CONTRACT TYPES

1. INTRODUCTION. One of the most important aspects of any acquisition is the selection of the most appropriate contract type. The contracting officer has primary responsibility for making this selection and must see that the provisions of every contract adequately protect the Government's interests and comply with acquisition regulations. However, other Government personnel must support the contracting officer, especially in areas that require specialized technical expertise. The nature of the requirement, as established and defined by the requiring activity, directly affects the type of contract that will be selected to fulfill the requirement. Therefore, all personnel involved in the acquisition process should have knowledge of the contract types available for use.

2. OBJECTIVES. After completion of this block of instruction, the student should be able to:

a. Recognize the roles that risk and uncertainty play in selecting a contract type.

b. Compare the Fixed-Price and Cost-Reimbursement families of contract types, emphasizing when each is appropriate for use.

c. Compare the characteristics and use of the following specific contract types: Firm-Fixed-Price (FFP), Fixed-Price With Economic Price Adjustment (FP/EPA), Cost-Plus-Fixed-Fee (CPFF), and Cost-Plus-Award-Fee (CPAF).

3. RISK AND UNCERTAINTY IN THE SELECTION OF CONTRACT TYPES.

a. DoD has a variety of needs that require that there be a number of contract types available to meet these requirements. Contract types differ principally in the amount of responsibility or **risk** assumed by the contractor and the amount and/or type of incentive provided for achieving certain goals. In the firm-fixed-price contract, the contractor assumes full risk for performance of the work at the initially agreed upon price, regardless of costs. At the same time, the contractor keeps 100 percent of any cost reductions. Thus this type of contract provides a great incentive to perform efficiently. In contrast, under a cost-plus-fixed-fee contract, the contractor is reimbursed for all allowable costs and also receives a set fee, thereby incurring minimal risk. This contractor has little reason to try to control costs; therefore, there is almost no incentive to reduce costs below the estimated amount.

b. As a system proceeds through the life cycle, the specifications for the item being researched, developed, or produced become more detailed, with an accompanying increase in the **certainty** of cost estimates. This cost confidence should be accompanied by an increase in the contractor's willingness to assume cost risk. At the production end, there is high cost certainty, and the firm-fixed-price or fixed-price with economic price adjustment type contract is normally used.

c. DoD policy is to have contractors bear an equitable share of contract cost risk and to compensate them for the assumption of that risk. A contractor's cost risk under a cost reimbursement contract is usually minimal. However, as acquisitions progress from basic research through development to production and on into operations and support supply contracts, the contractor will assume more and more risk as he takes on more responsibility for performance.

d. Tables 1 and 2 illustrate the relationship of various contract types with the life cycle phases.

CONTRACT TYPES IN THE ACQUISITION LIFE CYCLE

CED	PDRR	EMD	P, F/D	OS
CPFF	CPFF	CPIF	FPI	FFP
CPIF	CPIF	FPI	FFP	FPEPA
C	CPAF	CPAF	FPEPA	
CS				

Table 1

MAX ⇒⇒⇒⇒ GOVERNMENT ASSUMPTION OF RISK ⇒⇒⇒⇒ MIN
MIN ⇒⇒⇒⇒ CONTRACTOR ASSUMPTION OF RISK ⇒⇒⇒⇒ MAX

C	Cost
CS	Cost-Sharing
CPFF	Cost-Plus-Fixed-Fee
CPIF	Cost-Plus-Incentive-Fee
CPAF	Cost-Plus-Award-Fee
FPI	Fixed-Price Incentive
FFP	Firm-Fixed-Price
FPEPA	Fixed-Price with Economic Price Adjustment

Type of Contract	Type of Effort
Cost, Cost Sharing, CPFF	Basic Research
Cost, Cost Sharing, CPFF	Applied Research
Cost, Cost Sharing, CPFF	Exploratory Research
CPFF, CPAF	Advanced Development
CPFF, CPAF, CPIF	Engineering Development
CPIF, CPAF, FPI	Operational System Development
FPI, FFP	First Production
FPI, FFP, FPEPA	Follow-on Production
FFP	Supply

Table 2

4. CATEGORIES OF CONTRACT TYPES. Government contracts are generally classified according to the type of pricing arrangement used. There are two major categories, or families, of contract types: **cost-reimbursement** and **fixed-price**. Pages 8 and 9 compare the cost-reimbursement and fixed-price categories.

5. CHARACTERISTICS OF COST-REIMBURSEMENT-CONTRACTS.

a. As the name implies, the Government pays all allowable contract costs when contracts in this category are used. These contracts are primarily used when there is no valid basis for estimating performance costs with sufficient confidence to permit use of a fixed-price contract. Negotiations establish an **estimated cost** that will be the basis for obligating funds and will act as a ceiling that the contractor may not exceed without risk. This means the contractor is not to continue performance or otherwise incur expenses in excess of the established cost estimate unless and until the Government notifies him that the estimate has been increased in amount.

b. The contractor will usually receive a **fee**, also established through negotiation. The term profit is not used in cost-reimbursement contracts. Instead of earning a profit, contractors are paid a fee. Contracts in which the fee is tied directly to costs—i.e., the fee increases as costs are incurred—are forbidden by statute. This illegal type is a Cost-Plus-Percentage of Cost (CPPC) contract.

c. Cost-reimbursement contracts impose an administrative burden on both the Government and the contractor, requiring careful surveillance and auditing of costs. These contracts are appropriate for research and development because of the technical and price uncertainty associated with that kind of effort.

d. The following **characteristics** are generally true of **cost-reimbursement** contracts:

(1) Contractors are reimbursed for allowable costs.

(2) The contract normally provides for a fee, except for cost and cost sharing contracts.

(3) There is an administrative cost ceiling.

(4) The contractor only promises "best efforts" versus guaranteeing to perform.

(5) These contracts are always negotiated.

6. COST-PLUS-FIXED-FEE (CPFF).

a. When this type of contract is used, the Government reimburses the contractor for his **allowable costs** and pays a fee whose dollar amount was fixed during negotiations. This **fee does not vary with actual cost**, including cost overruns, i.e., costs in excess of the original estimated cost of the contract. The fee can change, however, if the work itself changes. If additional work is required, the additional costs and a commensurate increase in fee will be negotiated. Similarly, a

decrease in fee can result if the contract work is decreased, a termination occurs, or if the cost ceiling is reached prior to completion of the work and the Government chooses not to continue to fund the contract. This form of pricing arrangement is usually used for research, preliminary exploration, study contracts or any other situations where the parties cannot reasonably predict the level of effort or the parameters of investigation. The CPFF contract is used regularly in the first two phases of the life cycle model where **technical risk is moderate to high**.

b. **Statutory limitations** provide that the fee on CPFF contracts cannot exceed 10 percent of the estimated cost of the contract, exclusive of the fee, for production or supply contracts. A maximum fee of 15 percent is permitted on contracts for experimental or research work.

7. COST-PLUS-AWARD-FEE (CPAF).

a. The CPAF contract provides an incentive to a contractor when the work to be performed is such that it is neither feasible nor effective to devise predetermined objective incentive targets applicable to cost, technical performance, or schedule. This contract type is designed to **motivate the contractor toward exceptional performance**. It provides the Government with the flexibility to evaluate both actual performance and the conditions under which it was achieved.

b. CPAF arrangements are used for a variety of requirements, including professional services and operation of Government-owned facilities. This pricing arrangement is also used with other contract types to provide a possible reward to the contractor for specific tasks or requirements, such as timely responses, management involvement in cost control efforts, excellence in quality, or acquisition streamlining efforts. CPAF contracts may be used anywhere in the life cycle model and are not confined to weapon systems acquisitions.

c. As with other cost reimbursement contracts, the CPAF contractor is paid his **allowable costs**. However, the fee structure is in two parts. The **base fee** is fixed and does not vary with performance. The limit on the base fee is a dollar amount no greater than three percent of the estimated costs. The **award portion** of the fee is in an amount sufficient to provide motivation for excellence in contract performance in areas such as quality, timeliness, ingenuity, and cost effectiveness. The amount of the award paid to the contractor is determined through periodic **subjective evaluation** by an evaluation board in which the contractor's performance is measured against the criteria established in the contract. The Government's decision as to the amount of award is discussed with the contractor.

8. CHARACTERISTICS OF FIXED- PRICE CONTRACTS.

a. Fixed-price contracts require the contractor to deliver the supplies or perform the services on time and within the price restraints of the contract. Regardless of what actual costs the contractor may incur, the fixed-price contract will either not change at all, or will fluctuate upward only to a predetermined limit. These contracts place most of the burden of risk on the contractor. Therefore, contractors will not be interested in fixed-price contracts

unless the uncertainties associated with performance are at a manageable and predictable level. On the other hand, savings that the contractor is able to achieve through efficiencies, unexpected downward turns in market prices, and other circumstances all accrue to the contractor. The Government is not able to reduce the fixed-price of the contract solely because the contractor did not spend as much as he had originally estimated.

b. The following **characteristics** are generally true of **fixed-price** contracts:

(1) The contract either has a firm-fixed price or a price ceiling.

(2) There are no statutory limits on profit.

(3) The contractor assumes a greater proportion of risk and guarantees to perform.

c. Firm-Fixed-Price and Fixed Price with Economic Price Adjustment contracts are the only two contract types which can be used with sealed bidding.

9. FIRM-FIXED-PRICE (FFP).

a. A FFP contract provides for a price that the Government will pay upon the delivery and acceptance of items or services. Unless the requirements are changed by modification, this **price will remain firm** for the life of the contract. The contractor **must perform** for this price, regardless of his actual costs, or be liable for breach of contract. FFP contracts most closely reflect accepted industrial practices since the c**ontractor assumes all risks** of performance. Contractors are willing to assume all risks because they perceive those risks to be minimal.

b. Profit depends on the contractor's ability to produce or perform and to control costs; profit will be higher if the contractor produces efficiently, lower if costs are high. A FFP contract thus gives the contractor the maximum incentive to avoid waste and to devise production and subcontracting methods that will save labor and materials.

c. This type of contract is the simplest to administer by both the Government and the contractor. A FFP contract is normally used when there is **little or no technical uncertainty** and prices can be estimated with confidence. Therefore, a FFP contract is eminently suited for commercial/ commercial-type products or for acquiring other supplies or services on the basis of reasonably definite functional/performance or design specifications.

10. FIXED-PRICE WITH ECONOMIC PRICE ADJUSTMENT (FP/EPA). Fixed-price contracts that last more than six months can include special clauses allowing for adjustment of the price to **protect the Government and the contractor against significant economic fluctuations** in labor or material costs, or to provide for price adjustments in the event of change in the contractor's established prices. Use of this type of contract is appropriate when serious doubt exists as to the stability of market or labor conditions during an extended period of contract performance and when contingencies that would otherwise be included in the contract price can be identified and covered separately by a price adjustment clause. Adjustment will be **either**

upward or downward when those contingencies occur. Adjustments based on established prices are restricted to industry-wide contingencies, while adjustments based on labor and material costs are either limited to specific types of labor and material, or are tied to indices. Economic price adjustments have three general variations, two of which can be used with sealed bidding.

11. SUMMARY. The single most important factor in determining contract type is risk - technical, production or both. When significant risk is present, it is normally difficult to award a FFP contract because neither party will be able to agree on a price that the other thinks is fair and reasonable. Therefore, DoD has a wide spectrum of contract types that may be used in order to reach agreement. These types fall into two principal categories: cost-reimbursement and fixed-price. Other types are available for specialized acquisitions.

Cost-Plus-Fixed-Fee (CPFF)

Table 1. Contract Award

Estimated cost	$15,000,000
Fixed fee	900,000
Estimated cost plus fixed fee	$15,900,000

Figure 1. CPFF Arrangement.

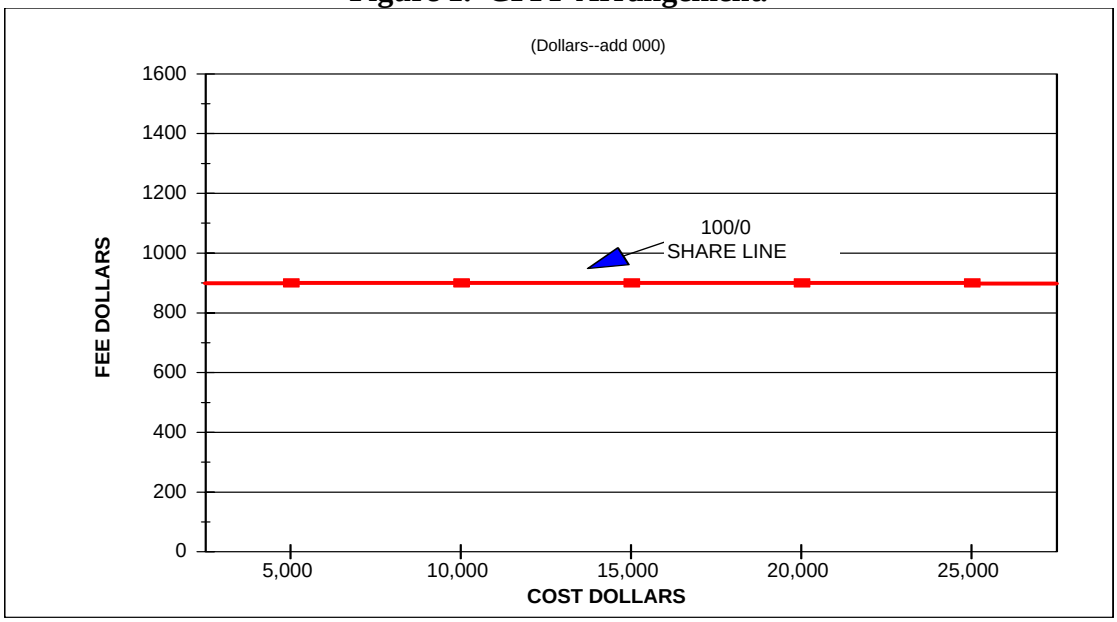


Table 2.
Assume that final costs are $12,000,000

Final cost	$12,000,000
Fixed fee	900,000
Final cost plus fixed fee	$12,900,000

Despite performance at $3,000,000 less than originally estimated (a cost underrun), the contractor receives the same fee fixed initially by the terms of the contract.

Table 3.
Now assume that final costs are $20,000,000

Final cost	$20,000,000
Fixed fee	900,000
Final cost plus fixed fee	$20,900,000

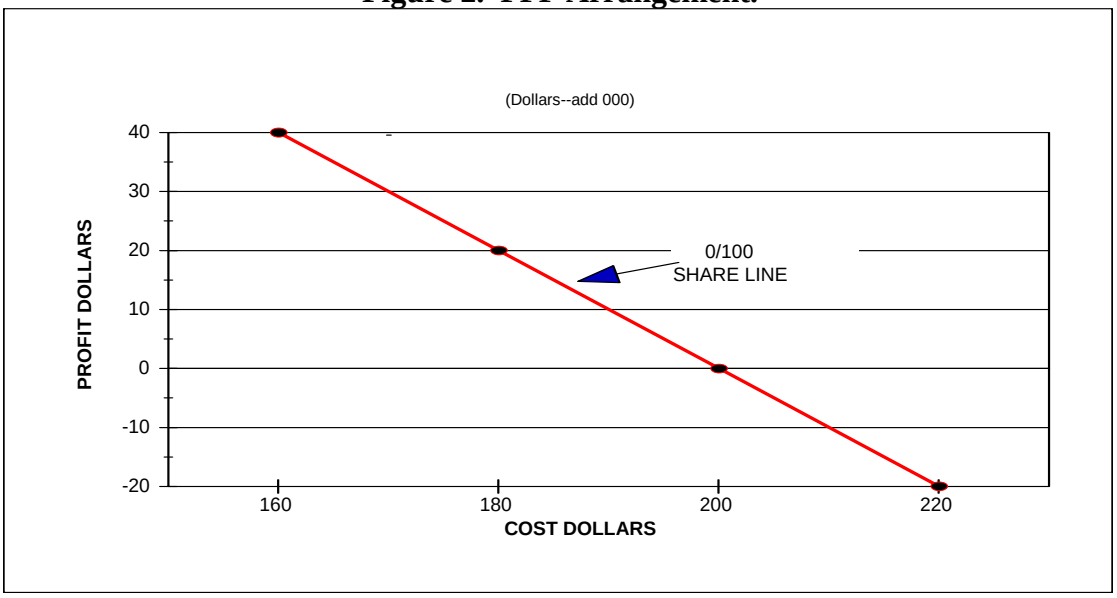
Even with final costs $5,000,000 more than originally estimated (a cost overrun), the contractor receives the same fee fixed initially by the contract terms.

Firm-Fixed-Price (FFP)

Table 4

Contract price	$200,000	$200,000	$200,000
Final cost	185,000	170,000	220,000
Profit realized	$ 15,000	$ 30,000	$(20,000)

Figure 2. FFP Arrangement.



Regardless of whether the contractor's final cost is higher or lower than originally planned, the Government will pay only the contract price of $200,000.

Primary Differences between Fixed-Price and Cost-Reimbursement Contracts

	Fixed-Price	Cost-Reimbursement
What we buy	Standard items (production/O&S)	New items (R&D)
Level of uncertainty	Low and predictable	Medium or high; many unknowns
Contract Requirements	Mandatory compliance and delivery	Best efforts
Changes	Few	Many
Rewards	No limitation on profit	Statutory fee limitations
Financing	Upon delivery, or progress payments	As costs are incurred

Primary Differences between Fixed-Price and Cost-Reimbursement Contracts

	Fixed-Price	Cost-Reimbursement
Price	Firm/Ceiling price	Estimated costs plus fee
Risk to contractor	Maximum	Minimum
Contractor motivation for cost control	High	Low
Accounting system required	Relatively simple	Relatively complex
Level of contract administration	Relatively easy	Relatively difficult

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