paid for more than the costs of items delivered and accepted (less allocable progress payments) and the earned profit on those items.
7. The unliquidated progress payments would not exceed the limit prescribed in Paragraph (a)(5) of the Progress Payments clause.
8. The parties agree on an appropriate rate.
9. The contractor agrees to certify annually, or more often if requested, that the alternate rate continues to meet the three liquidation requirements in 5, 6, and 7 above. The certificate must be accompanied by adequate supporting information.

- The contracting officer MUST adjust the liquidation rate in the following situations:

1. Increase the rate for both previous and subsequent transactions, if the contractor experiences a lower profit rate than the rate anticipated at the time the liquidation rate was associated with contract items already delivered, as well as subsequent progress payments.
2. Increase or decrease the rate in keeping with the successive changes to the contract price or target profit when:
 - The target profit rate is changed under a fixed-price incentive contract with successive targets, or
 - A redetermined price involves a change in the profit element under a contract with prospective price redetermination at stated intervals.

Minimum Alternate Liquidation Rate ([FAR 32.503-10](#) and [CFR Title 48 Chapter 99, 9904.410](#)).

The minimum liquidation rate is the amount of expected progress payments divided by the contract price. Written as an equation, the relationship would be:

$$\text{Minimum Liquidation Rate} = \frac{\text{Total Estimated Cost} \times \text{Progress Payment Rate}}{\text{Estimated Contract Price}}$$

Where:

Total Estimated Cost = Total estimated cost for the contract.

- When appropriate, adjust:
- As described above to exclude G&A that cannot be included in progress payments when the contractor is involved with the implementation of CAS 410.
- To include the estimated value of any work authorized but not yet priced. However, the adjusted cost must not exceed the price of all authorized work or the funds or the funds obligated for the contract.

Estimated Contract Price = The price of an FFP contract or the estimated price for other fixed-price contracts.

- When appropriate, adjust to include the estimated price of any work authorized but not yet priced and any projected economic adjustments. However the cost must not exceed the Government estimate of the price of all authorized work or the funds obligated for the contract.

For example: If the progress payment rate is 80 percent, the total estimated cost eligible for progress payments is \$10 million, and the estimated contract price is \$11 million, the rate would be calculated as follows:

$$\begin{aligned} \text{Minimum Liquidation Rate} &= \frac{\$10,000,000 \times 80\%}{\$11,000,000} \\ &= 72.8\% \end{aligned}$$

(Always round up to the next highest tenth of a percent. Rounding down would produce a rate below the minimum rate calculated.)

Assuming that you adopted the alternate liquidation rate calculated above in the thirteenth month of contract performance and contract costs and deliveries are the same as in the ordinary method calculations above, the payment pattern would be revised as shown in the table below. Note that the alternate liquidation rate substantially increases the total amount paid to the contractor prior to final delivery.

This increase in cash flow to the contractor is allowing the contractor to collect the realized profit on each delivered item as that item is accepted by the Government, rather than collecting all of the realized contract profit when the last item is accepted by the Government.

Progress Payment Liquidation									
Month	Monthly Contract Cost	Progress Payment Rate	Monthly Progress Payments	Price of Items Delivered	Liquidation Rate	Progress Payment Liquidation	Price of Delivered Items Less Liquidation	Total Paid	Unliquidated Progress Payment
1	\$100,000	80.0%	\$80,000		80.0%	\$0	\$0	\$80,000	\$80,000
2	\$250,000	80.0%	\$200,000		80.0%	\$0	\$0	\$280,000	\$280,000
3	\$250,000	80.0%	\$200,000		80.0%	\$0	\$0	\$480,000	\$480,000
4	\$400,000	80.0%	\$320,000		80.0%	\$0	\$0	\$800,000	\$800,000
5	\$550,000	80.0%	\$440,000		80.0%	\$0	\$0	\$1,240,000	\$1,240,000
6	\$600,000	80.0%	\$480,000		80.0%	\$0	\$0	\$1,720,000	\$1,720,000
7	\$700,000	80.0%	\$560,000		80.0%	\$0	\$0	\$2,280,000	\$2,280,000
8	\$650,000	80.0%	\$520,000		80.0%	\$0	\$0	\$2,800,000	\$2,800,000
9	\$725,000	80.0%	\$580,000		80.0%	\$0	\$0	\$3,380,000	\$3,380,000
10	\$850,000	80.0%	\$680,000		80.0%	\$0	\$0	\$4,060,000	\$4,060,000
11	\$600,000	80.0%	\$480,000		80.0%	\$0	\$0	\$4,540,000	\$4,540,000
12	\$950,000	80.0%	\$760,000	\$2,750,000	80.0%	\$2,200,000	\$550,000	\$5,850,000	\$3,100,000

Progress Payment Liquidation									
Month	Monthly Contract Cost	Progress Payment Rate	Monthly Progress Payments	Price of Items Delivered	Liquidation Rate	Progress Payment Liquidation	Price of Delivered Items Less Liquidation	Total Paid	Unliquidated Progress Payment
13	\$825,000	80.0%	\$660,000		72.8%	(\$198,000)	\$198,000	\$6,708,000	\$3,958,000
14	\$925,000	80.0%	\$740,000	\$2,750,000	72.8%	\$2,002,000	\$748,000	\$8,196,000	\$2,696,000
15	\$550,000	80.0%	\$440,000		72.8%	\$0	\$0	\$8,636,000	\$3,136,000
16	\$450,000	80.0%	\$360,000	\$2,750,000	72.8%	\$2,002,000	\$748,000	\$9,744,000	\$1,494,000
17	\$375,000	80.0%	\$300,000		72.8%	\$0	\$0	\$10,044,000	\$1,794,000
18	\$250,000	80.0%	\$200,000	\$2,750,000	*	\$1,994,000	\$756,000	\$11,000,000	\$0
Total	\$10,000,000		\$8,000,000	\$11,000,000		\$8,000,000	\$3,000,000		

* Remaining unliquidated progress payments.

Contract Modification ([FAR 32.503-9\(c\)](#)). Whenever the liquidation rate is changed, the contracting officer must issue a contract modification changing the liquidation rate in the Progress Payments clause. Adequate consideration for these modifications is included in the initial contract. The parties must promptly make the payment or liquidation required by the change.

9.7 Applying Financial Indicators To Subordination Agreement Need Decisions

Subordination Agreement. A subordination agreement is an agreement whereby a contractor's creditor subordinates its security interest in contractor-held property to the security interest held by the Government. In other words, the creditor agrees to relinquish its claim to any property properly claimed by the Government under the agreement.

For example: A creditor has a lien on a contractor's inventory. Before approving progress payments for material acquisition, the contracting officer insists on assurances that the creditor will not claim the material as part of the contractor's inventory subject to the lien. The contractor obtains a formal written agreement from the creditor, whereby the creditor agrees to subordinate its claim to the inventory.

Possible Situations for Agreement ([FAR 32.304-6\(e\)](#), [FAR 32.409-3\(d\)\(3\)](#), and [FAR 32.501-5\(b\)](#)).

Consider requiring the contractor to provide appropriate subordination agreement(s) when necessary to protect the Government's rights when the Government:

- Guarantees a contractor loan from a private financial institution;
- Makes agency-approved advance payments; or
- Makes progress payments based on costs.

Points to Consider in Agreement Decision. Determine the need for a subordination agreement after consultation with your organization's legal counsel. As you make your determination, consider:

- Other available financial guarantees;
- The contractor's present financial position and projections for the future;
- The type of contract and the nature of the work being done under the contract;
- The contractor's production capabilities and projections for contract completion of the contract in the required time and in accordance with contract requirements; and
- The adequacy of the contractor's accounting system (e.g., its ability to segregate Government inventory from the general inventory).

Agreement Timing. Obtain the subordination agreement as soon as you identify the need for the agreement. Do not delay until the contractor's financial problems imperil contract performance. It is more difficult to protect the Government's interest when the contractor is already in financial difficulty.

Obtaining a Subordination Agreement. Do not attempt to obtain a subordination agreement directly from the contractor's creditor. Require the contractor to obtain the agreement.

Remember that the Government contract is with the contractor, not the creditor.

- If you believe that the creditor might be unnecessarily alarmed by a Government request for subordination, consider meeting with both the creditor and the contractor to clarify the situation.
- If the creditor refuses to execute an agreement, that may indicate that the contractor has serious financial problems. Inquire into the reasons surrounding the creditor's refusal, to determine if the contractor's financial position warrants more drastic action (e.g., a finding of nonresponsibility for a proposed contractor or the suspension of progress payments for an existing contractor).

Security in Support of a Subordination Agreement ([FAR 52.232-23](#)). Normally, a creditor will require some form of security before agreeing to the subordination agreement. Assure that any security offered by the contractor complies with the terms of the contract.

For example: One common form of security is an assignment of claims. Under an assignment of claims, the contractor transfers to a bank, trust company, or other financing institution, its right to payment for contract performance. However, the Assignment of Claims clause establishes restrictions for contractor assignment of claims.

Subordination Agreement Format. The FAR does not prescribe a format for a subordination agreement. The example on the next page is the body of an agreement format developed by the Defense Contract

Management Agency for corporate creditors and property associated with progress payments.

- Consult with your legal counsel to assure that any format you use meets the needs of your particular contracting situation.
- Assure that the person signing the agreement has the authority to bind the creditor to such an agreement.

SUBORDINATION AGREEMENT

_____, a corporation of _____, hereinafter called the Debtor, has entered into Contract Numbers _____ with the United States of America, hereinafter called the Government, for the furnishing of defense supplies and expects to enter into future contracts with the Government for the furnishing of defense supplies . Said contracts include the Progress Payments clause. Pursuant thereto, the Debtor has requested the Government to provide progress payments, which request the Government is willing to grant in accordance with the terms of said clause and upon condition that _____, hereinafter referred to as the Creditor, agrees to subordinate to the rights of the Government under or arising out of said contracts and future contracts, any and all present and future recorded or perfectible liens under the Uniform Commercial Code or other liens or interest of the Creditor with respect to any parts, material, inventory or work in process, and other property to which the Government has title pursuant to paragraph (d) of said Progress Payments clause . In consideration of the making of progress payments to the Debtor by the Government, the undersigns agrees as follows:

Any and all present and future recorded or perfectible liens under the Uniform Commercial Code or other liens or interest of the undersigned Creditor with respect to any of the parts, material, inventory or work in process, and other property to which the Government has title pursuant to paragraph (d) of said Progress Payments clause, are fully subordinated to the rights and interests of the Government under or arising out of the aforementioned contracts and future contracts.

If any person, firm, corporation or entity other than the Debtor becomes obligated to perform said contracts or any part thereof, whether by operation of law or otherwise, any and all present and future rights of the Creditor shall remain fully subordinated to the rights of the Government.

The Subordination Agreement shall not be affected by any action extending the time of performance of said contracts or by making of any amendment or modification authorized by the terms of said contracts.

The Creditor hereby certifies that it has not given or executed any prior Subordination Agreement with respect to its claims against the Debtor except as follows: _____.

The Creditor hereby agrees to direct the Debtor (a) to mark its records in accordance with this Subordination Agreement and (b) to confirm receipt of notice by signing in the place indicated below.

This Agreement shall inure to the benefit of and may be enforced by the United States.