

United States Government Accountability Office

Report to the Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate

December 2005

DEFENSE ACQUISITIONS

DOD Has Paid Billions in Award and Incentive Fees Regardless of Acquisition Outcomes





Highlights of GAO-06-66, a report to the Subcommittee on Readiness and Management Support, Committee on Armed Services, U.S. Senate

Why GAO Did This Study

Collectively, the Department of Defense (DOD) gives its contractors the opportunity to earn billions of dollars through monetary incentives—known as award fees and incentive fees. These fees are intended to motivate excellent contractor performance in areas deemed critical to an acquisition program's success, with award fees being appropriate when contracting and program officials cannot devise objective incentive fee targets related to cost, technical performance, or schedule.

GAO was asked to determine whether award and incentive fees have been used effectively as a tool for achieving DOD's desired acquisition outcomes. To do this, GAO selected a probability sample of 93 contracts from the study population of 597 DOD award- and incentive-fee contracts that were active and had at least one contract action valued at \$10 million or more from fiscal year 1999 through 2003.

What GAO Recommends

GAO recommends that DOD improve its use of fees by specifically tying them to acquisition outcomes in all new award- and incentive-fee contracts, maximizing contractors' motivation to perform, and collecting data to evaluate the effectiveness of fees. In its comments on a draft of this report, DOD concurred or partially concurred with all of the recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-06-66.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Ann Calvaresi-Barr, (202) 512-4841, calvaresibarra@gao.gov.

DEFENSE ACQUISITIONS

DOD Has Paid Billions in Award and Incentive Fees Regardless of Acquisition Outcomes

What GAO Found

The power of monetary incentives to motivate excellent contractor performance and improve acquisition outcomes is diluted by the way DOD structures and implements incentives. While there were two examples in our sample in which the Missile Defense Agency attempted to link award fees directly to desired acquisition outcomes, such as demonstrating a capability within an established schedule, award fees are generally not linked to acquisition outcomes. As a result, DOD has paid out an estimated \$8 billion in award fees to date on the contracts in our study population, regardless of outcomes. The following selected programs show this disconnect.

Program Performance and Award-Fee Payments on Selected DOD Development Programs				
Acquisition outcomes	Comanche reconnaissance attack helicopter	F/A-22 Raptor tactical fighter aircraft	Joint Strike Fighter tactical fighter aircraft	Space-Based Infrared System High
Research and development cost increase over baseline	\$3.7 billion 41.2 percent	\$10.2 billion 47.3 percent	\$10.1 billion 30.1 percent	\$3.7 billion 99.5 percent
Acquisition cycle time increase over baseline	33 months 14.8 percent	27 months 13.3 percent	11 months 5.9 percent	More than 12 months
Percentage and total award fee paid to prime systems contractor (adjusted for rollover) ^a	85 percent \$202.5 million paid through 2004	91 percent \$848.7 million	100 percent \$494.0 million	74 percent \$160.4 million

Sources: DOD submissions to GAO, contract documentation, and GAO-05-301 (data); GAO (analysis).

^aWhen calculating the percentage of award fee paid (i.e., percentage of award fee paid = total fee paid to date / (total fee pool – remaining fee pool)), we included rolled-over fees in the remaining fee pool when those fees were still available to be earned in future evaluation periods.

When DOD programs did not pay all of the available award fee, DOD gave contractors on an estimated 52 percent of award-fee contracts at least a second opportunity to earn an estimated \$669 million in initially unearned or deferred fees. GAO believes these practices, along with paying significant amounts of fee for "acceptable, average, expected, good, or satisfactory" performance, undermine the effectiveness of fees as a motivational tool and marginalize their use in holding contractors accountable for acquisition outcomes. They also serve to waste taxpayer funds. Incentive fees provide a clearer link to acquisition outcomes; however, a majority of the 27 contracts with cost incentives that GAO reviewed failed or are projected to fail to complete the acquisition at or below the target price.

Despite paying billions in fees, DOD has little evidence to support its belief that these fees improve contractor performance and acquisition outcomes. The department has not compiled data, conducted analyses, or developed performance measures to evaluate the effectiveness of award and incentive fees. In addition, when contracts have utilized different fee strategies to focus the contractor's attention on specific acquisition outcomes, contracting officials have stated that DOD has few mechanisms to share lessons learned and innovative practices outside the local level.

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Abbreviations

DOD	Department of Defense
FAR	Federal Acquisition Regulation

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United States Government Accountability Office Washington, DC 20548

December 19, 2005

The Honorable John Ensign Chairman The Honorable Daniel K. Akaka Ranking Minority Member Subcommittee on Readiness and Management Support Committee on Armed Services United States Senate

The Department of Defense (DOD) contracts with various companies, institutions, and organizations to provide products and services that include everything from spare parts for aircraft to ship maintenance to the development of major weapon systems. With federal discretionary spending, including defense spending, facing serious budget pressures in the coming years, fiscal realities demand that DOD maximize its return on investment for these acquisitions. Each of these acquisitions poses unique risks and challenges for DOD and its contractors. In an effort to encourage defense contractors to perform in an innovative, efficient, and effective way in areas deemed important to an acquisition's success, DOD gives its contractors the opportunity to collectively earn billions of dollars through monetary incentives known as award fees and incentive fees. Award fees and incentive fees can be used alone or together in contracts, with award fees being appropriate when contracting and program officials cannot devise predetermined objective incentive-fee targets applicable to cost, technical performance, or schedule.

Award and incentive fees operate in an environment where actions taken by both DOD and the contractor contribute to acquisition outcomes. Prior GAO work has shown how fundamental acquisition problems within DOD, especially a lack of key product knowledge at critical junctures, have contributed to such issues as cost increases, schedule delays, and performance shortfalls in weapons programs. See appendix V for a list of GAO reports on weapon systems acquisition. These overarching problems, along with the selection of an unqualified supplier or inadequate funding, among other reasons, can negatively affect acquisition outcomes. In this context, DOD has looked to monetary incentives as one of the ways it can promote its desired acquisition outcomes. However, senior DOD and service acquisition officials have raised concerns about how effectively these fees are being used because DOD programs have paid contractors large amounts of fee on acquisitions that are falling behind schedule, overrunning costs, and experiencing significant technical problems. Because of these concerns, you requested that we determine whether award fees and incentive fees have been used effectively as a management tool for achieving DOD's desired acquisition outcomes.

To address this objective, we selected a probability sample of 93 contracts from the study population of 597 DOD award-fee and incentive-fee contracts that were active between fiscal years 1999 and 2003 and had at least one contract action coded as cost-plus-award-fee, cost-plusincentive-fee, fixed-price-award-fee, or fixed-price incentive valued at \$10 million or more during that time. Unless otherwise noted, the estimates in this report pertain to (1) this population of award- and incentive-fee contracts, (2) the subpopulation of award-fee contracts, or (3) the evaluation periods associated with contracts described in (1) or (2) that had been completed at the time of our review. Estimates of total award fees earned and total award fees that contractors received at least two chances to earn are based on all evaluation periods held from the inception of our sample contracts through our data collection phase, not just those from fiscal years 1999 through 2003. Because the estimates in this report are derived from a probability sample, they are subject to sampling error. All percentage estimates from our review have margins of error not exceeding plus or minus 10 percentage points unless otherwise noted. All numerical estimates other than percentages (such as totals and ratios) have margins of error not exceeding plus or minus 25 percent of the value of those estimates. See appendix I for more details about the probability sample and associated sampling error. Fifty-two contracts in our sample contained only award-fee provisions; 27 contracts contained only incentive-fee provisions; and 14 included both award- and incentivefee provisions. The types of products or services associated with contracts in our sample include research and development projects, aircraft and aircraft-related procurements, ship construction, and non-research-anddevelopment services, among others. For each of the 93 contracts in our sample, we interviewed contracting and program officials about the development, implementation, and effectiveness of the award- and incentive-fee structures using a standard questionnaire and analyzed their

responses. We also reviewed contract documentation related to these areas and examined fee payments in the context of program performance. Program performance was assessed using GAO's body of work on DOD weapon systems acquisitions.¹ Finally, we interviewed acquisition policy officials and consulted recent policy initiatives, reports, and audits related to DOD's use of award and incentive fees. See appendix I for additional details on scope and methodology. We performed our review from February 2004 to November 2005 in accordance with generally accepted government auditing standards.

Results in Brief

Award fees have generally not been effective at helping DOD achieve its desired acquisition outcomes. DOD programs engage in practices that undermine efforts to motivate contractor performance and that do not hold contractors accountable for achieving desired acquisition outcomes, such as meeting cost and schedule goals and delivering desired capabilities. DOD programs frequently pay most of the available award fee for what they describe as improved contractor performance, regardless of whether acquisition outcomes fell far short of DOD's expectations, were satisfactory, or exceeded expectations. Based on our sample, we estimate that for the study population of DOD contracts, the median percentage of available award fee paid to date (adjusted for fees that were deferred) was 90 percent, representing an estimated \$8 billion in award fees. DOD programs also provided about half of its contractors multiple opportunities to earn fees that the contractors did not earn when the fees were first made available. Based on our sample, we estimate that, to date, contractors for DOD contracts in our study population received at least two chances to earn \$669 million in fees that were not initially earned or deferred. In addition, DOD programs regularly paid contractors a significant portion of the available fee for what award-fee plans describe as "acceptable, average, expected, good, or satisfactory" performance when federal acquisition regulations and military service guidance state that the purpose of these fees is to motivate excellent performance. These practices reduce the effectiveness of award fees as motivators of performance and compromise the integrity of the fee process. DOD does

¹ GAO, Defense Acquisitions: Assessments of Selected Major Weapon Programs, GAO-05-301 (Washington, D.C.: Mar. 31, 2005).

not define contractor performance in terms of acquisition outcomes. Rather than focusing on acquisition outcomes, such as delivering a fielded capability within established cost and schedule baselines, DOD often places emphasis on such things as the responsiveness of contractor management to feedback from DOD officials, quality of contractor proposals, or timeliness of contract data requirements. Some programs, most notably the Missile Defense Agency's Airborne Laser program, have structured fees to focus on acquisition outcomes, such as successfully demonstrating the system, which can help ensure that fee payments are more representative of program results. Incentive-fee contracts link contractor performance to acquisition outcomes more explicitly; however, about half of the 27 incentive-fee contracts that we reviewed failed or are projected to fail to meet a key measure of program success—completing the acquisition at or below the target price. In the one case in which significant savings were realized through the successful use of an incentive fee, program officials were able to leverage the knowledge gained about program costs on a previous contract. However, when contracts have identified seemingly effective award- and incentive-fee strategies, contracting officials have stated that DOD has few mechanisms to share lessons learned and innovative practices outside the local level.

The effectiveness of award and incentive fees as a management tool has also been limited by DOD's failure to examine the basis for their use, assess how well they are working, and account for various factors that arise in the complex acquisition environment. Although DOD has paid billions in fees over time, the department has little evidence to support its contention that the use of award and incentive fees results in the intended effect on contractor performance and acquisition outcomes. While DOD officials have told us that they believe these fees improve contractor performance and program outcomes, DOD has not conducted overall evaluations or compiled data on the effectiveness of award and incentive fees. In addition, DOD has not developed performance measures to evaluate whether contracts utilizing these fees actually produce better outcomes than other contract types. Research on incentive fees by GAO, Harvard University, and the RAND Corporation going back decades has concluded that these types of fees do not consistently motivate contractors to control cost. Other research by Air Force personnel has shown that award fees are not always implemented in a way that is consistent with the intent of improving contractor performance.

To strengthen the link between monetary incentives and acquisition outcomes and by extension increase the accountability of DOD programs for fees paid and of contractors for results achieved, we recommend that the Secretary of Defense direct the Undersecretary of Defense for Acquisition, Technology, and Logistics to take the following seven actions. DOD can immediately improve its use of award fees on all new contracts by (1) instructing the military services to move toward more outcomebased award-fee criteria that are both achievable and promote accountability for acquisition outcomes; (2) ensuring that award-fee structures are motivating excellent contractor performance by only paying award fees for above satisfactory performance; and (3) requiring the appropriate approving officials to review new contracts to make sure these actions are being taken. DOD can improve its use of award fees on all existing contracts by (4) issuing DOD guidance on when rollover is appropriate. In the longer term, DOD can improve its use of award and incentive fees by (5) developing a mechanism for capturing award- and incentive-fee data within existing data systems, such as the Defense Acquisition Management Information Retrieval system; (6) developing performance measures to evaluate the effectiveness of award and incentive fees as a tool for improving contractor performance and achieving desired program outcomes; and (7) developing a mechanism to share proven incentive strategies for the acquisition of different types of products and services with contracting and program officials across DOD.

DOD's Office of Defense Procurement and Acquisition Policy provided written comments on a draft of this report. In its comments, DOD concurred with three of our seven recommendations—moving toward more outcome-based award-fee criteria, issuing guidance on rollover, and developing a mechanism to share proven incentive strategies—and agreed to address them in a policy memorandum and communications plan that it indicated will be issued on March 31, 2006. DOD partially concurred with four of our recommendations-only paying award fees for above satisfactory performance, requiring the appropriate officials to make sure these recommendations are implemented in new contracts, collecting award- and incentive-fee data, and developing performance measures to evaluate the effectiveness of award and incentive fees in improving acquisition outcomes. Concerning our recommendation related to the payment of award fees for satisfactory performance, DOD stated that it was both fair and reasonable to pay a portion of the award fee for this level of performance, but agreed that the preponderance of fee should be

paid for excellent performance and that it would reinforce existing policies in its March memorandum. We continue to believe that award fees should be primarily reserved for above satisfactory performance, which as pointed out in this report is not the current practice for most contracts. On the remaining three recommendations, DOD indicated that it would conduct a study to determine the appropriate actions to address these recommendations. DOD plans to complete the study by June 1, 2006. While this study may provide additional insights, we encourage DOD to use it as a mechanism for identifying the specific steps the department will take to fully address our recommendations, not to determine whether the department will take action. Between fiscal years 1999 through 2003, the department obligated \$157 billion through award- and incentive-fee contracts and used these contracts on some of its largest weapons programs. Given the dollars involved, DOD needs to collect data and develop performance measures on the use of award and incentive fees to help it effectively manage these contracts and assure its resources are well-spent. DOD's comments are reprinted in their entirety in appendix II of this report.

Background

Federal agencies, including DOD, can choose among numerous contract types to acquire products and services. One of the characteristics that varies across contract types is the amount and nature of the fee that agencies offer to the contractor for achieving or exceeding specified objectives or goals. Of all the contract types available, only award- and incentive-fee contracts allow an agency to adjust the amount of fee paid to contractors based on the contractor's performance.² Typically, award-fee contracts emphasize multiple aspects of contractor performance in a wide variety of areas, such as quality, timeliness, technical ingenuity, and cost-effective management. Incentive-fee contracts usually focus on cost control, although they can also be used to motivate contractors to achieve specific delivery targets or performance goals in areas such as missile range, aircraft speed, engine thrust, or vehicle maneuverability.

² Other contract types do not provide this same level of control over fees and profits. The two most prevalent DOD contract types (based on the number of contract actions) are firm-fixed-price and cost-plus-fixed-fee. Under firm-fixed-price contracts, DOD and the contractor agree on a price and the contractor assumes full responsibility for all costs and the resulting profit or loss. Under cost-plus-fixed-fee contracts, the contractor receives a fee that was negotiated and fixed at the inception of the contract.

Regardless of differences between award- and incentive-fee contracts, federal acquisition regulations state that these contracts should be used to achieve specific acquisition objectives, such as delivering products and services on time or within cost goals and with the promised capabilities. For award-fee contracts, the assumption underlying the regulation is that the likelihood of meeting these acquisition objectives will be enhanced by using a contract that effectively motivates the contractor toward exceptional performance. The reason or basis for selecting an award- or incentive-fee contract can vary, depending on the type of work a contractor is expected to perform. The acquisition environment, including the knowledge DOD has prior to starting an acquisition program, the adequacy of resources, and the soundness of acquisition practices, can also be a critical factor that affects how well contractor performance translates into acquisition outcomes.

Award-Fee Contracts

The development and administration of award-fee contracts involve substantially more effort over the life of a contract than incentive-fee contracts.³ For award-fee contracts, DOD personnel (usually members of an award-fee evaluation board⁴) conduct periodic—typically semiannual evaluations of the contractor's performance against specified criteria in an award-fee plan and recommend the amount of fee to be paid.⁵ Because award fees are intended to motivate contractor performance in areas that are susceptible to judgmental and qualitative measurement and evaluation (e.g., technical, logistics support, cost, and schedule), these criteria and evaluations tend to be subjective.⁶ After receiving the recommendation of

⁵ Award-fee contracts are intended to be flexible, so award-fee plans allow contracting and program officials to change fee criteria and the weight given to each criterion from evaluation period to evaluation period.

⁶ The Navy Award Fee Guide suggests that objective measures also be utilized, to the maximum extent possible, to support the subjective evaluation of the contractor's performance.

³ The Federal Acquisition Regulation (FAR) requires that the expected benefits of using an award-fee contract must exceed the additional administrative effort and cost involved (FAR Part 16.404(b)(1) and 16.405-2(b)(1)(iii)).

⁴ Award-fee evaluation board members may include personnel from key organizations knowledgeable about the award-fee evaluation areas, such as engineering, logistics, program management, contracting, quality assurance, legal, and financial management; personnel from user organizations and cognizant contract administration offices; and the local small business office in cases where subcontracting goals are important. On major weapons programs, the boards are generally made up of personnel from the program office.

the award-fee evaluation board, a fee-determining official⁷ makes the final decision about the amount of fee the contractor will receive. The feedetermining official can also decide to move unearned award fee from one evaluation period to a subsequent evaluation period or periods, thus providing the contractor an additional opportunity to earn previously unearned fee—a practice called rollover. Table 1 provides a general look at the process for evaluating and determining award fee amounts.

Table 1: General Process for Determining Award-Fee Amounts 1 DOD officials provide input on the contractor's performance for an evaluation period that just ended. 2 Program officials compile data and prepare a briefing or summary for the award-fee evaluation board. 3 Award-fee evaluation board convenes meeting; contractor has the option to submit a self-assessment and brief the board. Award-fee evaluation board considers all the input and recommends a fee rating for the contractor. 5 Fee-determining official (usually outside the program) makes an initial fee determination and notifies the contracting officer. 6 Contracting officer notifies contractor of initial determination; contractor has the option to appeal the decision to the fee-determining official. Fee-determining official makes a final determination, including whether to rollover unearned fee, and notifies contracting officer. Contracting officer issues final determination to contractor and processes a contract 8 modification authorizing payment.

Sources: Air Force Award Fee Guide, Army Contracting Agency Award Fee Handbook, Navy/Marine Corp Award Fee Guide (data); GAO (analysis).

Incentive-Fee Contracts

Incentive-fee contracts use what is considered to be an objective evaluation of the contractor's performance to adjust the fee paid. DOD's evaluation usually involves the application of a fee-determination formula that is specified in the contract. Evaluations occur at the end of the contract or, in the case of a performance or delivery incentive, at program milestones. The evaluations do not require an extensive evaluation

⁷ The fee-determining official is generally at a higher level organizationally than those directly involved in the evaluation of the contractor (e.g., award-fee board members). For instance, this official can be the program executive officer for a weapons system acquisition contract or a garrison commander on a base support services contract.

process or the participation of a large number of contracting or program personnel. Table 2 provides a general look at the process for evaluating and determining the amount of incentive fee paid for a contract with a cost incentive.

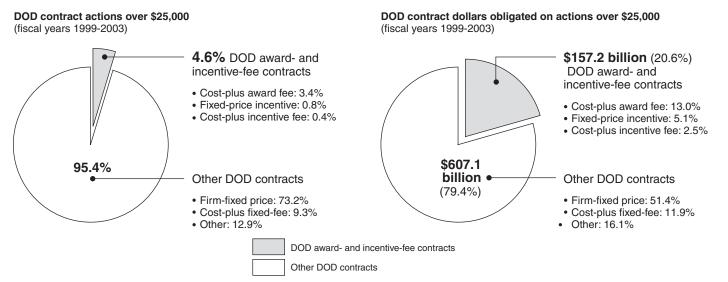
Table 2: General Process for Determining Incentive-Fee Amounts

	1 At the conclusion of the contract, DOD contracting officer compares the contractor's actual cost to complete the contract with the target cost specified in the contract.	
	2 a. If contractor's actual cost matches the target cost, DOD awards the contractor an amount called the target fee or target profit. ^a	
	b. If contractor's actual cost falls below the target cost, the contracting officer applies a formula with a share ratio that specifies how much the contractor's target fee or profit is increased for every dollar the actual cost is below the target cost.	
	c . If contractor's actual cost exceeds the target cost, the contracting officer applies a formula with a share ratio that specifies how much the contractor's target fee or profit is reduced for every dollar the actual cost is above the target cost.	
	3 Contracting officer processes a contract modification authorizing payment.	
	Sources: Federal Acquisition Regulation, DOD Contract Pricing Guide (data); GAO (analysis).	
	^a In federal contracting, the terms "profit" and "fee" refer to the amount of money paid to the contractor above and beyond either a fixed price or a contractor's reimbursable costs. The term "profit" is associated with fixed-price contracts, and the term "fee" is associated with cost-reimbursable contracts.	
Contracts Discussed in This Report	For this report, we examined fixed-price and cost-reimbursable award- and incentive-fee contracts, as well as contracts that combined aspects of both of these contract types. (See app. III for an explanation of various contract types.) Our probability sample of 93 contracts was drawn from a	

contract types.) Our probability sample of 93 contracts was drawn from a total of 597 DOD award- and incentive-fee contracts that were active from fiscal years 1999 through 2003 and had at least one contract action coded as cost-plus-award-fee, cost-plus-incentive-fee, fixed-price award-fee, or fixed-price-incentive valued at \$10 million or more during that time. Among the sample, 52 contracts contained only award-fee provisions, 27 contracts contained only incentive-fee provisions, and 14 contracts included both. (App. I contains additional information on our scope and methodology.)

From fiscal year 1999 through fiscal year 2003, award- and incentive-fee contract actions⁸ accounted for 4.6 percent of all DOD contract actions over \$25,000. However, when taking into account the dollars obligated— award- and incentive-fee contract actions accounted for 20.6 percent of the dollars obligated on actions over \$25,000, or over \$157 billion, as shown in figure 1.⁹ Our sample of 93 contracts includes \$51.6 billion, or almost one-third, of those obligated award- and incentive-fee contract dollars.

Figure 1: Prevalence of Award- and Incentive-Fee Contracts, Fiscal Years 1999-2003



Sources: Federal Procurement Data System (data); GAO (analysis and presentation).

DOD utilized the contracts in our sample for a number of purposes. For example, research and development contracts accounted for 51 percent (or \$26.4 billion) of the dollars obligated against contracts in our sample from fiscal years 1999 through 2003, while non-research-and-development services accounted for the highest number of contracts in our sample.

⁸ Contract actions include any action related to the purchasing, renting, or leasing of supplies, services, or construction. Contract actions include definitive contracts; letter contracts; purchase orders; orders made under existing contracts or agreements; and contract modifications, which would include the payment of award and incentive fees.

⁹ These obligations include award- and incentive-fee payments as well as other contract costs.

Table 3 shows the dollars obligated and the types of contracts by product and service. Appendix IV contains a breakdown of the contracts in our sample by contract type and military service.

Number of Number of Number of Number of **Total dollars** contracts with contracts contracts with contracts with according to in GAO's Percentage of award fees and incentive fees both award product or sample (in dollars in GAO's no incentive and no award and incentive Product or service service billions) sample fees fees fees Research and 7 development 32 \$26.4 51.2% 20 5 Aircraft and aircraftrelated procurement 7 8.5 16.5 2 5 0 6 8.3 16.0 0 2 4 Ship construction Non-research-and-23 9 development services 36 6.0 11.6 4 Other 12 2.4 4.7 7 4 1 14 Total 93 \$51.6 100% 52 27

Table 3: Products and Services, Dollars Obligated, and Contract Types in GAO's Sample, Fiscal Years 1999-2003

Sources: Federal Procurement Data System (data); GAO (analysis).

Note: The sample cases include 12 contracts that were selected with certainty: 7 for research and development, 3 for ship construction, 1 for aircraft procurement, and 1 for non-research-and-development services. Seven of the contracts selected with certainty had award-fee provisions, 2 had incentive-fee provisions, and 3 contained both award- and incentive-fee provisions.

DOD has the flexibility to mix and match characteristics from different contract types. The risks for both DOD and the contractor vary depending on the exact combination chosen, which, according to the Federal Acquisition Regulation, should reflect the uncertainties involved in contract performance. Based on the results from our sample, about half of the contracts in our study population were cost-plus-award-fee contracts. The theory behind these contracts is that although the government assumes most of the cost risk, it retains control over most or all of the contractor's potential fee as leverage. On cost-plus-award-fee contracts, the award fee is often the only source of potential fee for the contractor. According to defense acquisition regulations, these contracts can include a base fee—a fixed fee for performance paid to the contractor—of anywhere from 0 to 3 percent of the value of the contract; however, based on our sample results, we estimate that about 60 percent of the cost-plus-award-

fee contracts in our study population included zero base fee.¹⁰ Tables 4 and 5 show the estimated percentage of DOD award-fee contracts that had a particular percentage of the value of the contract available in award fees and base fees.

Table 4: Award Fees as a Percentage of Contract Value

Percentage of value of contract available in award fees	Estimated percentage of award fee contracts with this percentage available
1	0
2	4
3	10
4	2
5	4
6	4
7	23
8	4
9	6
10	15
11	4
12	7
13	4
14	0
15	14
20	Less than 1

Sources: DOD submissions to GAO and contract documentation (data); GAO (analysis).

Notes: While there is no limit on the maximum percentage of the value of the contract that can be made available in award fee, the 20 percent included in the Space-Based Infrared System High development contract was outside the norm. Percentages do not add to 100 due to rounding. Sampling errors for percentages in this table do not exceed plus or minus 12 percentage points.

 $^{^{\}rm 10}$ The 95 percent confidence interval surrounding this estimate ranges from 46 percent to 73 percent.

Table 5	Base Fees	as a Percentag	e of Contract Value
I able J.	. Dase i ces	as a reicentay	

	Percentage of value of contract available in base fees	Estimated percentage of award fee contracts with this percentage available
	0	63
	1	0
	2	8
	3	26
	4	2
	Sources: DOD submissions to GAO and contract document	ntation (data); GAO (analysis).
	program office received a deviation from the which allows for a maximum of 3 percent ba	cts in our sample included a 4 percent base fee. The e Defense Federal Acquisition Regulation Supplement, ase fee. Percentages do not add to 100 due to rounding. e do not exceed plus or minus 13 percentage points.
	contracts in our study populatio an estimated 13 percent were contracts, the government and However, on fixed-price incentive assumes more risk because if the contractor absorbs the loss. Und when costs increase to the point	ample, an estimated 16 percent of the in were fixed-price incentive contracts, and ost-plus-incentive-fee contracts. In both of d the contractor share the cost risks. we contracts, the contractor usually e contract reaches its ceiling price, the der a cost-plus-incentive-fee contract, t where the contractor will only earn the ustments occur and the government s reimbursable costs.
DOD Acquisition Practices and Program Success	acknowledge the acquisition environment instance, based on our sample re- contracts and most of the dollar acquisition of weapon systems. weapon system acquisition as a are the best in the world, DOD's	entive-fee contracts, it is important to vironment in which they are used. For esults, we estimate that most of the s in our study population are related to the Since 1990, GAO has designated DOD high-risk area. ¹¹ Although U.S. weapons acquisition process for weapon programs consequences—cost increases, late

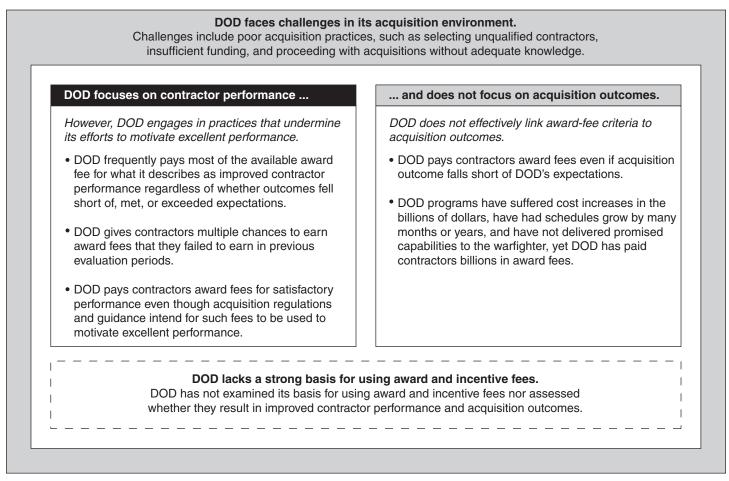
deliveries to the warfighter, and performance shortfalls. These problems

¹¹ GAO, *High-Risk Series: An Update*, GAO-05-207 (Washington, D.C.: January 2005).

	occur because DOD's weapon programs do not capture early on the requisite knowledge that is needed to efficiently and effectively manage program risks. For example, programs move forward with unrealistic program cost and schedule estimates, lack clearly defined and stable requirements, use immature technologies in launching product development, and fail to solidify design and manufacturing processes at appropriate junctures in development. As a result, wants are not always distinguished from needs, problems often surface late in the development process, and fixes tend to be more costly than if made earlier. When programs require more resources than planned, the buying power of the defense dollar is reduced, and funds are not available for other competing needs.
	The persistence of these problems reflects the fact that the design, development, and production of major weapon systems are extremely complex technical processes that must operate within equally complex budget and political processes. A program that is not well conceived, planned, managed, funded, and supported may easily be subject to such problems as cost growth, schedule delays, and performance shortfalls. Even properly run programs can experience problems that arise from unknowns, such as technical obstacles and changes in circumstances. In short, it takes a myriad of things to go right for a program to be successful but only a few things to go wrong to cause major problems.
Award and Incentive Fees Are Not an Effective Tool for Achieving DOD's Desired Acquisition Outcomes	DOD has not structured and implemented award-fee contracts in a way that effectively motivates contractors to improve performance and achieve acquisition outcomes. DOD practices—such as routinely paying its contractors nearly all of the available award fee, amounting to billions of dollars, regardless of whether the acquisition outcomes fell short of, met, or exceeded expectations; rolling an estimated \$669 million in unearned or withheld award fees to future evaluation periods; and paying a significant portion of the available fee for what award-fee plans describe as "acceptable, average, expected, good, or satisfactory" performance—all lessen the motivation for the contractor to strive for excellent performance. In addition, DOD award-fee plans have not been structured to focus the contractor's attention on achieving desired acquisition outcomes. DOD generally does not evaluate contractors on criteria that are directly related to acquisition outcomes, and the link between the

elements of contractor performance that are included in award-fee criteria and acquisition outcomes is not always clear. While incentive-fee contracts are more directly linked to select acquisition outcomes, DOD has not fared well at using these types of contracts to improve cost control behavior or meet program goals. However, when contractor performance does not result in the desired acquisition outcome under an incentive-fee contract, the reduction of fees is usually automatic and based on the application of a predetermined formula. Figure 2 summarizes our findings within the general framework of issues surrounding DOD's use of award and incentive fees.

Figure 2: Weaknesses in DOD's Use of Award and Incentive Fees



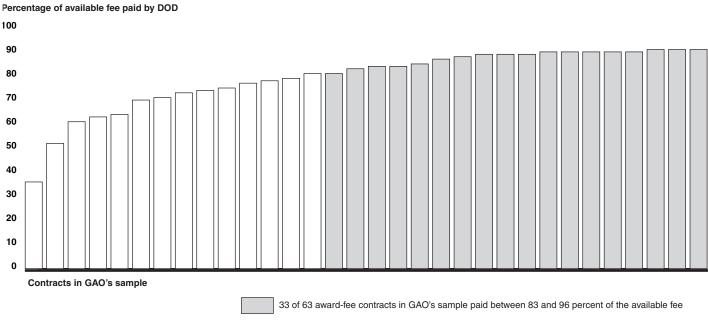
Source: GAO.

Practices Do Not Maximize Contractors' Motivation to Perform	ractice of routinely paying its contractors nearly all of the award fee puts DOD at risk of creating an environment in which s pay and contractors expect to receive most of the available fee, as of acquisition outcomes. Based on our sample, we estimate that award-fee contracts, the median percentage of available award to date (adjusted for rollover) ¹² was 90 percent, representing an d \$8 billion in award fees for contracts active between fiscal years ough 2003. ¹³ The lowest percentage of available fee paid to date for s in our sample was 36 percent, and the highest was 100 percent. shows the percentage of available fee earned for the 63 award-fee s in our sample and the lack of variation, especially across the s in the middle of the distribution.
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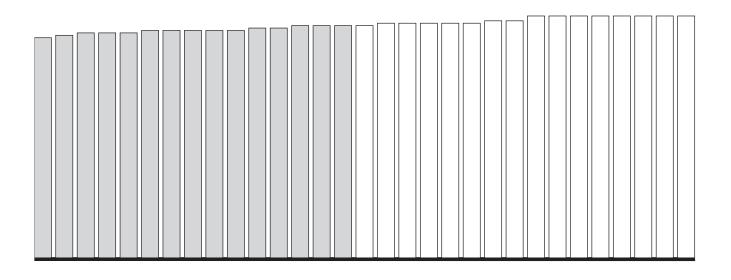
 $^{^{12}}$ When calculating the percentage of award fee paid (i.e. percentage of award fee paid = total fee paid to date / (total fee pool – remaining fee pool)), we included rolled-over fees in the remaining fee pool when those fees were still available to be earned in future evaluation periods.

¹³ Our estimate is based on award fee periods that were held from the inception of the contracts in our sample through the data collection phase of our review. The oldest award fee contracts in our sample were signed in fiscal year 1991.



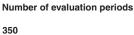


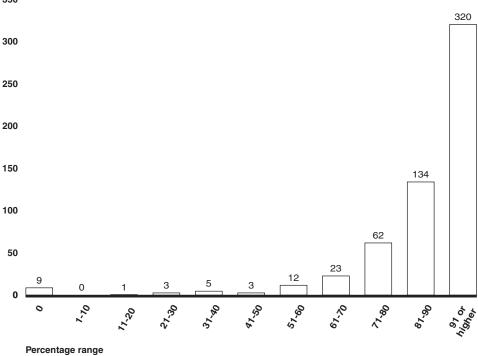
Sources: DOD submissions to GAO and contract documentation (data): GAO (analysis and presentation).



The pattern of consistently high award-fee payouts is also present in DOD's fee decisions from evaluation period to evaluation period. This pattern is evidence of reluctance among DOD programs to deny contractors significant amounts of fee, even in the short term. We estimate that the median percentage of award fee earned for each evaluation period was 93 percent and the level of variation across the evaluation periods in our sample was similar to the trend shown in figure 3. On DOD award-fee contracts, we estimate that the contractor received 70 percent or less of the available fee in only 9 percent of the evaluation periods. Figure 4 shows the percentage of available fee earned by evaluation periods overall for these contracts.







Sources: DOD submissions to GAO and contract documentation (data); GAO (analysis and presentation)

In addition to consistently awarding most of the available award fee on an evaluation period-by-evaluation period basis, the use of "rollover" is another indication of DOD's reluctance to withhold fees. Rollover is the process of moving unearned available award fee from one evaluation period to a subsequent evaluation period, thereby providing the contractor an additional opportunity to earn that unearned award-fee amount. DOD and program officials view rollover as an important mechanism for maintaining leverage with contractors; however, award-fee guidance issued by the Air Force, Army, and Navy in the last 3 years states that this practice should rarely be used in order to avoid compromising the integrity of the award-fee evaluation process. We estimate that 52 percent of DOD award-fee contracts rolled over unearned fees into subsequent

evaluation periods.¹⁴ We estimate that unearned fees were rolled over in 42 percent of evaluation periods of contracts that used this practice.¹⁵ Further, we estimate that the mean percentage of unearned fees that were rolled over in these periods was 86 percent, and in 52 percent¹⁶ of these periods at least 99 percent of the unearned fee was rolled over. Consequently, in many evaluation periods when rollover was used, the contractor still had the chance to earn almost all of the unearned fee, even in instances when the program was experiencing problems. Across all the evaluation periods for the 32 contracts in our sample that used this practice, the amount rolled over was almost \$500 million, or an average of 51 percent of the total unearned fees. (See fig. 5 for a depiction of DOD's use of rollover on the contracts in our sample.) Overall, for DOD award-fee contracts active between fiscal years 1999 through 2003, we estimate that the total dollars rolled over across all evaluation periods that had been conducted by the time of our review was \$669 million.

¹⁴ The 95 percent confidence interval for this estimate ranges from 40 percent to 64 percent.

 $^{^{15}}$ The 95 percent confidence interval for this estimate ranges from 31 percent to 53 percent.

¹⁶ The 95 percent confidence interval for this estimate ranges from 34 percent to 69 percent.

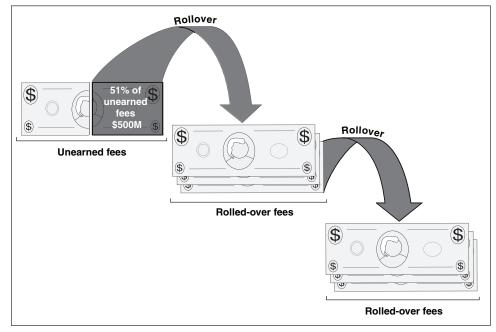


Figure 5: DOD's Use of Rollover on 32 Contracts in GAO's Sample

Sources: DOD submissions to GAO and contract documentation (data); GAO (analysis and presentation).

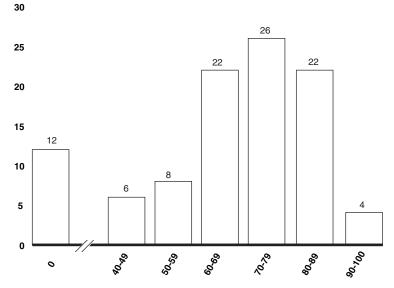
Several of the contracts in our sample routinely rolled over 100 percent of a contractor's unearned award fee into fee pools for use later in the programs. For example, the Joint Strike Fighter program has rolled over 100 percent of the unearned award fee for its development contracts into a reserve award-fee pool that the program uses to target areas not covered in the award-fee plan, such as encouraging the contractor to track awards to small businesses and improving communications with countries that are partners in the development program.¹⁷ However, the program has also used the reserve award-fee pool to provide additional money to motivate cost control, even though this area is already a focus of the award-fee plan. If the contractor does not earn the fee in the targeted area, the program keeps rolling the unearned fee back into the reserve pool. The practical effect of this is that the Joint Strike Fighter program's prime contractors still have the ability to earn the maximum award fee despite the cost and technical issues the program has experienced.

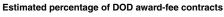
¹⁷ In its technical comments on a draft of this report, DOD stressed that while the Joint Strike Fighter program office has rolled over unearned fee to a reserve award fee pool, it is under no obligation to make any of this reserve award fee pool available to the contractor.

DOD may also be diluting the motivational effectiveness of award fees by paying significant amounts of fee for satisfactory performance. Although DOD guidance and federal acquisition regulations state that award fees should be used to motivate excellent contractor performance in key areas, most DOD award-fee contracts pay a significant portion of the available fee from one evaluation period to the next for what award-fee plans describe as "acceptable, average, expected, good, or satisfactory" performance.¹⁸ Figure 6 shows the maximum percentage of award fee paid for "acceptable, average, expected, good, or satisfactory" performance and the estimated percentage of DOD award-fee contracts active between fiscal years 1999 through 2003 that paid these percentages. Some plans for contracts in our sample did not require the contractor to meet all of the minimum standards or requirements of the contract to receive one of these ratings. Some DOD award-fee contracts in our sample also allowed for a portion of the available award fee to be paid for marginal performance—a rating lower than satisfactory. Even fixed-price-award-fee contracts, which already include a normal level of profit in the price, paid out award fees for satisfactory performance. Six of the eight fixed-price contracts with award fee provisions in our sample paid out 50 percent or more of the available award fee for satisfactory performance.

¹⁸ For the 53 contracts in our sample that paid at least a portion of the available fee if the contractor received a rating of "acceptable, average, expected, good, or satisfactory," there were 40 different fee ranges associated with these categories.

Figure 6: Maximum Percentage of Award Fee Available for "Acceptable, Average, Expected, Good, or Satisfactory" Performance and the Estimated Percentage of DOD Contracts That Paid These Percentages





Maximum percentage of award fee made available for "acceptable, average, expected, good, or satisfactory" performance

Note: Sampling errors for percentages in this figure do not exceed plus or minus 13 percentage points.

The amount of award fee being paid for performance at or below the minimum standards or requirements of the contract appears to not only be inconsistent with the intent of award fees (as explained in DOD guidance and federal acquisition regulations¹⁹) but also is inconsistent with the reasons contracting and program officials cited on our questionnaire for their use. According to responses to our questionnaire, rewarding satisfactory performance was one reason that award or incentive fees were used on an estimated 29 percent of DOD award- and incentive-fee

Sources: Award-fee plans and contract documentation (data); GAO (analysis and presentation).

¹⁹ According to FAR 16.404(a)(1), in a fixed-price-award-fee contract, the fixed price (including normal profit) will be paid for satisfactory contract performance. Award fee earned (if any) will be paid in addition to that fixed price. According to FAR 16.405-2(a)(2), a cost-plus-award-fee contract should include an award amount that is sufficient to provide motivation for excellence in such areas as quality, timeliness, technical ingenuity, and cost-effective management.

contracts. However, rewarding better than satisfactory performance was one reason that these fees were used on an estimated 77 percent of these contracts.²⁰

The responses provided to our questionnaire also seem to rule out the administration of award fees as one of the reasons for their general lack of effectiveness. Several key elements related to development and administration of award-fee contracts were present on almost all contracts. Specifically, contracting and program officials' questionnaire responses showed that the appropriate people were involved in the development and administration of award-fee contracts, and there was adequate guidance and training in place. We estimate that for 91 percent of DOD award-fee contracts, there were designated performance monitors responsible for evaluating specific areas described in the award-fee plan. On an estimated 88 percent of DOD award-fee contracts, award-fee evaluation board members received training on their roles and responsibilities. We further estimate that on 85 percent of DOD award-fee contracts, performance monitors also received training. Evaluation boards were held as planned for an estimated 86 percent of DOD award-fee contracts, and some programs conducted interim assessments of contractor performance to support the end-of-period evaluations. Based on questionnaire responses from contracting and program officials, an estimated 95 percent of DOD award-fee contracts had rating category descriptions that provided enough detail to distinguish between categories. An estimated 79 percent of the contracting officers responsible for developing and administering award-fee contracts and an estimated 80 percent of the contracting officers responsible for incentive-fee contracts believed the training was adequate. Finally, the contracting and program officials on an estimated 94 percent of DOD award- and incentivefee contracts felt that the guidance they used to develop and administer the contract was adequate.

Award-Fee Contracts: Fee Criteria and Payouts Not Routinely Linked to Acquisition Outcomes

DOD programs do not structure award fees in a way that motivates contractors to achieve or holds contractors accountable for achieving desired acquisition outcomes. In several contracts we evaluated, DOD established award-fee criteria that were focused on broad areas, such as

²⁰ The sum of these estimates exceeds 100 percent because respondents to our questionnaire were provided seven potential reasons as to why award and incentives fees were used in the contract and were asked to choose all that applied.

how well the contractor was managing the program. This can result in award-fee plans and criteria that seemingly have little to do with acquisition outcomes, such as meeting cost and schedule goals and delivering desired capabilities. For example, on a Navy ship construction contract, 50 percent of the award-fee money, or \$28 million, was based on management criterion including how responsive the contractor was to the government customers, the quality and accuracy of contract proposals, and the timeliness of contract data requirements. Elements of the awardfee process, such as the frequency of evaluations, may also limit DOD's ability to effectively evaluate the contractor's progress toward acquisition outcomes. For instance, while holding award-fee evaluations every quarter was successful for three Pentagon Renovation Management construction contracts because the contractor's short-term progress could easily be assessed, a similar strategy might not be effective for a long-term development effort because quarterly or even semiannual evaluations may not generate meaningful information about progress.

High award-fee payouts on programs that have fallen or are falling well short of meeting their stated goals are also indicative of DOD's failure to implement award fees in a way that promotes accountability. Several major development programs—accounting for 52 percent of the available award-fee dollars in our sample and 46 percent of the award-fee dollars paid to date—are not achieving or have not achieved their desired acquisition outcomes, yet contractors received most of the available award fee. The Comanche helicopter, F/A-22 and Joint Strike Fighter aircraft, and the Space-Based Infrared System High satellite system, have experienced significant cost increases, technical problems, and development delays, but the prime systems contractors have respectively received 85, 91, 100, and 74 percent of the award fee made available to date (adjusted for rollover), totaling \$1.7 billion (see table 6).

Table 6: Program Performance and Award-Fee Payments on Selected DOD Development Programs

Acquisition outcomes	Comanche reconnaissance attack helicopter	F/A-22 Raptor tactical fighter aircraft	Joint Strike Fighter tactical fighter aircraft	Space-Based Infrared System High
Research and development cost increase over baseline	\$3.7 billion 41.2 percent	\$10.2 billion 47.3 percent	\$10.1 billion 30.1 percent	\$3.7 billion 99.5 percent
Acquisition cycle time increase over baseline	33 months 14.8 percent	27 months 13.3 percent	11 months 5.9 percent	More than 12 months ^a
Number of program rebaselines	1 ^b	14	1	3
Total award fee paid to prime systems contractor	\$202.5 million paid through 2004	\$848.7 million	\$494.0 million	\$160.4 million°
Percentage of award fee paid to prime systems contractor (adjusted for rollover) ^d	85 percent of available fee	91 percent	100 percent	74 percent
Total award fee paid to prime engine contractor	No engine contractor	\$115 million paid through 2004	\$35.8 million	No engine contractor
Percentage of award fee paid to prime engine contractor (adjusted for rollover) ^d	N/A	89 percent of available fee	100 percent	N/A

Sources: DOD submissions to GAO, contract documentation, and GAO-05-301 (data); GAO (analysis).

^a The Air Force Space Command has not specified the acquisition cycle time for the Space-Based Infrared System High program; however, the delivery of the first two satellites has been delayed by more than a year.

^bOverall, there were five rebaselines for the Comanche program; however, only one occurred after development start. The Comanche program was canceled in 2004.

[°] The program also utilizes incentive fees tied to cost and mission successes. The award fee paid does not include fees earned through mission success incentives. To date, the contractor has earned \$3 million in these fees and could earn over \$70 million over the life of the contract.

^d When calculating the percentage of award fee paid to date (i.e., percentage of award fee paid to date = total fee paid to date / (total fee pool – remaining fee pool)), we included rolled-over fees in the remaining fee pool when those fees were still available to be earned in future evaluation periods. For instance, even though the Joint Strike Fighter prime contractor has not been paid 100 percent of the award fee that was made available for each evaluation period, it retains the ability to potentially earn all of this unearned fee at a later date. By reflecting the contractor has, in essence, earned 100 percent of the total award fee to date.

DOD can ensure that fee payments are more representative of program results by developing fee criteria that focus on its desired acquisition outcomes. We found two notable examples in which DOD's Missile Defense Agency attempted to hold contractors accountable for program outcomes. In the case of the Airborne Laser program, DOD revised the award-fee plan in June 2002 as part of a program and contract restructuring. The award-fee plan was changed to focus on achieving a successful system demonstration by December 2004. Prior to the restructuring, the contractor had received 95 percent of the available award fee, even though the program had experienced a series of cost increases and schedule delays. The contractor did not receive any of the \$73.6 million award fee available under the revised plan because it did not achieve the key program outcome—successful system demonstration.²¹ Similarly, the development contract for the Terminal High Altitude Area Defense program, a ground-based missile defense system, contains a portion of the award fee tied specifically to desired program outcomes conducting successful flight tests, including intercepts of incoming missiles. This \$50 million special award-fee pool is separate from and in addition to the subjective award-fee portion of the contract, which is worth more than \$524 million (of which \$275 million has already been paid). If one of the first two test flights is successful, the contractor will receive \$25 million. If the missile misses the target, the contractor provides DOD with a cost credit of \$15 million. The first of these flight tests is scheduled to occur before the end of calendar year 2005.

Other programs have utilized different fee strategies to focus the contractor's attention on specific acquisition outcomes. However, contracting officials have stated that there are few mechanisms to share lessons learned and innovative practices outside the local level. These approaches include conditional fees and linked incentives.

- Conditional fees stipulate that certain requirements must be met for a contractor to earn and keep fees. For example, we reviewed an Intercontinental Ballistic Missile program award-fee plan that included an "After Discover Performance Deficiencies" provision to ensure that award-fee payouts were consistent with program outcomes. This provision allowed the program to retrieve funds paid during prior award-fee periods if the program experienced overruns or if performance deficiencies were discovered after the award fee has been paid.
- Linked incentives evaluate cooperation across multiple contracts and contractors. For example, after initial interoperability problems, the Cooperative Engagement Capability program added award-fee criteria to evaluate how well the system integrated with the Aegis destroyer.

²¹ According to DOD, the contract was restructured again in May 2004 and the cost ceiling was increased from about \$2 billion to \$3.6 billion and the period of performance of the contract was extended more than 3 years, from June 2005 to December 2008.

Incentive-Fee Contracts: Many Contracts Not Meeting Cost or Performance Targets

Contracts with incentive fees have also not fared well at motivating costcontrol behavior or meeting program targets; however, fee payments are more consistent with acquisition outcomes. According to DOD contracting and program officials, contractors overran or were expected to overrun the target price on 52 percent of the 27 incentive-fee contracts in our sample. In these cases, the contractor does not earn the target fee but may earn a minimum fee, if one is specified in the contract. For example,

- the Navy's cost-plus-incentive-fee contract for the LPD 17, an amphibious transport dock ship, is projected to overrun the target price of \$644 million by at least 139 percent;
- on the Army's Brilliant Anti-Armor Submunition program, a fixed-price incentive contract for test hardware, overran the \$75 million target cost by 27 percent (\$20 million); and
- the fixed-price incentive contract for the Navy's P-3C Sustained Readiness Program initially called for 50 kits to be produced, but only 13 were delivered before contract funding was exhausted.

Incentive-fee contracts that also included performance and delivery incentives similarly have not met those key objectives, as shown in the examples below.

- Even though the system received approval from the Navy in June 2005 for low-rate initial production, the contracting officer and program manager stated that the cost, delivery, and technical incentives in the Airborne Laser Mine Detection System program did not improve contractor performance. During the course of the effort, the contractor experienced several cost overruns, as well as technical performance shortfalls. In addition, because of government delays, program officials decided to eliminate the delivery incentive included in the initial contract.
- According to the contracting and program officials responsible for administering and managing one of the Army's chemical demilitarization contracts, performance milestones with incentive fees were an important part of the Army's effort to accelerate the destruction of chemical weapons stockpiles after the events of September 11, 2001. However, these incentives did not keep the contract on schedule. The contractor missed the target completion date for the third of its four performance incentive milestones and the program was delayed by over a year. According to DOD, the failure to meet this milestone was due to unforeseen technical difficulties, and could not have been ultimately influenced by any type of contractual language.

In contrast, the successful use of fee is supported by the level of product knowledge attained by officials and their ability to leverage this knowledge. For example, DOD contracting officials for the Patriot Advanced Capability-3 missile had a well-developed knowledge of the acquisition's cost risks and were able to reduce costs by \$42 million for the low-rate initial production contract. Contracting officials stated that the favorable outcome was due to the use of a cost model that was developed and matured on the previous production contract.

Unlike award-fee contracts, incentive-fee contracts are based on formulalike mechanisms that determine the amount of fee earned. When a contractor misses a target in an incentive-fee contract, the reduction of fees is usually automatic and based on the application of a predetermined formula.²² The nature of the fee criteria in these contracts also eliminates most of the subjectivity in the evaluation process. Cost, schedule or delivery, and performance incentives are all based on targets that can be evaluated against actual costs, actual dates, and actual performance. In addition, negative incentives allow for fee reductions if the contractor does not meet certain criteria. For example, on one of the Navy's carrier refueling and overhaul contracts, the contractor's fee could be reduced if its overhead rate exceeded a certain target. Since incentive fees, especially those related to cost, are primarily evaluated at the conclusion of the contract, the officials applying the evaluation criteria or fee formula have a clear sense of the contractor's performance.

²² We found one instance of DOD using the equivalent of rollover for incentive-fee contracts. When the contractor missed the third program milestone on the Army chemical demilitarization contract, the program delayed the milestone by 14 months and offered the contractor a chance to earn 80 percent of the available fee. According to program officials, the performance incentive milestone was rescheduled to re-incentivize the contractor.

DOD Has Little Evidence That	DOD's use of monetary incentives is based on the assumption that such incentives can improve contractor performance and acquisition outcomes; however, past studies have challenged the validity of this assumption.
Monetary Incentives	Research on incentive fees going back to the 1960s has concluded these incentive fees are not effective in controlling cost. ²³ Studies conducted by
Improve Results as	GAO, Harvard University, and the RAND Corporation, among others, have
Intended	concluded that these incentives do not motivate cost efficiency, in part because profit is not the contractor's only motivation. Other considerations, such as securing future contracts with the government, can be stronger motivators than earning additional profit. More recently, research on award fees revealed that while these fees are an intuitively appealing way to improve contractor performance, they do not always operate that way in practice. Contractor respondents in one study stated that award fees motivate performance to some extent; however, the consensus was that they do not in and of themselves increase performance significantly. Research has also pointed to recurring disconnects between the intent and the administration of award-fee contracts. Award-fee criteria were not applied as intended; and many award-fee board members and fee-determining officials approached the process with the assumption

Despite these findings and the concerns raised by senior DOD officials about the amounts of award fee paid to contractors on acquisitions that were not performing to their established baselines, very little effort has gone into determining whether DOD's current use of monetary incentives is effective. Over the past few years, officials including the Undersecretary for Acquisition Technology and Logistics and the Assistant Secretary of the Air Force for Acquisition expressed concerns that contractors

the contractors should earn the full amount unless there were specific instances of poor performance that warranted deductions, instead of starting at zero and considering the actions the contractor had taken to

earn the available fee. Finally, the lack of explicit rationale and documentation in support of performance ratings has led some researchers to conclude that fees were being paid without adequate

justification.24

²³ GAO, Incentive Contracts: Examination of Fixed-Price Incentive Contracts, GAO/NSIAD-88-36BR (Washington, D.C.: November, 1987). Frederic M. Scherer, The Weapons Acquisition Process: Economic Incentives (Boston: Harvard University, 1964). Irving N. Fisher, A Reappraisal of the Incentive Contracting Experience (Santa Monica: The RAND Corporation, 1968).

²⁴ Thomas J. Snyder, *Analysis of Air Force Award Fee and Award Term Contract Implementation* (Air Command and Staff College: Air University, 2001).

routinely earn high percentages of fee while programs have experienced performance problems, schedule slips, and cost growth.²⁵ In 1999, following a report by a DOD-led integrated process team addressing contractor incentives, the Undersecretary of Defense also issued a memorandum for all service secretaries specifically noting that contractors do not always have an incentive to focus their attention on the government's desired outcomes and offered several principles for structuring future contract incentives. However, according to the lead of the integrated process team from the Office of the Secretary of Defense, the effort did not result in any new policy directives, changes in guidance, or new training. In addition, DOD did not assess the results of the study.

In contrast to the concerns expressed by DOD's senior acquisition leadership, we gathered testimonial evidence that indicates DOD contracting and program officials believe that these monetary incentives are effective for improving contractor performance. Based on responses to our questionnaire, an estimated 77 percent of DOD award- and incentivefee contracts had improved performance because of the incentive provisions, in the opinion of contracting and program officials. On awardfee contracts, officials pointed to increased responsiveness or attention from the contractor at the management level as evidence of this improvement, even if this increased responsiveness did not result in overall desired program outcomes being achieved.

One of the potential reasons for this disconnect between statements at the policy level and the opinions of practitioners is the lack of a DOD-wide system for compiling and aggregating award- and incentive-fee information and for identifying resulting trends and outcomes. DOD has not compiled information, conducted evaluations, or used performance measures to judge how well award and incentive fees are improving or can improve contractor performance and acquisition outcomes. The lack of data is exemplified by the fact that DOD does not track such basic information as how much it pays in award and incentive fees. Such information collection across DOD is possible. For instance, DOD is implementing the Defense Acquisition Management Information Retrieval system to collect data on acquisition costs and variances, schedules, and

²⁵ In its technical comments on a draft of this report, DOD stated that the Air Force's Acquisition Transformation Action Council is currently analyzing award- and incentive-fee contracts and aggressively pursuing solutions to the problems outlined in the draft report. A Transformation Initiative Group was assembled to provide recommendations back to the Acquisition Transformation Action Council for implementation.

program baseline breaches on major acquisition systems. This system
provides DOD policymakers with readily available information they can
use to oversee program performance across the department. If DOD does
not begin to collect similar information on award and incentive fee
payments, it may not be able to measure progress toward meeting one of
the goals listed in its fiscal 2004 performance and accountability report,
that is, invigorating the fiscal well-being of the defense industry by
rewarding good performance.

Conclusions

Conclusions	The existence or application of a well-developed and well-implemented monetary incentive alone does not determine the overall success or failure of an acquisition. DOD acquisition programs operate in an environment with underlying pressures and incentives that drive both program and contractor behavior. Competition for funding and contracts leads to situations, especially in major system acquisitions, in which costs are underestimated and capabilities are overpromised. Resulting problems require additional time and money to address. At the same time, DOD customers are tolerant of cost overruns and delays in order to get a high- performance weapon system. DOD's current approach toward monetary incentives reflects these realities and has resulted in a failure to hold contractors accountable for delivering and supporting fielded capabilities within cost and schedule baselines. While DOD and contractors share the responsibility for program success, award and incentive fees, to be effective, need to be realigned with acquisition outcomes. Awarding large amounts of fee for satisfactory or lesser performance and offering contractors multiple chances to earn previously withheld fees has fostered an environment in which DOD expects to pay and contractors expect to receive most of the available award fee regardless of outcomes. In addition, DOD's lack of information on how well award and incentive fees are achieving their intended purpose leaves the department vulnerable to millions of dollars of potential waste. Successes do exist at the individual contract level, but DOD will need to leverage this knowledge if it hopes to identify proven incentive strategies across a wide variety of DOD acquisitions.
Recommendations for Executive Action	To strengthen the link between monetary incentives and acquisition outcomes and by extension increase the accountability of DOD programs for fees paid and of contractors for results achieved, we recommend that the Secretary of Defense direct the Undersecretary of Defense for Acquisition, Technology, and Logistics to take the following seven actions. DOD can immediately improve its use of award fees on all new contracts

	by (1) instructing the military services to move toward more outcome- based award-fee criteria that are both achievable and promote accountability for acquisition outcomes; (2) ensuring that award-fee structures are motivating excellent contractor performance by only paying award fees for above satisfactory performance; and (3) requiring the appropriate approving officials to review new contracts to make sure these actions are being taken. DOD can improve its use of award fees on all existing contracts by (4) issuing DOD guidance on when rollover is appropriate. In the longer term, DOD can improve its use of award and incentive fees by (5) developing a mechanism for capturing award- and incentive-fee data within existing data systems, such as the Defense Acquisition Management Information Retrieval system; (6) developing performance measures to evaluate the effectiveness of award and incentive fees as a tool for improving contractor performance and achieving desired program outcomes; and (7) developing a mechanism to share proven incentive strategies for the acquisition of different types of products and services with contracting and program officials across DOD.
Agency Comments and Our Evaluation	DOD's Office of Defense Procurement and Acquisition Policy provided written comments on a draft of this report. These comments are reprinted in appendix II. DOD also provided separate technical comments, which we have incorporated as appropriate. DOD concurred with three of our seven recommendations—moving
	toward more outcome-based award-fee criteria, issuing guidance on rollover, and developing a mechanism to share proven incentive strategies. The department indicated that it would implement these recommendations by issuing a policy memorandum on award fees and completing a communications plan for sharing incentive strategies on March 31, 2006.
	DOD partially concurred with four of our seven recommendations. Concerning three of the four recommendations—requiring the appropriate officials to make sure these recommendations are implemented in new contracts, collecting award and incentive fee data, and developing performance measures to evaluate the effectiveness of award and incentive fees in improving acquisition outcomes—DOD indicated that the Director of the Office of Defense Procurement and Acquisition Policy, in collaboration with the military departments and defense agencies, would conduct a study to determine the appropriate actions to address them. The office plans to complete the study by June 1, 2006. While this study may provide additional insights, we encourage DOD to use it as a mechanism for identifying the specific steps the department will take to fully address

our recommendations, not to determine whether the department will take action. For instance, in its response to our recommendation on developing a mechanism for capturing award and incentive fee data, DOD raises the issue of cost. We agree that the potential cost of implementing this recommendation should be considered, while deciding on an appropriate course of action. However, given that the department paid out an estimated \$8 billion in award fees on the contracts in our study population regardless of outcomes, we believe that a reasonable investment in ensuring that these funds are well-spent in the future is warranted. Collecting this data is also necessary to support the development of meaningful performance measures, which can be used to evaluate the costs and benefits of continuing to use these contract types and determine if they are achieving their goal of improving contractor performance and acquisition outcomes. Further, without data and performance measures, DOD will not be in a position to measure the effectiveness of any actions it takes to address the issues identified in this report.

DOD also partially concurred with our recommendation related to only paying award fees for above satisfactory performance. Specifically, the department stated that it is fair and reasonable to allow the contractor to earn a portion of the award fee for satisfactory performance. However, we believe that this use of award fee should be the exception, not the rule. Fixed-price-award-fee contracts already include a normal level of profit in the price which is paid for satisfactory performance. In addition, the inclusion of base fee in a cost-plus-award-fee contract may be a more appropriate mechanism for providing fee for satisfactory performance. According to the Army Contracting Agency's Handbook for Award Fee Contracts, base fee (not exceeding three percent of the estimated contract cost) can be paid to the contractor for acceptable performance and is designed to compensate the contractor for factors such as risk assumption, investment, and the nature of the work. DOD also stated that award fee arrangements should be structured to encourage the contractor to earn the preponderance of fee by providing excellent performance. According to its comments, DOD plans to address this issue in the March 2006 policy memorandum on award fees. While DOD may conclude that it needs the flexibility to pay a portion of the award fee for satisfactory performance, especially for high risk efforts, current practice on most award fee contracts is to pay a significant portion of the available fee for "acceptable, average, expected, good, or satisfactory" performance. We would encourage DOD to consider limiting the maximum percentage of fee available for this level of performance to, consistent with its comments, keep the preponderance of fee available for excellent performance.

We are sending copies of this report to interested congressional committees; the Secretary of Defense; the Secretaries of the Air Force, Army, and Navy; the Commandant of the Marine Corps; and the Director, Office of Management and Budget. We will provide copies to others on request. This report will also be available at no charge on GAO's Web site at http://www.gao.gov.

If you have any questions about this report or need additional information, please call me at (202) 512-4841 (calvaresibarra@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Other staff making key contributions to this report were Thomas J. Denomme, Assistant Director; Robert Ackley; Heather Barker; Lily J. Chin; Aftab Hossain; Julia Kennon; John Krump; Jerry Sandau; Sidney Schwartz; Ron Schwenn; Najeema Davis Washington; and E. Chris Woodard.

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Ann M. Calvaresi-Barr Director Acquisition and Sourcing Management

Appendix I: Scope and Methodology

Our objective was to determine whether award and incentive fees are an effective management tool for achieving the Department of Defense's (DOD) desired outcomes. To conduct our work, we selected a sample of 93 award- and incentive-fee contracts, interviewed contracting and program officials, analyzed contract documentation related to incentive provisions, collected and analyzed data on award-fee payments, reviewed DOD and military service guidance on award and incentive fees, and examined the results of initiatives related to improving the use of these fees.

Our sample for this review was based on contract data from the Federal Procurement Data System. We extracted information from this database on all DOD contracts active between fiscal years 1999 through 2003 that had at least one contract action coded as cost-plus-award-fee, cost-plus-incentive-fee, fixed-price-award-fee, or fixed-price incentive valued at \$10 million or more during that time. These criteria gave us a study population of 597 unique contracts, which were associated with 2,474 award- and incentive-fee contract actions.

To ensure the validity of the database from which we drew our sample, we tested the reliability of the contract type field in the Federal Procurement Data System.¹ We selected a sample of 30 contracts from the population of DOD contracts active between fiscal years 1999 through 2003 and asked DOD and the military services to provide data on the contract type(s) for each one using data sources other than the Federal Procurement Data System or Individual Contracting Action Reports (DD Form 350). We also requested that DOD and the military services verify that at least one contract action between fiscal years 1999 through 2003 was valued at over \$10 million. Of the 30 contracts, DOD and the military services reported that 10 were either incorrectly coded or omitted information on a relevant contract type in the Federal Procurement Data System. Of these 10 errors, only 3 would have caused a contract to be mistakenly included or excluded in the population from which our sample was selected. Based upon these responses and the exclusion of only one contract from our sample because of miscoding in the Federal Procurement Data System, we determined that the data were sufficiently reliable for the purposes of this report.

¹ See GAO, *Reliability of Federal Procurement Data*, GAO-04-295R (Washington D.C.: Dec. 30, 2003), for more information on the reliability of the data.

To select the sample for this review, we stratified the population of 597 contracts based on the total dollar value of award- and incentive-fee contract actions associated with the contract during this period. We included all 12 contracts in the sample for which the total value of the award- and incentive-fee contract actions during this period exceeded \$2 billion. We used probability sampling techniques to select 85 contracts from the remaining 585 contracts in the population, ensuring that the number of contracts from the Navy, Army, Air Force, and all other defense agencies and organizations combined were proportional to their representation among the 585. During our work, we discovered that 2 of the 85 contracts we sampled from the stratum of 585 contracts were outside of the scope of this review. These contracts were removed from the sample. We also discovered that for 2 other in-scope contracts in this stratum, the officials involved in developing and administering the contract and the contract documentation were not available. We excluded these contracts from our analysis. We randomly selected a total of 4 additional contracts from the same stratum to include in our analysis.

Because we followed a probability procedure based on random selections, our sample is only one of a large number of samples that we might have drawn. Since each sample could have provided different estimates, we express our confidence in the precision of our particular sample's results as 95 percent confidence intervals (for example, plus or minus 7 percentage points). These are the intervals that would contain the actual population values for 95 percent of the samples we could have drawn. As a result, we are 95 percent confident that each of the confidence intervals in this report will include the true values in the study population. All percentage estimates from our review have margins of error (that is, confidence interval widths) not exceeding plus or minus 10 percentage points, unless otherwise noted. All numerical estimates other than percentages (such as totals and ratios) have margins of error not exceeding plus or minus 25 percent of the value of those estimates. Our analysis also tested the extent to which statistically significant relationships existed between such factors as contract type, reasons an incentive contract was chosen, types of officials involved in developing the incentive structure, use of rollover, training, and guidance; and contracts that contracting and program officials have cited improved contractor performance because of the use of incentive.

To determine whether award and incentive fees are an effective management tool, we conducted structured interviews with contracting and program officials about the development, implementation, and effectiveness of the incentive structure for 92 of the 93 award- and incentive-fee contracts in our sample; analyzed contract documentation related to incentive provisions; and collected and analyzed data on award-fee payments for 63 of the 66 contracts with award-fee provisions in our sample. For one contract, the office responsible for administering the contract could not identify any contracting or program personnel who could address our interview topics and all questions were coded as "no response." For three contracts, the office responsible for administering the contract could not provide complete documentation on award-fee payments.

To conduct our structured interviews on the development, implementation, and effectiveness of the incentive structure, we used a questionnaire that was a combination of open- and close-ended questions. When possible, these interviews were held in person. We visited the Defense Threat Reduction Agency Headquarters; Joint Strike Fighter Program Office; Los Angeles Air Force Base; Missile Defense Agency (Navy Annex); Patuxent Naval Air Station; Pentagon Renovation and Construction Program Office; Redstone Arsenal; U.S. Army Contracting Agency's Information Technology, E-Commerce and Commercial Contracting Center; U.S. Navy's Strategic System Program Office; Warner Robins Air Force Base; Washington Navy Yard; and Wright Patterson Air Force Base for this purpose. The remaining interviews were held by video teleconference or by telephone. All interviews were conducted between October 2004 and April 2005.

We also reviewed contract documentation related to the development and implementation of the contracts' incentives, including the basic contract, statement of work, acquisition planning documents, modifications related the incentive structure, award-fee plan, documentation describing fee criteria for specific evaluation periods, contractor self-assessments, award-fee board evaluation reports, and fee-determination documents. We used this information to corroborate and supplement the information provided in the structured interviews, determine the extent to which linkages exist between fee criteria and the desired program outcomes identified by contracting and program officials, and examine fee payments in the context of program performance. When possible, we evaluated program and contract performance using GAO's body of work on DOD systems acquisitions, including the annual assessment of selected major weapon programs and annual status report on the ballistic missile defense program.

For each of the 66 award-fee contracts in our sample, we collected and analyzed data on the base fee and maximum award fee, expressed as a

percentage of the estimated cost, exclusive of the cost of money; the award fee available and paid for each evaluation period; the amount of unearned fee rolled over into subsequent evaluation periods; the total award-fee pool; and the remaining award-fee pool, which included any rolled-over fee still remaining to be potentially earned. In most cases, contracting and program officials submitted the data on a standard template we provided. In cases where the program did not submit data in the requested format, we gathered this information from fee-determination letters and contract modifications. We also used these documents to verify the reliability of the data that were submitted by contracting and program officials. From this data, we calculated the percentage of the available fee that was awarded for individual evaluation periods, entire contracts to date, and the overall sample. We included rollover amounts available and earned in our calculations of fee awarded for individual evaluation periods. When calculating the percentage of fee earned for entire contracts, we excluded rolled-over fees from the available fee pool when those fees were still available to be earned in future evaluation periods. We also calculated the percentage of unearned fee that was made available to the contractor as rollover for individual evaluation periods, entire contracts, and the overall sample. Estimates of total award fees earned and total award fees that were rolled over are based on all evaluation periods held from the inception of our sample contracts through our data collection phase, not just those from fiscal years 1999 through 2003. We did not analyze incentive fee payments because most fee determinations are related to cost and are not complete until the contract is closed out.

We interviewed officials from Defense Acquisition University, Office of Director of Defense Procurement and Acquisition Policy, Office of the Deputy Assistant Secretary of the Air Force for Contracting (Policy and Implementation), Office of Deputy Assistant Secretary of the Army (Policy and Procurement), Office of the Deputy Assistant Secretary of the Navy for Acquisition Management, Office of the Air Force Inspector General, and the U.S. Army Audit Agency, as well as government contracting experts on recent initiatives and current trends in incentive contracting. We reviewed previous audit and inspection reports from the Air Force, Army, and Navy. We analyzed current award- and incentive-fee guidance provided in the Federal Acquisition Regulation, Defense Federal Acquisition Regulation Supplement, U.S. Army Audit Agency's report on Best Practices for Using Award Fees, Air Force Award Fee Guide, Air Force Material Command Award Fee Guide, and other service-specific policies, as well as the National Aeronautics and Space Administration's Award Fee Guide. We identified and reviewed DOD and military service policy memos and initiatives including DOD's Contractor Incentives

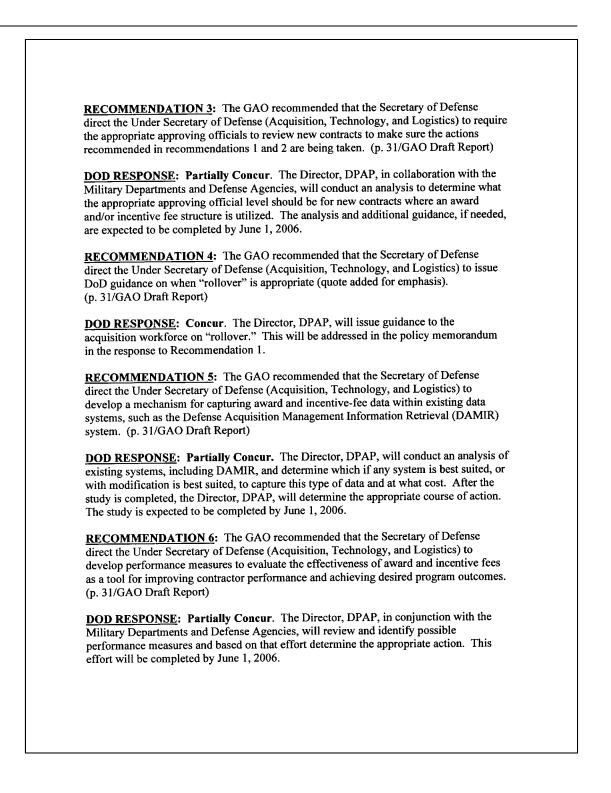
Integrated Process Team; the Assistant Secretary of the Navy for Research, Development, and Acquisition's policy memo on Contract Incentives, Profits and Fees; the Deputy Assistant Secretary of the Army for Procurement's report on Innovation in Contractual Incentives; and the Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics' "quick look" at DOD Profit Policy and Defense Industry Profitability. We identified innovative monetary incentives used on contracts within our sample and the mechanisms available to share those across DOD.

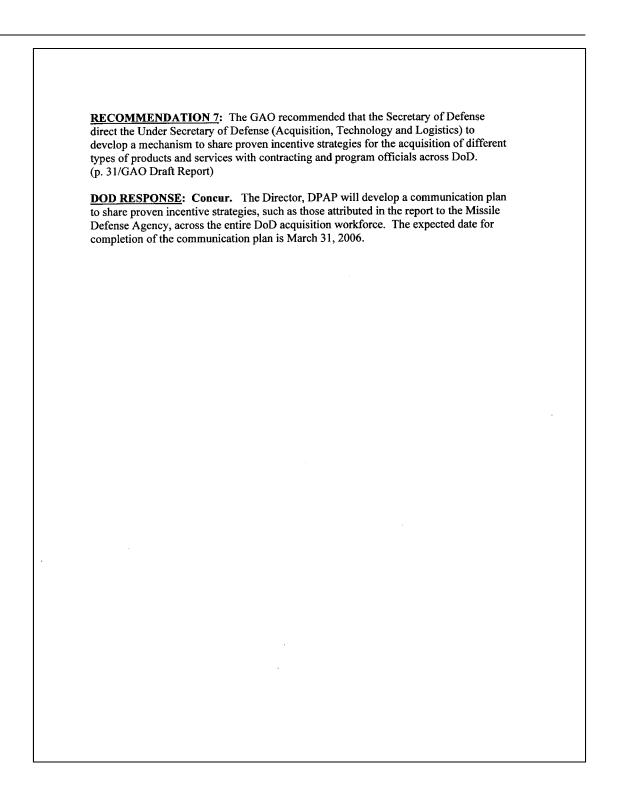
We performed our review from February 2004 to November 2005 in accordance with generally accepted government auditing standards.

Appendix II: Comments from the Department of Defense

OFFICE OF THE UNDER SECRETARY OF DEFENSE 3000 DEFENSE PENTAGON WASHINGTON, DC 20301-3000 DEC 1 2 2005 COUISITIO TECHNOLOGY Ms. Ann M. Calvaresi-Barr Director, Acquisition and Sourcing Management U.S. Government Accountability Office 441 G Street, N.W. Washington, DC 20548 Dear Ms. Calvaresi-Barr: This is the Department of Defense response to the GAO draft report, 'DEFENSE ACQUISITIONS: DoD Has Paid Billions in Award and Incentive Fees Regardless of Acquisition Outcomes,' dated November 4, 2005, (GAO Code 120326/GAO-06-66)." The report includes seven recommendations for the Secretary of Defense on how DoD can improve its use of award fees on new contracts. The Department's response to the recommendations is enclosed. Domenue C. Cip Domenic C. Cipicchio Acting Director, Defense Procurement and Acquisition Policy Enclosure: As stated

	ORT - DATED NOVEMBER 4, 2005 ODE 120326/GAO-06-66	
GAO CODE 120326/GAO-06-66 "DEFENSE ACQUISITIONS: DOD HAS PAID BILLIONS IN AWARD AND INCENTIVE FEES REGARDLESS OF ACQUISITION OUTCOMES"		
	T OF DEFENSE COMMENTS RECOMMENDATIONS	
lirect the Under Secretary of Defensionstruct the military services to mov	AO recommended that the Secretary of Defense se (Acquisition, Technology, and Logistics) to re towards more outcomes based award fee criteria te accountability for acquisition outcomes.	
Policy (DPAP), will address desired	Director, Defense Procurement and Acquisition loutcomes and the role the award fee should play in policy memorandum. The expected issuance date for 5.	
lirect the Under Secretary of Defense hat award-fee structures are motiva	AO recommended that the Secretary of Defense se (Acquisition, Technology and Logistics) to ensure ting excellent contractor performance by only paying formance. (p. 31/GAO Draft Report).	
e to motivate excellent contractor p ward fee for satisfactory performan ontracts when the nature of the wor erformance incentives are not appr erformance-based incentive(s) is a "ixed-Fee contract. In these situation ward fee for satisfactory performan arned when the fee-determining of as been submarginal or unsatisfactor rrangement should be structured to f the award fee by providing excell the maximum amount of award fee evel of performance, as provided for the ensuring that existing policies are	cur. The purpose of award fee arrangements should performance. However, this does not preclude paying nee. The Department utilizes Cost Plus Award Fee rk to be performed is such that objective cost and ropriate and linking contractor performance to some more attractive alternative than using a Cost-Plus- ons, allowing the contractor to earn a portion of the nee is fair and reasonable. Normally, award fee is not ficial has determined that the contractor performance ory (DFARS 216.405-2). Generally, the award fee o encourage the contractor to earn the preponderance lent performance and a contractor should not receive under a contract without a demonstrated superior or in the award fee plan. A reminder that we should e being followed is appropriate. This will be m mentioned in the response to Recommendation 1.	





Appendix III: Contracting Definitions

Award fee: An amount of money that is added to a contract and that a contractor may earn in whole or in part during performance and that is sufficient to provide motivation for excellence in the areas such as quality, schedule, technical performance, and cost management.

Base fee: An award-fee contract mechanism that is an amount of money over the estimated costs (typically in the range of 0 to 3 percent of the contract value), which is fixed at the inception of the contract and paid to the contractor for performance in a cost-plus-award-fee contract. A base fee is similar to the fixed fee paid to a contractor under a cost-plus-fixed-fee contract that does not vary for performance.

Ceiling price: A prenegotiated maximum price that may be paid to the contractor.

Cost contract: A cost-reimbursement contract in which the contractor receives no fee. A cost contract may be appropriate for research and development work, particularly with nonprofit educational institutions or other nonprofit organizations, and for facilities contracts.

Cost-plus-award-fee contract: A cost-reimbursement contract that provides for a fee consisting of a base amount (which may be zero) fixed at inception of the contract and an award amount, based upon a judgmental evaluation by the government, sufficient to provide motivation for excellence in contract performance.

Cost-plus-incentive-fee contract: A cost-reimbursement contract that provides for an initially negotiated fee to be adjusted by a formula based on the relationship of total allowable costs to total target costs.

Cost-reimbursable contract: A contract that provides for payment of the contractor's allowable cost to the extent prescribed in the contract not to exceed a ceiling.

Delivery incentives: A monetary incentive used to motivate the contractor to meet a particular product or service delivery objective.

Fixed-price contract: A contract that provides for a price that is either fixed or subject to adjustment obligating the contractor to complete work according to terms and for the government to pay the specified price regardless of the contractor's cost of performance.

Fixed-price-award-fee contract: A variation of the fixed-price contract in which the contractor is paid the fixed price and may be paid a subjectively determined award fee based on periodic evaluation of the contractor's performance.

Fixed-price incentive contract: A fixed-price contract that provides for adjusting profit and establishing the final contract price by application of a formula based on the relationship of total final negotiated cost to total target cost.

Incentive contract: A contract used to motivate a contractor to provide supplies or services at lower costs and, in certain instances, with improved delivery or technical performance, by relating the amount of fee to contractor performance.

Linked incentives: Incentives tied to performance in areas across multiple contracts and contractors and used to motivate contractors to cooperate.

Negative incentives: A method used by the government to allow for fee reductions if the contractor does not meet certain criteria.

Rollover: The process of moving unearned award fee from one evaluation period to a subsequent period or periods, thus allowing the contractor an additional opportunity to earn that unearned award fee.

Share ratio: A fee-adjustment formula written as a ratio of the cost risk between the government and the contractor.

Target cost: The preestablished cost of the contracted goods/services that is a reasonable prediction of final incurred costs.

Appendix IV: Sample Characteristics

GAO's sample of 93 award and incentive contracts comprises the following contract types:

- 48 cost-plus-award-fee contracts,
- 4 fixed-price-award-fee contracts,
- 12 cost-plus-incentive-fee contracts,
- 14 fixed-price incentive contracts,
- 1 cost-plus-incentive-fee / fixed-price incentive contract, and
- 14 contracts that are combinations of award- and incentive-fee contract types.

The sample contracts included the following breakdown by military service and DOD agency or organization:

- 37 Navy contracts,
- 30 Air Force contracts,
- 18 Army contracts,
- 3 Missile Defense Agency contracts,
- 3 Pentagon Renovation Management Office contracts,
- 1 Marine Corps contract, and
- 1 Defense Threat Reduction Agency contract.

Appendix V: GAO Reports on the Weapon Systems Acquisition Environment

Defense Acquisitions: Stronger Management Practices Are Needed to Improve DOD's Software-Intensive Weapon Acquisitions. GAO-04-393. Washington, D.C.: March 1, 2004.

Defense Acquisitions: DOD's Revised Policy Emphasizes Best Practices, but More Controls Are Needed. GAO-04-53. Washington, D.C.: November 10, 2003.

Best Practices: Setting Requirements Differently Could Reduce Weapon Systems' Total Ownership Costs. GAO-03-57. Washington, D.C.: February 11, 2003.

Best Practices: Capturing Design and Manufacturing Knowledge Early Improves Acquisition Outcomes. GAO-02-701. Washington, D.C.: July 15, 2002.

Defense Acquisitions: DOD Faces Challenges in Implementing Best Practices. GAO-02-469T. Washington, D.C.: February 27, 2002.

Best Practices: Better Matching of Needs and Resources Will Lead to Better Weapon System Outcomes. GAO-01-288. Washington, D.C.: March 8, 2001.

Best Practices: A More Constructive Test Approach Is Key to Better Weapon System Outcomes. GAO/NSIAD-00-199. Washington, D.C.: July 31, 2000.

Defense Acquisition: Employing Best Practices Can Shape Better Weapon System Decisions. GAO/T-NSIAD-00-137. Washington, D.C.: April 26, 2000.

Best Practices: DOD Training Can Do More to Help Weapon System Program Implement Best Practices. GAO/NSIAD-99-206. Washington, D.C.: August 16, 1999.

Best Practices: Better Management of Technology Development Can Improve Weapon System Outcomes. GAO/NSIAD-99-162. Washington, D.C.: July 30, 1999.

Defense Acquisitions: Best Commercial Practices Can Improve Program Outcomes. GAO/T-NSIAD-99-116. Washington, D.C.: March 17, 1999. Defense Acquisition: Improved Program Outcomes Are Possible. GAO/T-NSIAD-98-123. Washington, D.C.: March 18, 1998.

Best Practices: Successful Application to Weapon Acquisition Requires Changes in DOD's Environment. GAO/NSIAD-98-56. Washington, D.C.: February 24, 1998.

Major Acquisitions: Significant Changes Underway in DOD's Earned Value Management Process. GAO/NSIAD-97-108. Washington, D.C.: May 5, 1997.

Best Practices: Commercial Quality Assurance Practices Offer Improvements for DOD. GAO/NSIAD-96-162. Washington, D.C.: August 26, 1996.

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