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MBA PROFESSIONAL REPORT

**Analysis of Acquisition Workforce Responses to
Recent GAO Reports on Award and Incentive Fees**

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December 2007**

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REPORTS ON AWARD AND INCENTIVE FEES**

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EXECUTIVE SUMMARY

The purpose of this project is to survey the acquisition workforce regarding recent GAO reports and statements made on Award and Incentive Fees. The reports entitled, "DOD Has Paid Billions in Award and Incentive Fees regardless of Outcomes" and "DOD Wastes Billions of Dollars through Poorly Structured Incentive Fees" have questioned the acquisition methods' effectiveness. In order to analyze the reports, the researchers have conducted background research on the proper use and facilitation of Award and Incentive Fees in accordance with *Federal Acquisition Regulation (FAR)* standards, DoD 5000 policy, and other applicable policies.

The research team surveyed a sample size of contracting managers at the 45th Annual Aerospace and Defense Contract Management Conference. The focus of the Conference, "Rules, Risks, and Rewards: The Changing Outlook for Aerospace and Defense Contracting", presented an opportunity for the researchers to survey participants who felt strongly about the GAO statements. Because the survey was conducted in anonymity, the research team was able to gather both positive and negative feedback.

The following are the major findings of the research:

The first statement examines DoD programs, which do not rely on Award-fees to motivate contractors to achieve desired acquisition outcomes. Almost half of the Government personnel surveyed agreed with this statement.

The second statement examines the Government awarding a significant portion of the available Award-fee to the

contractor for "satisfactory" performance. Just under half of the Government respondents agreed with this statement.

The third statement examines deferred fees or "rollovers." More than 50% of the Government respondents agreed with this statement, while the majority of contractors stayed neutral.

In addition to these, finding contributors too many of the findings per the responses indicated on the Government and contractor surveys suggested that the DoD require improvement in the areas of training, administration, and implementation of Award and Incentive Fees. Incentive and Award-fee contracts offer the Government a way to encourage contractors to achieve exceptional performance. The Government, however, must fully understand how to relate performance-evaluation factors to the program outcome, and then communicate that relationship clearly to the contractor. Partnerships between both parties can create more risk-sharing and open communication to mitigate acquisition delays and cost overruns. This notion places an emphasis on acquisition planning.

I. INTRODUCTION

A. INTRODUCTION

This introductory chapter will provide the reader a comprehensive outline of the research paper in its entirety. In addition, brief summations of each chapter and subsection will be incorporated to inform the reader about the specifics of each section. This section includes a synopsis of the background, problem statements, purpose of the research, scope and methodology, organization of the paper, and finally closes with the researchers' view of the benefits of the study. According to the GAO,

The power of monetary Incentive Fees to motivate excellent contactor performance and improve acquisition outcomes is diluted by the way that DOD structures and implements Incentive Fees [...] [T]he Department of Defense (DOD) has paid billions of Award-fees and Incentive Fees to discover that fees are not an effective tool for achieving DOD's desired acquisition outcomes. (GAO, 2005, December, Intro)

B. BACKGROUND

Collectively, the Department of Defense (DoD) gives its contractors the opportunity to earn billions of dollars through monetary Incentive Fees (GAO, 2005, December, Intro). The GAO's inference of mismanagement and uncertainty has the Award and Incentive Fees Fee function of Government contracting under scrutiny. In the opinion of the GAO, the acquisition community has begun to accept a lassiez-faire notion of providing near maximum fee award to contractors for "par" or "sub-par" performance. Contract

managers imply this practice is needed to motivate contractors considering solicitations' technical complexity, unrealistic requirements, stringent time constraints and the uncertainty of funds and/or follow-on contracts. As a result, the DoD has paid out an estimated \$8 billion in Award-fees to date on Government contracts...regardless of the outcome (GAO, 2005, December, Intro). This finding has added "fuel to the fire," driving continual congressional propositions for acquisition reform. The DoD acquisition community continues to seek and apply process improvements from various forms of industry and leadership. From the "lean" principles utilized by Toyota Motor Company, to current implementations of varying purchasing strategies, the Government continues to value sound applications that appear to be a "one size fits all" solution.

The acquisition community has been in, and continues to be in, a quest for transformation and reform. At the 2006 World Wide Contracting Conference, Mr. Charles Williams, Deputy Assistant Secretary for Contracting, Office of the Assistant Secretary of the Air Force for Acquisition, challenged the acquisition community, "regardless of what level you are at, SES, General Officer, or GS-5 [...] we must embrace change and transformation" (Williams, 2006). This challenge is indicative of the need for acquisition professionals to introduce entrepreneurial methodologies into the community as well as the need for members of the community to analyze DoD Incentive Fees practices and their net benefit to Government contracting. Other than organizational metrics, there is not an overall system that independently assesses or measures Award and Incentive Fee

outcomes. This fact catalyzes the Government to ask the question, do Award and Incentive Fees accomplish their intended objective?

In the past decade, Government spending on acquisitions has increased dramatically. Civilian and military leaders have made changes, such as program cuts, to assist in budgetary shortfalls necessary to contribute to the Global War on Terrorism (GWOT) and OPERATION ENDURING FREEDOM. With increasing pressure to contribute to the war effort and recapitalize our aging infrastructure, senior DoD and service acquisition officials are seeking ways and inventing places to reduce costs and risks. Because of this mandate, many have raised concerns about the effectiveness of these obligated fees, specifically Award and Incentive Fees. Recent reports assert that DoD programs paid large fees on acquisitions that are "falling behind schedule, overrunning costs, and experiencing significant technical problems" (GAO, 2005, December, p. 2). In a statement released to the *Air Force Times*, Lt. Col Edwards of the 88th Comptroller Squadron displayed the realism of the budget shortfalls when he stated, "this really is about readiness [...] increasing ops tempo [...] and budget challenges across the board. This budget issue affects all of us. We simply cannot afford not to [...] invest in our future. This mandate is affecting operational readiness and support functions of many installations" (Kaufman, 2007). He went on to say, "It won't be easy" (2007).

As many installations face the challenges of redistribution of funds and constant manning shortages, the acquisition community must be prepared to make decisions that will contribute to strategic objectives implemented by

our acquisition leadership. This may involve a greater focus on the distribution of Award and Incentive Fees.

DoD acquisition personnel are continuously tasked to make sound business decisions on a tactical and strategic level. This is specifically true where they must identify their budget as a constraint and resourcefully provide optimization to maximize the efficiency of monies spent for commodities and services. The GAO suggests portions of the acquisition fee system are unable to motivate the contractor to perform, thus asserting that many contracts are not meeting cost or performance targets (GAO, 2005, December, p. 29). Regardless of the findings, it is part of the acquisition professionals' fiduciary duty to adhere to the responsibilities delegated. In the acquisition community, professionals must determine and employ the most efficient methodologies to achieve the desired end-state of the contract. Award-fees and Incentive Fees are the most commonly used means for achieving those results.

The existence or application of well-developed and well-implemented monetary Incentive Fees alone does not determine the overall success or failure of an acquisition. DOD acquisition programs operate in an environment with underlying pressures and Incentive Fees 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 over-promised. 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 Incentive Fees 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 Fees strategies across a wide variety of DOD acquisitions. (GAO, 2005, December, p. 33)

If DoD procurement is not achieving these objectives, acquisition personnel must understand why and begin to implement changes to correct the discrepancies. Active contract managers must be surveyed to determine if statements made by the GAO correlate with the field use of Award and Incentive Fees. By obtaining this feedback, researchers will assist in identifying areas of improvement for involved agencies, thus assisting contract managers in resource focusing.

C. PURPOSE OF RESEARCH

The purpose of this project is to survey the acquisition workforce regarding recent GAO reports and statements made on Award and Incentive Fees. The GAO excerpt of information is based on a sample size of 52 contracts containing Award-fee provisions. In addition, 27 were Incentive Fee provisions, and 14 contracts contained

both, based on a “probability sample of 93 contracts from the study population of 597 DoD Award and Incentive Fee contracts that were active and had a fee valued at \$10 million or more from fiscal year 1999 through 2003” (GAO, 2005, December, Intro). This report focuses on the improper outcomes of and the administration of Award and Incentive Fees. The research will gather feedback based on an anonymous survey (see Appendices C and D) provided at the 45th Annual Aerospace and Defense Contract Management Conference held in Garden Grove, CA. The research intent is to take the statements from the GAO reports and determine if the GAO’s findings are reflective of the administrative and contractual actions of Government and contract management professionals.

There were a multitude of reasons that the researchers chose to review Award and Incentive Fees. The end objective is to inform Government contract managers of areas of improvement within the Award and Incentive Fee structure that can maximize the intended value of each procurement and minimize the inefficiencies that hinder it.

Because of this focus, the research will assist in vectoring resources to mitigate the issues and highlight the recommendations for improvement that may affect the acquisition community more than others. This will also give the DoD and interested industry partners follow-on topics for future research.

Although these are not the only available Incentive Fee arrangements the Government has at its disposal, they are the primary ones utilized and will, therefore, be our research focus.

D. PROBLEM STATEMENTS

The GAO essentially evaluated 93 varying DoD contracts with Award and Incentive Fee combinations. Three of the primary findings of GAO were that the DoD:

- Evaluates contractors on Award-fee criteria that are not directly related to key acquisition outcomes;
- Pays contractors a significant portion of the available fee for what award plans describe as “acceptable, average, expected of satisfactory performance”; and
- Gives the contractors at least a second opportunity to earn initially unearned or deferred fees.

The researchers will incorporate these overall conclusions into two separate survey statements (see Appendices C and D) to gather information on Award and Incentive Fees. Survey findings will be incorporated into the methodology.

E. SCOPE AND METHODOLOGY

The scope of this MBA project will analyze Award-fee and Incentive Fee portions of Government contracting, which (according to the GAO) are currently ineffective in providing correct fee compensation for contract performance outcomes. With that notion, the researchers will communicate the GAO statements to real-world acquisition professionals in order to determine, by surveying contract managers, if there is concurrence. At the conclusion of our research, we will analyze the findings and determine if there are any similarities between the assessment of the GAO findings and the “reality” of procurement contracting involving business transactions.

The methodology of this research will be by survey and anonymous correspondence. The following section entitled "organization of the study" will outline the specific sections of the research paper as well as how the research in each section shall be obtained. In addition, this brief section will explain the rationale and the importance of each sub-section of the project. Research will be conducted by reviewing GAO reports 06-66 and 06-409T to extract GAO statements. In its review of the reports, the research team has established the foundation of research and shall provide a comprehensive analysis at the conclusion of the research. In order to understand the report terminology, literature reviews using scholarly periodicals and other means shall be used to establish the proper usage and administration of Award and Incentive Fees.

The 45th Annual Aerospace and Defense Contract Management Conference will be the primary collection point for information. The research team anticipates that by obtaining real-world information from contract managers in the field, a better assessment of day-to-day operations can be derived. The researchers, using feedback and analysis from these findings, will evaluate the analyzed survey of respondents to conclude if, in fact, the GAO statements are commensurate with the surveyed responses. Based upon the findings of the research, the conclusion will introduce possibilities for further research regarding the use and control of Award and Incentive Fees.

1. Limitations of the Study

The research conducted is based on qualitative information derived from a Likert scale survey. The

qualitative assessments do not have any statistical inferences based on the surveyed population, and, therefore, are not analyzed herein. The Likert model uses subjective or objective statements in order to obtain the surveyed respondent's opinion (see Appendices C and D).

F. BENEFITS OF THE STUDY

The benefits of this study are that it will provide the DoD with insight that will assist in the development of innovative ways to replicate tangible Incentive Fees that will motivate contractors to perform and produce above satisfactory performance. In efforts to mitigate many of the current issues that are not consistent with established policy and procedure, such as awarding contractors for exemplary performance, this research intends to produce alternative means with which the DoD can reward contractors for above-standard performance and penalize them for below-standard performance, as applicable.

In addition, the GAO cited that contracting officials have stated there are few mechanisms to share lessons learned and innovative practices (GAO, 2005, December, Intro). This report will serve as another avenue through which to convey much-needed information regarding Incentive Fees.

G. ORGANIZATION OF RESEARCH PAPER

1. Chapter I Introduction

The introduction portion of this research paper will identify the scope of the research area. It is divided into

subsections that aim to clarify the research. The introduction synthesizes the research paper and contains the following sections: introduction, background, purpose of research, problem statements, scope and methodology, organization of the research paper, and the benefits of the study. The intent is to discuss the GAO reports' generalities and identify the speculations that they cast on the current acquisition profession as a whole.

2. Chapter II Background and Conceptual Framework

The focus of the second chapter will be to explore the basic premise and rationale for the GAO's investigation of the DoD usage of Award and Incentive Fees, showing a brief historical background of the GAO as well as the stakeholders involved. As additional information, a brief evaluation of the requestor and the organizational hierarchy of the GAO will show the "close" interrelationship of the requestors and the GAO.

The GAO infers that the Award and Incentive Fee mismanagement issue is gargantuan. It cites everything from un-enforced policies to inadequate training as contributors to the DoD \$8 billion dollar mishandling of funds. To establish a basis for the research, the reports will be introduced as a background. To understand the GAO reports, proper usage of the fees will be reviewed later in the research paper with an in-depth analysis of the proper usage, definition, and latent issues of Award and Incentive Fees.

3. Chapter III Contract Award-fees Fees

This chapter will be an in-depth investigation of Award-fees. The intent is to provide readers with specific information regarding the application of the Award-fee, its intended use, and then its current misuse in the field of acquisition. Using the data from the collection points described previously, the researchers will reference and cite the proper application of Award-fees.

Award-fee types contracts are only one of several options Contracting Officers have at their disposal to motivate contractor performance. Just as in application, this contract must be understood in order to analyze the GAO reports and the results of the research survey. While many topics can be discussed concerning Award-fee contracts, this chapter will focus only on the cost-plus-award-fee type contracts, including the elements of an Award-fee contract, evaluation criteria, award procedure, and applications of Award-fee type contracts.

4. Chapter IV Contract Incentive Fees

This chapter will provide an in-depth background on Incentive Fees. The intent is to provide readers with specific information regarding the application of Incentive Fees, their intended use, and then their current misuse in the field of acquisition. Using the data from the collection points described previously, the researchers will reference and cite areas for Incentive Fees Fee improvements.

Simply stated, a successful Incentive Fee program motivates contractors to heighten performance and achieve above-average results in categories of cost, schedule, and performance. It begins with a sound understanding of the

industry, a founded risk assessment of the organization, and tactful negotiating skills. The Program Manager and the Contracting Officer must hone these intuitive skills in order to formulate the right contract mode, at the right time, at the right place, in order to fulfill objectives critical to the user. Without these skills, contract verbiage is just that, contract verbiage.

In order for contracts, regardless of their complexity, to be a success, it is imperative that the Integrated Product Teams (IPT) ensure that members of the DoD program have knowledge of the procurement. Specifically, the Program Manager, who has the overall responsibility for cost, schedule, and performance, should assume the conductor's role in the initial research effort and maintain intimate coordination from the Contracting Officer before entering into a contract (GAO, 2007, May 28, pp. 50-53). All DoD personnel involved must understand the requirement, acquisition strategy, and the right incentives to get superior results.

5. Chapter V Research Findings

This chapter will focus on the responses from contract managers that attended the 45th Annual Aerospace and Defense Contract Management Conference in Garden Grove, California on the 26 and/or 27 July, 2007. Each question from the surveys labeled "contractor" and "Government" (see Appendices C & D) will be analyzed and charted individually or comparatively to compare findings in this text with the excerpts that were extracted from the GAO report 06-66 and 409T. This analysis will assist the readers in addressing ongoing Award and Incentive Fee misuse that continues to

plague the DoD credibility in assuring sound business judgment and solid procurement activity. This analysis will assist the readers in understanding the respondents' (Government & Industry) views relating to the GAO assessment of the DoD use of Award and Incentive Fees.

In addition to the individual analysis, there will be a comparative analysis from the responses of similar questions from the surveys (See Appendices C and D). The surveys were constructed to have some identical questions. The purpose of this was to identify any disparity in the responses between the Government and the contractors. The comparative analysis will show any significant correlations between the Government and the contractors. Each section will be charted and discussed to outline the findings in a visually accessible manner.

Finally, a summary of this section will be included to encompass the findings of the research.

6. Chapter VI Conclusions, Recommendations, & Areas for Further Research

Chapter VI will provide the readers with a summation of the MBA project. This chapter will encapsulate all of the findings and incorporate the researchers' final assessment of the responses from the survey. The focus will be to capture the responses to the sample survey from the NCMA and to identify potential future follow-on topics. The readers of this project will be able to assess if the GAO accurately described Government practices related to contracting administrative actions.

H. SUMMARY

In summary, we can concede that many problems lay dormant within the DoD acquisition system. Focused research with proper dissemination of newly revealed information can assist the DoD in vectoring scarce resources to the appropriate mitigation points. The researchers contend that by identifying and surveying seasoned contract managers, they can assist the DoD in performing this task. This chapter discussed the introduction to the research and the paper. The next chapter will give the reader background on the GOA, its framework, and the stakeholders potentially involved with the reports used in this research.

II. BACKGROUND AND CONCEPTUAL FRAMEWORK

A. INTRODUCTION

The purpose of this chapter is to give the readers a general background into the history of the GAO, from which agency it receives its authority as well as its past and present roles in Government oversight. An outline of the GAO organizational structure is noted; in brevity, a discussion on the stakeholder analysis is included. This will include perspectives into the checks and balances system between the GAO, Senate, DoD, and the contractors. The researchers contend that an understanding of the interest behind the reports may show an indication of the reluctance to change and the complacency in which all stakeholders operate.

Recent criticisms stemming from DoD audits and congressionally mandated inquiries into Award-fee contracts have caused Contracting Officers to rethink strategies for utilizing Award-fee and Incentive Fee contracts. Mr. Kenneth Krieg, former Under Secretary of Defense for Acquisition Technology and Logistics (USD (AT&L)), contends that the problem is "gigantic," referring to inaccurate utilization of these Incentive Fees whose purpose is to obtain a greater value for potentially greater cost (Rogin, 2007, March 19). The subjectivity which Award-fees integrate into contracts makes them an attractive option for Contracting Officers. Frequently, contract Award-fee board members can interpret effort to the fee criteria with varying results. When the criterion is not based on tangible

cost, schedule, or delivery metrics, there is technically no right or wrong answer when determining Award-fees.

On the other hand, Incentive Fee (IF) contract formula calculations are regarded as complicated to derive, due to the many variables and weighted averages that can contribute to the cost-formula ratio. Incentive Fees are not difficult to implement, but with the administration that the contracts require, IF contracts are burdensome.

With subjectivity on one end of the spectrum, and administrative burdens on the other, contract Fee matrices are duplicated from one contract to the next; the choice and application often results in a prisoner's dilemma. For instance, Program Managers (PM) have the option of hurdling blocks of creativity to formulate a fee that gets results, or "borrow" previous arrangements from other contracts. Time and multiple levels of approval ultimately serve as a contributor to the PM and CO settling for the latter. The result of this is an ineffective and inefficient fee program.

In this conflict between policy, reform, Congress, the DoD, industry, JCIDS, and PPBE, there are stakeholders that unnoticeably have bargaining power when citing mismanagement of taxpayer funds. We have briefly described the conceptual notion of how variant types of fees should operate; however, for additional clarification, the researchers will investigate Award-fees and Incentive Fees in full detail later in the project. Prior to plummeting into the literary review, we will evaluate the stakeholders involved. This may open a labyrinth of questions for exploration in future research. For the purpose of this chapter, we will evaluate the Congress and the rationale for inquiry, the GAO's

purpose within the organizational structure, its positioning for policy, DoD policy and feedback from industry derived from the sample survey submitted at the 45th Annual Aerospace and Defense Contract Management Conference.

B. HISTORICAL BACKGROUND

For decades, the United States Government has utilized various forms of contract Incentive Fees in an effort to motivate contractors to deliver above-satisfactory results on cost, schedule, and performance. Since the promulgation of the *FAR*, the Government has used monetary means to incentivize contractors. There are other methodologies to catalyze above-par performance; however, the Government chooses to use AF and IF as its primary incentives.

Typically, Award-fee contracts emphasize multiple aspects of contractor performance in a wide variety of areas such as quality, technical ingenuity, cost management, and timeliness (GAO, 2005, p. 6). While these items appear to be measurable, one must evaluate the following questions:

- What is quality? How is it defined? How is it measured?
- What is technical ingenuity? What innovation is it compared to?
- How is cost management measured? Is it the least spent or the best allocation of funding?
- How is time measured and evaluated? Is it periodically, or just at the end of the contract?

Many times, the acquisitioning agency will “hot wash” the issue to determine if the criteria were successful. Often, the information is not shared or is only disseminated

through a “stove-piped” channel within the community. The generated reports are normally declared as internal memorandums used for decision-making purposes only. When criteria are subject to speculation, a specialized agency intervenes under the guidance of Congress; this agency is the Government Accountability Office (GAO}.

C. STAKEHOLDER ANALYSIS

Since its inception, the GAO has been subject to appreciation, ridicule, and praise for its reports and various types of investigative inquiries. Characterized as what many present-day professionals refer to as the “watchdog” for Congress with no teeth, the GAO continues to highlight ongoing problems and issues that plague the US Government and its agencies. The benefit of the GAO is debatable; however, the foundation of its inherent authority leaves no doubt of the agency’s legitimacy. An organization that has evolved from performing voucher validation to program and budget spending analysis, the GAO has gained credibility in the eyes of many over the decades.

Created by the *Budget and Accounting Act* (42 Stat. 20) in 1921, Congress passed the reform to require the federal Government to improve accountability (GAO, 2004). The function of auditing, initially the responsibility of the treasury, was transferred to the GAO, in addition to accounting and claims functions. The Act made the GAO independent of the executive branch and gave it a broad mandate to investigate how federal funds are spent. Later legislation expanded the GAO's influence, but the *Budget and Accounting Act* continues to serve as the basis for its

activities (GAO, 2004). GAO oversight extends to every classification of the Government (See Figure 1). Under the legislative branch, encompassed by the wings of Congress, the GAO investigates the majority of the sub-components of the Government. Although any Senate committee can obtain its services, the Committee on Armed Services uses its fair share of the GAO's resources. This may be due to the Committee's influence on the GAO budgetary process.

The GAO's budget requests are submitted through Congress for its annual appropriations. For FY 2008, the GAO has submitted its budget to the 110th congress with an 8.5% increase from FY 07 (GAO, 2007, p. 5). The GAO routinely receives its requested budget amounts.

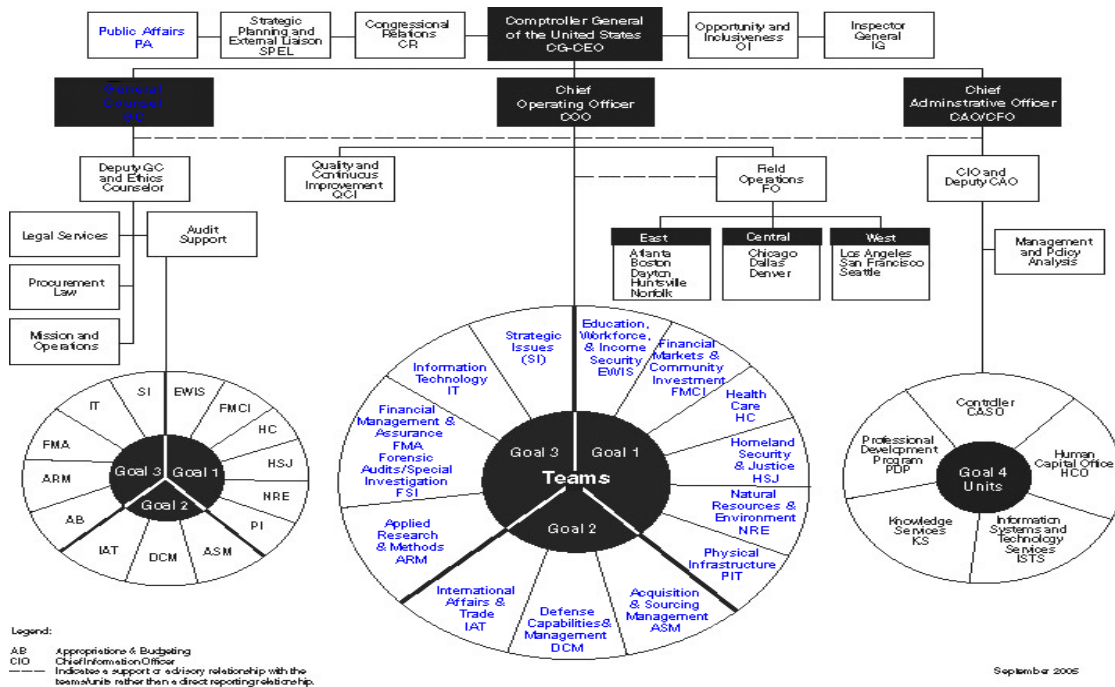


Figure 1. GAO Organizational Chart (GAO, 2004)

Senators J. Ensign of Nevada and J. Akaka of Hawaii launched an inquiry into the use and handling of Award and Incentive Fees. Their accusations infer consistent DoD misuse. The DoD contends that there is a need for Award and Incentive Fees, even if for satisfactory performance. One respondent from the NCMA conference stated, "the DOD acquisition process consistently delivers effective weapons systems." Another anonymous writer suggested, "a few large dollar contracts incentivizing narrow areas without regard for larger Government cost, schedule, or quality issues, skews the evaluation of hundreds of smaller AF contracts properly managed and AF applied" (Government survey 4).

In one report, the GAO recommended that the DoD should "ensure that Award-fee structures are motivating excellent contractor performance by only paying for above satisfactory performance" (GAO, 2005, December, p. 43). To protect the interest of the age-old processes the DoD uses to achieve "maximum" results, the DoD responded with the following:

The purpose of fees should be to motivate excellent performance. *This should not preclude paying Award-fees for satisfactory performance.* The Department utilizes [...] fee contracts when the nature of the work performed is such that objective costs and performance initiatives are not important and linking contractor performances of some performance-based Incentive Fees is a more attractive alternative. In these situations, allowing the contractor to earn *a portion of the Award-fee for satisfactory performance is fair and reasonable.* (GAO, 2005, December, p. 43, emphasis added)

Many of the contractors will agree that the comments made by the DoD have some plausibility. Though that may be the case, one anonymous contractor commented, "Contractors work hard

for Award-fees. [...] If they are handed out for free then someone is not doing their job" (Contractor Survey 21). Many contractors find themselves caught in a tug-of-war challenge between two principle agents: the DoD and their shareholders. Always willing to entertain the needed service of the DoD, contractors insist that services and procurement of today are not those of past decades. The technical complexity, time, and funding constraints contribute to many ACAT 1D programs being in the "red" prior to specifications coming to fruition. Many surveyed contracting managers indicate that there are many problems with Award and Incentive Fees, such as the administration process and the criteria set forth at initiation. One opinion was consistent on both sides: proper monetary Incentive Fees can contribute to improved contractor performance (See Figure 9).

Indicated below are potential remedies the GAO suggested to the DoD:

To strengthen the link between monetary Incentive Fees and acquisition outcomes and by extension, increases the accountability of DOD programs for fees paid and of contractors for results achieved, takes 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;

(4) Issuing DOD guidance on when roll over is appropriate;

(5) Developing a mechanism for capturing Award and Incentive Fees-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 Fees strategies for the acquisition of different types of products and services with contracting and program officials across DOD.
(GAO, 2005, p. 4)

The GAO seeks to find the root cause of the issue investigated. Many times, as did the DoD in this circumstance, the investigated organization will agree with some, all, or none of the findings. The GAO does not explain "how" to obtain a solution to the organization. The solution may solve the problem, or it may contribute to it. With its mission completed and the requesting congressman satisfied with the findings, the GAO identifies and addresses the next issue on the agenda. Although attention has been brought to the problem, and policy and directives changed, the question remains: does the GAO convey its findings in a way that is acknowledged and accepted by contract managers?

D. SUMMARY

Many policies reflect the proper way of using Award and Incentive Fees. Yet, managing the overall use of fees will take communication, responsiveness, and coordination from each organization.

All of the stakeholders contribute to the inefficient bureaucratic system that makes the DoD process unique. The constant struggle to prove fault and ineptness continues to divide an illusive consensus. Although the DoD, GAO, and Congress have checks-and-balances, findings and concurrences are conceded with no additional joint effort to solve the issue.

This chapter discussed a brief history of the GAO, its role and organizational structure, in addition to the stakeholders involved in the reports used in this research. The next chapter will discuss Award-fee type contracts from various perspectives.

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III. CONTRACT AWARD-FEES

Award-fee contracts must be structured in ways that will focus the Government and contractors' efforts on meeting or exceeding cost, schedule, and performance requirements, according to a memorandum for secretaries of the U.S. military departments and directors of the defense agencies. The ability to earn Award-fees needs to be directly linked to achieving desired program outcomes. (Finley, 2006, p. 2)

A. INTRODUCTION

This chapter will provide the reader with a basic understanding of Award-fee type contracts, which is only one of a Government Contracting Officer's several options to motivate contractor performance. Within this chapter, the Award-fee determination process and Award-fee concepts will also be evaluated as they are used in cost-plus-award-fee contracts in major weapon systems acquisition within the Department of Defense (DoD) and space systems in the National Aeronautical Space Administration (NASA). Both the DoD and NASA are encountering similar problems with contractor performance and program outcome; therefore, both GAO reports (06-409T (2005) and 07-58 (2007, January)) and applicable references and sources will be utilized. While many topics could be discussed concerning Award-fee contracts, this chapter will focus only on the cost-plus-award-fee type contracts, including the elements of an Award-fee contract, evaluation criteria, award procedure, and the applications of AF contracts.

Today, Government Contracting Officers have become the center of attention when topics such as contractor

performance Incentive Fees and Award-fees are mentioned. What options does a Contracting Officer have to persuade the contractor to perform? Most Government Contracting Officers that use Award-fees in their contracts are aware of at least two types of contract motivators that also reduce risk—Incentive Fees and Award-fees. Award-fees will be analyzed in this chapter.

To motivate contractor performance today, certain structures or elements have to be put in place to allow the Government and the contractor to work together to achieve the desired outcome. Money, profit, and/or a promise for additional contracts could be used as optional motivators for the contractor to perform above standards or to meet delivery schedules early. The lure of follow-on awards to contractors have, in the past, kept some contractors performing, even if profit margins are low on the first contract award (Summers, 1995, pp. 26-28). In the DoD, the purpose for using Award and Incentive Fees is to improve performance of the contractor and to achieve desired acquisition outcomes for the Government (Dept. of the Air Force, p. 6).

Current Issues

Within the past three to four years, the GAO completed several reports on the DoD lack of efficiency in utilizing Award-fees contracts based upon poor structuring of Incentive Fees contracts. In 2005, the GAO reported: "DOD has paid billions in Award and Incentive Fees regardless of acquisitions outcomes." It further commented on the DoD need for increased structure and implementation of better Award-fee contracts to effectively motivate the contractor to achieve the desired outcome for the Government. This

attributed to the GAO's analysis that the DoD awarding a significant amount of fees to contractors, regardless of where the contractor stood on the performance schedule (GAO, 2005, December, p. 14).

In another report, issued in January of 2007 by the GAO on NASA Procurements, entitled "Use of Award-fees for Achieving Program Outcomes Should Be Improved," the GAO asserted that NASA's Award-fee programs require the improvements listed below:

- NASA should improve its current use of Award-fees by reemphasizing tying Award-fee payments to desired outcomes, limiting the number of factors used in contractor evaluations as its guidance recommends.
- NASA needs to develop metrics for measuring the effectiveness of Award-fees, establish a system for collecting data on the use of Award-fee contracts. (GAO, 2007, January, p.18)

NASA led the way for Award-fee type contracts when it acquisitioned complicated materials and specialized services to drive the space program. Award-fees in developmental testing of products such as weapons systems and developmental software have proven to be useful if correctly utilized to affect contractor performance. Other services on which Award-fee type contracts may have an impact are: janitorial, landscaping, maintenance, and similar services in which the ability to compensate the contractor for non-

quantitative aspects of performance on a subjective basis follows sound and ethical business judgment (Synder, 2002, p. 7).

B. PURPOSE OF AWARD-FEES

Award-fees are instruments used to incentivize the contractor to go beyond completing a task to merely satisfactory standards. A contract, in most cases, should always result in each party having a mutual understanding of the work that will be completed or product to be delivered and the type of payment used in exchange for that work or product delivered. However, for some contracts, the vendor is encouraged to conform to above-satisfactory standards. If utilized appropriately, Award-fees are a beneficial tool to motivate contractors to excel. The overall goal of using Award-fees is to motivate contractor performance in areas that are subject to judgmental/qualitative measurement and evaluation, such as technical functionality, logistics support, cost, and schedule. An Award-fee provision gives the contractors an opportunity to earn additional money based upon the Government's assessment of their performance in those critical areas. Should the Government and the contractor enter into a contract using an Award-fee arrangement, if properly structured, it will motivate the contractor to increase performance (Dept. of Air Force, 2002, p. 6).

C. HISTORICAL BACKGROUND

During World Wars I and II, Incentive Fees were commonly included in contracts. Navy contracts with Bethlehem Steel for shipbuilding in World War I included

Incentive Fees for performance and capital investment. The mobilization phases throughout World War II created a bias for competitive negotiation because of other more important, urgent and compelling issues at that time. The War Production Board's Directive stated that formally advertised bid procedures were not to be used in war contracts. Negotiation was to be used instead (as it was in other mobilizations). Nevertheless, the directive also instituted three criteria for contracts: (1) speed of delivery, (2) conservation of superior facilities for the more difficult items of production, and (3) placing contracts with firms requiring the least amount of additional machinery and equipment. This necessity for rapid delivery motivated the separate departments of the Army and Navy to create innovative contract terms and conditions (Synder, 2001, pp. 5-6).

The War department developed an "evaluated-fee" contract similar to the Cost-plus-fixed-fee (CPFF) construction contracts of World War I; the difference was that a portion of the fee would be based on the contractor's performance. Further modifications to contracts' terms were made by the Navy's Bureau of Ships—adjusting CPFF contracts so that a percentage of the fee was fixed, and the rest was awarded as a bonus for achieving cost savings. This contract appeared in 1943 in large ship-building programs and some ordnance items. These critical changes to the contract terms laid the foundation for the Award-fee contract type used today (Synder, 2001, pp. 5-6).

Around that time, the Navy was converting as many of its contracts as possible into Incentive Fee contracts. However, the initiative received mediocre support from

industry because of its inexperience with Government contract changes. Production experience was low, so contractors had difficulty estimating costs, and Government changes and interference often interrupted delivery schedules. Consequently, contractors embraced Incentive Fees because they were reluctant to associate profit tied to changing goals. The lesson learned was that Incentive Fees contracts can be powerful, but are limited unless utilized at the right time and place and under the right circumstances. NASA would successfully reintroduce these Incentive Fees twenty years later (Synder, 2001, pp. 5-6).

The concentration of Government forces in the 1960s led to the development of the Award-fee process currently used in Government contracting. Secretary of Defense Robert S. McNamara, who served under Presidents Kennedy and Johnson, had a tremendous effect on defense procurement. McNamara, a graduate of Harvard's Graduate School of Business Administration and a statistician for the Army Air Corps in World War II, was determined to upgrade procurement practices with modern management techniques. He terminated cost-based contracts, believing that they encouraged waste by not linking profits to outcome.

During McNamara's term as Secretary of Defense, the percentage of military procurement dollars awarded by cost-plus-fixed-fee contracts fell from 39% in 1960 to 14 % in 1964. Conversely, fixed-price contracts and fixed-price Incentive Fees dollars awarded rose from 45 to 55 % in the same period (Cibinic & Nash, 1998). Although NASA is credited with creating the Award-fee contract that is common today, both NASA and the Navy issued contracts with Award-fee provisions in 1962. The Navy awarded a contract which

incorporated terms for Award-fees for logistics operations support at Kwajalein Island that year. NASA also awarded an Award-fee contract in October 1962 that provided for the research and development of a nuclear-powered rocket engine. In January 1963, NASA awarded its second contract that covered the operation, maintenance, and engineering services for the Mercury Manned Space Flight Network. NASA increased from one Incentive Fees contract in 1962, to 34 by 1964. By the beginning of 1967, it was managing 200 contracts with Incentive Fees (Synder, 2001, p. 7).

The Air Force did not award its first Award-fee contract until 1964. However, due to problems with an unwritten policy against subjective Incentive Fees, no other contracts were awarded until the latter parts of 1969 (Synder, 2001, p. 7).

Throughout the 1960s, NASA and the Navy used Award-fee contracts to the utmost, whereas the Air Force and Army remained reluctant. The Air Force eventually expanded their use in the 1970s, as then Secretary of the Air Force Robert C. Seamans, Jr., mandated their use on major programs acquisitions such as the B-1 and F-15 (Synder, 2001, p. 7).

During the 1980s and 1990s, Award-fee contracts began to flourish in both the DoD and the Air Force. Even small-dollar contracts such as maintenance or other service-type contracts eventually utilized Award-fees. In fact, Air Education and Training Command (AETC) became one of the largest users of Award-fee contracts. AETC contracts out much of its operations to private industry—awarding most, if not all, of its aircraft maintenance and many base support services conducted at its installations (Synder, 2001, p. 8). As use of Award-fee contracts for base-level activities

increased, the Air Force tasked the Air Force Logistics Management Center (later changed to the Air Force Logistics Management Agency (AFLMA)) to create a guide for Award-fee contracts. This was later published in 1988 (Cibinic & Nash, 1998). The spread of this contract type among base-level offices and program offices has caused the AFLMA and the Air Force audit agencies to do repeated reviews of implementation throughout the last 10 years. It is apparent that Award-fee use has expanded substantially among Air Force contracting agencies.

D. INNOVATIONS IN AWARD-FEE

The award-term contract is the newest incentive structure in Government contracting. Thomas Luedtke, NASA's associate administrator for procurement, argued that Award-term contracting is the most innovative approach in use in 2000 (Synder, 2001, p. 8-9). As is the case with so many of today's acquisition reforms, award-term contracting is the result of commercial best business practices. Private firms seek long-term business relations with the vendors they choose. The vendor's performance greatly affects both their relationship and the next contract. In Government contracting, award-term contracting offers a similar approach (Synder, 2001, p. 7). As described in the Air Force *Award-fee Guide* (2002), the Government team members monitor and evaluate the contractor's performance and report their findings to a Government Fee Determining Official (FDO). The FDO makes the final determination on the amount of award-fee the contractor receives based on their evaluation of the contractor's performance (Dept. of the Air Force, 2002, p. 13). If a contractor's performance is

continually rated as excellent by its evaluators, the firm could potentially increase a contract length by as much as five or more years on an existing five-year contract, excluding competition. This option to extend is a unilateral right of the Government, not the contractor (Burman, 2000, October 1).

Award-term contracts reward the contractor with a contract extension. In past years, agencies have used award-term Incentive Fees to acquire a variety of services, including technical and logistics support, laundry and dry cleaning, depot-level maintenance, aircraft maintenance, grounds maintenance, janitorial services, real property maintenance and repair, and training (Gill, 2000, September, pp. 19-20). The Incentive Fees is being used with several contractual configurations such as fixed-price, cost-reimbursement, indefinite-delivery/indefinite-quantity, and requirements.

E. ELEMENTS OF A COST-PLUS-AWARD-FEE (CPAF) CONTRACT

A CPAF contract normally included the following components: estimated cost, base fee, maximum fee, award periods, and evaluation criteria. The expected costs must be negotiated on a fair and reasonable basis between the buyer and the seller, and should represent the best estimate of what actual costs will be upon completion of performance. Projected costs can be similar to target costs in the Cost-plus-incentive-fees-fee (CPIF) contract (Venable, 2000, p. 25).

The CPAF is related to cost-reimbursable contracts with special fee provisions. CPAF contracts are distinguished by the distinctive process in which the sum of the contractor's

fee is agreed upon. In a general sense, the Award-fee is a motivator that can be paid by the Government to a contractor. The intent of the Award-fee contract is "to retain control over most or all of the contract's potential profits as leverage. On CPAF contracts, the Award-fee is often the only source of potential fee for the contractor (GAO, 2007, January p. 4). This control should motivate the contractor to exceed the minimum standards of performance that are acceptable under the evaluation criteria written into the contract.

The fee traditionally used in a CPAF contract consists of two parts. The first part is a base (or fixed) fee. Award-fee guidelines enable the contractor to obtain a base fee, which does not change with contract performance. The amount of the base fee will be further explained later in this chapter.

An Award-fee contract also presents a maximum fee. The distinction between the maximum fee and base can be referred to as the "Award-fee pool." The Award-fee pool is applied to encourage the contractor to perform excellent work (Schade, 1990, December, p. 19). The amount awarded to the contractor is dependent on the level of contractor performance during the performance period. This award amount is intended to provide motivation for the contractor to surpass performance standards—for example, quality, timeliness, creativity, and cost efficiency. The Award-fee amount given to the contractor may be the entire Award-fee pool or only a part of what is available for the period of the contract. The exact amount is based upon a subjective evaluation of the quality of the contractor's performance, judged based on criteria originally included in the

contract. Government representatives recommend the Award-fee to the FDO for a unilateral decision (NASA, 2001, Sec 2.3).

The base fee is a fixed fee established by the Government after awarding the contract. The base fee can be defined as what is paid to the contractor regardless of the contractor's performance on the contract, as long as the contract is still in place or not terminated. On Government cost-reimbursement type contracts the actual payment of a base fee typically accompanies a contractor's monthly reimbursement "by the Government" for "best efforts" of actual contractor costs (Garrett, 2007a, p. 12).

The base fee is also the lowest dollar amount of fee that a contractor can earn on a CPAF contract. A contract may, in fact, have a Zero-base-fee (ZBF). Unallowable Cost Offsets (UCO) and Marginal-performance-level (MPL) concepts were identified by Gregory Garrett to determine a more accurate base fee (Garrett, 2007a, p. 12).

The ZBF concept deals with the theory that removing a base fee and leaving a total fee pool depends only on the Award-fee. This concept can enable better Incentive Fees for the contractor to attain performance because if no base fee exists, the government no longer guarantees the contractor a base payment regardless of contractor performance. The UCO concept covers the contractor, on an average, two to three percent above the contract cost to protect the contractor from Government-deemed "Unallowable Cost," which is based on Government cost and accounting standards (Garrett, 2007a, pp. 12-13).

The MPL concept bares the idea that the base fee is established with a particular quality or level of performance in mind. Bases are established by taking into consideration the various profit analysis factors, but in an amount commensurate with that level of quality of performance categorized as minimum acceptable. The MPL concept, to determine the amount of base fee, has been used by NASA and other Government agencies and activities for nearly 30 years. This concept contains no percent limits to the amount of base fee. (Garrett, 2007a, p. 13)

Base fees are intended to offer the contractor a sufficient fee for completing the bare minimum standards. As such, the base fee is the same with the minimum fee on the CPIF contract. However, the DoD supplement to the *Federal Acquisition Regulation (FAR)* limits the amount of the base fee to three percent of the estimated cost (NASA, 2007, Sec. 1816.405-271(a)).

As previously discussed, the Award-fee pool is the amount of money that is negotiated between the Government and the contractor based on performance. The base fee, which is also negotiated, is fixed, not being affected by the performance of the contractor. Finally, maximum fee is the total amount of fees that the contractor could receive based on excellent or superior performance. It would be a combination of the base fee and the Award-fee pool. Normally, the Award-fee pool is divided into periods for evaluation of contractor performance.

The length of the award period must be long enough to cover adequate work—so as to allow a logical basis upon which to develop the evaluation—but short enough to allow feedback to the contractor before the project is completed. A three-month or less evaluation period may not be

sufficient to justify, based on the amount of work required to complete the evaluations. An evaluation period greater than three months in length is more appropriate (Venable, 2000, p. 26).

F. CREATING EVALUATION CRITERIA

Evaluation criteria can be defined as the subjective and/or objective criteria that are used to rate each category of performance. The criteria must focus on the most critical portions of the program and encourage the contractor to boost performance. The focal point or end result of the program must be spelled in "plain English" to the contractor. The criteria should be clearly defined and should detail the program requirements (Dept. of the Air Force, 2002, p. 4).

One of the first and most important steps in the Award-fee planning process is developing the evaluation criteria and standards for making the final award. The evaluation criteria establish the elements of the contractor's performance, which are used by the Government in determining the award amount, and which can prove to be very difficult to create. The most significant issues with a CPAF contract deal with the quality of the evaluation criteria structure and the rating plan. The impact of a precise, well-written evaluation plan cannot be overstated. The evaluation criteria must recognize the weighting of each factor and contain guidelines as to the level of performance required for specific rating levels (NASA, 2007, FAR Supplement).

The contractor must be fully cognizant of the evaluation criteria. And, in most agencies, the selection of criteria is not a subject of negotiation. The final

selection is a unilateral decision by the Government. The main benefit of this authority is so that the Government can change the evaluation criteria during the contract if the Government deems it necessary to refocus the contractor's efforts (NASA, 2001, Sec 3.4.1). Overall, the evaluation criteria should emphasize the most important aspects of the program (as these will likely motivate the contractors in a positive way to improve performance) and should be specific to the needs and goals of the acquisition (Dept. of the Air Force, 2002, p. 27).

No two evaluations and rating plans will be the same in all respects; each must be modified to fulfill its own specific requirement. Furthermore, the evaluation criteria should be tailored to a restricted number of significant elements critical to the project's successful completion. A few examples of key elements used include technical functionality, quality, managerial capability, schedule adherence, cost control, and personnel utilization. Once the key elements are decided upon, these categories may be further divided into sub-criteria for evaluating the elements that make up each performance category (Wight, 1984, p. 28).

Because the Government is more concerned with results rather than effort, the evaluation criteria needs to assess "output and/or outcome" rather than "input" (Wight, 1984, p. 28). However; based upon the procurement circumstances, performance evaluation factors could have outcomes, outputs, inputs or a mix. The evaluation of the results of an activity as compared to its intended purpose is the outcome factor. Outcome-based factors are the least problematic when one is administering performance evaluation factors, and

should offer the best gauge for overall success. Therefore, outcome-based factors should be the primary type of evaluation factor considered for use. The output factor refers to the processes, procedures, actions, and key elements influencing successful contract performance. Input factors refer to the immediate processes, procedures, actions or techniques that influence successful contract performance (NASA, 2007, FAR Supplement). As such, the evaluated criteria must clearly indicate all objectives in order to reach the optimal outcome; otherwise, the overall Incentive Fees to the contractor may be lost.

There are numerous ways to institute a rating plan in the evaluation criteria. As indicated previously, no two systems are alike; a system must be selected that fits the requirement. The system of principles most commonly referred to as the adjective-type standard grading system indexes performance, quality, adjective and corresponding explanations to a percentage of the potential Award-fee available during the evaluation period (NASA, 2001, Sec. 3.4.1) Appendix A shows an example of an adjective evaluation standards system recommended by the NASA *Award-fee Contracting Guide*.

G. THE AWARD PROCEDURE

The award procedure can be broken down into a three-phase process in most contracting arenas: evaluation of contractor performance, review of contractor performance, and determination of Award-fee by the FDO.

The first phase begins with the Government evaluation of the contractor's performance during the Award-fee or reporting period. In most cases, the individuals evaluating

the contractor are those that have the technical and business expertise in what the contractor has been contracted to accomplish during that period. These people may include the Administrative Contracting Officer (ACO), Defense Contract Audit Agency (DCAA) auditor, and other on-site representatives. These evaluators must understand the contract terms and conditions, the evaluation criteria, and the technical areas. The fundamental objective in this part of the process (during the contractor's evaluation of performance) is to have an government expert or the most experienced government personnel evaluate that particular portion of the contract in which they are proficient. The Government expert's evaluation is then presented in the form of a report to the appointed evaluation board members know as the Performance Evaluation Board (PEB). The exact number of reports is based on the number of evaluation periods established in the contract at the beginning of contract award in most cases, but are commonly monthly or quarterly. (Wight, 1984, p.31)

The next phase, phase two, is the review of the evaluations completed by the PEB. If the PEB were to become engaged in this process, its responsibility would be to analyze all of the evaluation reports and subjectively decide a performance rating for each pre-established evaluation criteria and an overall performance rating for the period for the contractor (Wight, 1984, pp. 31-32).

The third phase is the actual award by the Fee Determination Official (FDO). If the PEB is employed, it forwards the performance rating and recommended Award-fee amount to the FDO. The FDO then reviews the recommendation of the PEB, with the option to agree or disagree with the

recommendations and Award-fee amount. If a PEB does not assist the FDO, then the FDO must review the evaluation reports and determine an Award-fee amount. In major contracts, the FDO would be at the management level of the procuring activity (usually the Project Manager), while in smaller contracts, the Contracting Officer might carry out this function. After the FDO initial award determination is complete, a letter report is forwarded to the contractor explaining the performance grade and corresponding Award-fee, and including a list of all areas of performance improvement which, if incorporated, may result in potential additional Award-fees in future periods (Wight, 1984, pp. 32-33). The contractor has an opportunity to refute the FDO decision by presenting evidence in his favor to qualify the actions taken. However, once the FDO (possibly in consultation with the PEB) has reviewed the rebuttal and final Award-fee determination, the judgment is final and not subject to any further disputes by the contractor (Dept. of the Air Force, 2002, p. 13). (See Appendix B for an example of a Determination letter.)

1. NASA Evaluation of Awards-fee Contracts

When working with CPAF contracts, NASA personnel complete semiannual evaluations analyzing contractor performance and comparing it with the criteria specified in the contract. Throughout each period of evaluation, the contractor's performance is tracked and reported to the performance evaluation board (PEB). The PEB then continues to prepare the performance report forwarded to them with other important information and then forwards their information to the fee determination official (FDO), stating

their findings and recommendations for consideration. The contractor also has the option to submit its own self-assessment of its performance throughout the evaluation period. The FDO may meet with the PEB in review of the report. Thereafter, a final decision is made in writing as to the amount of fees to be paid. The FDO provides the determination to the Contracting Officer and a copy of the related document to the contractor (Dept. of the Air Force, 2002, pp. 13-16).

H. THE APPLICATION OF AWARD-FEES

For the Government to achieve the maximum benefits from the Award-fee process and its superior motivational elements, additional focus should be placed in the reduction of the administrative burden. However, in certain contract types, such as cost-reimbursement contracts, the Government should be already engaged in the majority of these actions. The Government should have a clear understanding of what truly motivates contractors to perform above-standard on contracts and use that information to leverage the desired outcome. The theory behind Award-fee contracts is to maintain authority over most, if not all, of the contractor's prospective profit as leverage (GAO, 2007, January, p. 4).

If a cost-plus-award-fee type contract is utilized properly, management is given a flexible tool that entices the contractors to enhance their performance. This type of contract is mainly suitable for support services that are usually associated with base maintenance and operations support contracts (Ault & Handy, 1986, May).

Cost-plus-award-fee contracts are appropriately used for:

- Work to be performed is such that it is neither feasible nor effective to devise predetermined objective Incentive Fees targets applicable to cost, technical performance, or schedule.
- The likelihood of meeting acquisition objectives will be enhanced by using a contract that effectively motivates the contractor toward exceptional performance and provides the Government with the flexibility to evaluate both actual performance and conditions under which it was achieved; and
- Any additional administrative effort and cost required to monitor and evaluate performance are justified by the expected benefits. (*FAR*, 2007, Sec 16.405-2(b)1)

CPAF contracts are especially useful in the procurement of support services associated base maintenance activities and the high-tech program adopted by NASA. Cost-plus-award-fee contracts are not used:

- As an administrative technique to avoid Cost-plus-fixed-fee contracts when the criteria for Cost-plus-fixed-fee contracts apply, nor shall a Cost-plus-award-fee contract be used to avoid the effort of establishing objective targets so as to make feasible use of a Cost-plus-incentive-fees type contract.
- Where the contract amount, period of performance or the benefits expected are insufficient to warrant additional administrative effort or cost. (NASA, 2001, Sec. 1.3)

While no regulations have designated a specific size and type of contract that must be in the form of CPAF, it is

the researchers' opinion that the Government should not enter into a CPAF contract when the benefits of doing so do not outweigh the costs.

If used properly in DoD procurements and acquisitions, Award-fee could be advantageous to both the Government and the contractor. Contractors that have outstanding performance receive the larger reward or fee based on the perspective of the Government, and the Government receives a product or service that meets or exceeds performance standards. The Award-fee, if used appropriately, can be an element of flexibility enabling the Government to take control of the contract in each award period. The DoD's addition of Award-fees creates tools that can potentially enhance the performance of the contractor (Burt, Dobler & Starling, 2003, p. 447.)

I. SUMMARY

In summary, an Award-fee, in DoD contracting, is money set aside by the Government to persuade the contractor to perform exceptionally—for a specified time based on the performance outcome stated in the contract. The main distinction among Award-fees and other fees is that unlike the base fee, the contractors' Award-fee is dependent on the Government's subjective evaluation of the contractor's performance. The subjective aspect provides flexibility in contracting situations in uncertain environments.

The objective of this chapter was to provide the readers the necessary material needed to understand the uses of Award-fee type contracts by clarifying cost-plus-award-fee contracts, variable contract elements, the award procedure, and the applications of Award-fee type contracts.

This next chapter will be a comprehensive overview of the principles and applications of Incentive Fee contracts.

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IV. CONTRACT INCENTIVE FEES

A. INTRODUCTION

This chapter will explain the principles and applications of Incentive Fee (IF) contracts. These contracts are used to obtain greater performance from contractors on Government procurements. In addition to reviewing the generalities of IF contracts, the researchers will discuss the objectives of the incentives and how to incorporate them into effective contract terminology.

A successful IF contract requires a top-notch, experienced Contracting Officer. This officer must have the knowledge base to derive meaningful Incentive Fees that motivate contractors to aspire to perform and achieve above-average results in categories of cost, schedule, and performance ("Negotiating," 2005, August, pp. 50-53). The principle understanding is initiated with a sound understanding of the industry, a founded risk assessment of the organization, and tactful negotiating skills. Evaluating the result of the programs, many times the Contracting Officer can discover that the incentive parameters are positively related to the return (Golec, 1993, November, p.1396). To manage effectively, the Program Manager and the Contracting Officer must hone these intuitive skills in order to formulate the right contract mode, at the right time, at the right place in order to fulfill objectives critical to the user.

B. OBJECTIVES

There are many variations of Incentive Fees. IF contracts use what is considered an objective evaluation of the contractors' performance to adjust the fee paid (GAO, 2005, December, p. 8). They allow for the Government and contractors to provide needed flexibility in acquiring a large variety and volume of supplies and services required by agencies (*FAR*, 16.401). Various IF contracts and the fashion in which they are written can subject either of the parties in the contract to a greater associated risk. In the case of IF contracts, both the contractor's responsibility for performance as well as the cost of the contract for profit or incentives offered are tailored to the uncertainties involved in contract performance (*FAR*, 16.401).

The criteria is conveyed either subjectively or objectively, depending on the standards of measurement that the Program Manager and the Contracting Officer deem appropriate. The *FAR* describes IF contracts as:

appropriate when a firm-fixed price contract is not appropriate and the required supplies or services can be acquired at a lower cost and in certain instances, with improved delivery of technical performance, by relating the amount of profit or fee payable under the contract to the contractors' performance. (*FAR*, 16.401)

IF contracts, by definition, require the Contracting Officer to write incentives that are measurable to encourage improvements in the contract that may have been otherwise unattainable by using traditional Firm-fixed contracting vehicles. The objective of IF-based contracts is threefold:

- a) To establish reasonable and attainable targets that clearly communicate to the contractor;
- b) To include Incentive Fees arrangements designed to motivate the contractor that might not otherwise be emphasized and also discourage waste;
- c) To ensure that when using predetermined formula types, evaluated contract outcome is commensurate with performance. (*FAR*, 16.401)

Information obtained from various sources and factors driven by the customers needs both equate to risk and the amount of risk that the Program Manager and/or the Contracting Officer is willing to accept on the acquisition. The type of analysis the Contracting Officer or PM uses when choosing and evaluating will indeed vary depending upon the circumstance of the contract. However, the results are weighted accordingly to produce the best applicable result. In order to align these factors, some consideration should be given for contractor aspirations.

Depending on the stakeholders IF factors will vary. While many differ from organization to organization, many are and have remained the same for decades. Some items that are important to companies are company growth, increased share of the defense market, public image, organizational prestige, carry-over benefits to commercial business, opportunities for follow-on business, and greater expectations for future growth and profit (Fox, 1974, p. 441). The dilemmas for many Contracting Officers involve how to arrange the contract in a way that provides the contractor the opportunity to accomplish these goals.

C. IMPLEMENTATION

IF contracts usually focus on cost control, although they can be used to motivate contractors to achieve specific delivery targets or performance goals in tangible areas such as range, speed, engine thrust, aircraft speed, and/or maneuverability, just to name a few, when dealing with major defense procurements (GAO, 2005, p. 6). IF are considered objective in nature, such that the criteria for deciphering the methodology normally involves one simplistic step followed by one of three evaluations:

1. The first basic step involves the Contracting Officer comparing the contractor's actual cost to target costs specified. Upon completion:
 - a. If contractor actual costs match the target cost, the DoD awards the contractor an amount called the target fee or target profit.
 - b. If contractor actual cost falls below the target costs, 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 costs.
 - c. If contractor 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 that actual cost is above the target cost. (GAO, 2005, pp. 8-9)

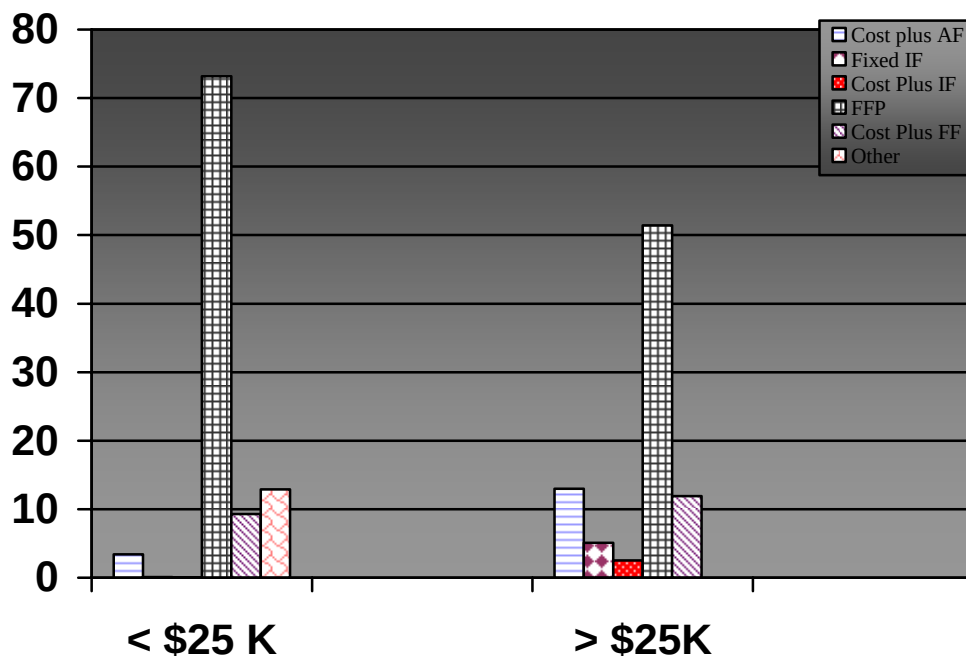


Figure 2. Distribution of Award and Incentive Fees
Contracts, FY 1999-2003 (GAO, 2005, p. 10)

Although the application of this formula appears to be relatively simplistic, it frequently involves the contribution of other variables that may dictate the outcome. In the DoD, professionals themselves have continued to exclaim that cost, delivery, and technical IF in certain acquisitions have a direct correlation to contractor performance; they are confident the application of IF is beneficial. This opinion, however, is contradictory to the information of the aforementioned recent congressionally mandated reports. The reports were short of citing Government contributions relating to Government delays, but were confident in distinguishing the consistent negligence of the DoD on fee application. Due to

the impact of the reports and their apparent circulation, program officials may consider rethinking their strategy and eliminate some IF structures in the future (GAO, 2005, p. 29).

It has been suggested that the present system of rewards and penalties in defense procurement discourages cost control and cost reduction (Fox, 1974, p. 439). Varying research attempts to rationalize the many reasons for this finding. Yet, one thing is clear: often the notion of "patriotism" is no longer an incentive. Competition, scarce resources, and time are all factors that deliberately place the contractor in positions in which presenting unrealistic proposals "covering cost" is the unwritten industry rule.

The only thing worse than a serious cost overrun, is a cost under-run of 15% or more (Fox, 1974, p. 440). Although each contract is determined to be evaluated "separately," when a contractor exceeds projected established criteria, it sets precedence, regardless of where gains were attained.

For instance, if, in fact, a typical base operational budget were to reduce cost by 10% in an average fiscal year, there would normally be "justified" reallocation of those funds elsewhere to fulfill other requirements. The intent of the base is to spend all of the remaining funds locally. The reason why is simple: if the funds were to be returned, the budget for next year would likely be approximately 10% less than the previous year. In essence, there is no incentive to save, other than the greater good. Contractors respond the same way with their budget as do base commanders. Consequently, future contracts are viewed in

respect to the cost savings from the previous contract award. To put it plainly, if such an under-run occurred, this would, in turn, endanger the vendor's relationship with the Contracting Officer and motivate the latter to negotiate lower target pricing on the next contract (Fox, 1974, p. 440).

Another insightful approach to an already controversial issue is that of NASA's top procurement official, Tom Luedtke. He ventured to rediscover the age-old technique of incentivizing contractors by developing a way to add performance Incentive Fees to contracts without paying high fees (Palmer, 2005, August, p. 22).

Attempting to cater to the frustrations of industry managers, the NASA began to experiment with another type of incentive, award term contracts, in an effort to reward companies for their excellent performance by extending their contracts instead of paying them more money (Palmer, 2005, August, p. 22). In an effort to find a win-win situation that would allow the Government to have another form of leverage for incentivizing contractors while still maintaining above-satisfactory degrees of cost, schedule, and performance, Luedtke discovered that extensions in the contract were more appealing to industry than the notion of just a fee (Palmer, 2005, August, p. 22).

Three years ago, John Sutton, Deputy Director of Contracting at the Air Force's Arnold Engineering Development Center in Tennessee, awarded a \$2.7 billion contract for the center's operations that could extend up to 12 years. Using the award-term incentive, he saved millions of dollars by avoiding annual competitions (Palmer, 2005, August, p. 22).

As with many contracts, the most critical element is to ensure that incentive metrics are properly aligned. Poorly designed or insufficient measures may result in unintended consequences. For example, one company tried to motivate data entry operators by paying a bonus for more than a certain number of keystrokes per hour. The operators soon learned they could "increase productivity" by repeatedly tapping a single key (Perkins, 2004, May 10). Evidently some metrics are seemingly clear to some, but are openly ambiguous to others.

D. ELEMENTS OF INCENTIVE FEES

There are many forms of contracting incentives. They can be arranged in various ways within the contract to deliver the desired result. They stem from any of the three primary functions of the PM—that is, to incentivize for cost, schedule, and performance. If the desired outcome is tiered, then it may be optimal for the CO (in coordination with the PM) to organize an incentive for multiple aspects of the contract.

There are multiple ways that an IF contract can be structured. The modes in which it is implemented will vary based on the degrees of risk assessed in the procurement. Modes range from Firm-fixed-pricing (FFP) to Cost-plus (CP) type contracts. The following factors should be included to justify the correct contractual instrument for the procurement (*FAR*, 16.104):

Price competition is defined as an effective price competition, which results in realistic pricing. A fixed-price contract is ordinarily in the Government's interest.

Price analysis, with or without competition, may provide a basis for selecting the contract type. The degree to which price analysis can provide a realistic pricing standard should be carefully considered.

Cost analysis can be used in the absence of effective price competition. If price analysis is not sufficient, the cost estimates of the offeror and the Government provide the basis for negotiating contract-pricing arrangements. It is essential that the uncertainties involved in performance and their possible impact upon costs be identified and evaluated, so a contract type that places a reasonable degree of cost responsibility upon the contractor can be negotiated.

Type and complexity of the requirements, particularly those unique to the Government, usually result in greater risk assumption by the Government. This is especially true for complex research-and-development contracts, in which performance uncertainties or the likelihood of changes make estimating performance costs in advance difficult. As a requirement occurs, cost risk should shift to the contractor, and a fixed-price contract should be considered.

Urgency of the requirement is deemed as a primary factor. The Government may choose to assume a greater proportion of risk, or it may offer Incentive Fees to ensure timely contract performance.

Period of performance or length of production run can be evaluated in times of economic uncertainty; contracts extending over a relatively long period may require economic price-adjustment terms.

Contractor's technical capability and financial responsibility.

Adequacy of the contractor's accounting system should be reviewed before a Contracting Officer agrees on a contract type other than firm-fixed-price. The Contracting Officer shall ensure that the contractor's accounting system will permit timely development of all necessary cost data in the form required by the proposed contract type. This factor may be critical when the contract type requires price revision while performance is in progress, or when a cost-reimbursement contract is being considered, and all current or past experience with the contractor has been on a fixed-price basis.

Concurrent contracts. If performance under the proposed contract involves concurrent operations under other contracts, the impact of those contracts, including their pricing arrangements, should be considered.

Extent and nature of proposed subcontracting. If the contractor proposes extensive subcontracting, a contract type reflecting the actual risks to the prime contractor should be selected.

Acquisition history. Contractor risk usually decreases as the requirement is repeatedly produced. In addition, product descriptions or descriptions of services to be performed can be defined more clearly. (*FAR*, 16.104)

According to the *FAR*, these are the most common categorical areas into which contract requirements can be segmented. Although there maybe others, COs have learned to used these areas in contract determination.

E. ESTABLISHING INCENTIVE FEES CRITERION

There are two distinct categories in which contract IF criterion is based: subjectivity and objectivity. Both classifications of contract Incentive Fees are typically

categorized as either positive Incentive Fees or negative Incentive Fees or some combination thereof (Garrett, 1997, p. 95).

Subjectively based contract Incentive Fees are those that use individual judgment, opinions, and informed impressions as the basis for determining the amount of Incentive Fees, either positive or negative, awarded in designated areas (Garrett, 1997, p. 95). The key to subjective IF is ultimately determined by one or more individuals making a decision based upon his/her experience, knowledge, and the available information—a total judgment (Garrett, 1997, p. 95).

In contrast, objective Incentive Fees can be identified, based, and evaluated, on facts and or actual events. Objective fees are commonly applied to Incentive Fees contracts seeking to improve cost, schedule, and performance. The next section on implementation will describe and reference examples of how quantitative Incentive Fees should function to achieve desired objectives.

Types of Incentive Fees	Positive Negative	No Reward
Objective Incentive Fees		
Cost Performance	Under	On
Schedule Performance	Over	
Quality Performance	Early	On
	Late	
	Exceed	Achieve
	Under	
Subjective Incentive Fees		
Award-fee	Exceed	Achieve
Other Special Incentive Fees	Under	

Figure 3. Incentive Fees Matrices (Garrett, 1997, p. 97)

F. PROCEDURE FOR IMPLEMENTING

1. Incentive Fees Based on Cost Performance

Cost is the most sought-after performance variable. The procedures for Incentive Fees based on cost-performance contracts are as follows:

The parties negotiate a target cost and a target profit (which equals the target price) and the sharing formula that will be applied to cost over- and under-runs.

A sharing formula is negotiated for cost over-runs and under-runs.

Lastly, a ceiling price is negotiated, normally referred to as the Point of Total Assumption (PTA) that is normally the DoD maximum dollar liability. (Garrett, 1997, p. 96)

Gregory Garrett's scenario that follows illustrates the correct application of an Incentive Fee structure.

Scenario 1:

Target cost: \$20,000,000

Target Profit: \$2,000,000

Target Price: \$22,000,000

Sharing Formula: 75/25 Over-run (buyer 75% and the seller at 25%), 50%/50% under-run

Ceiling price: \$24,500,000 (122.5 of target cost)

In a given procurement for armored personnel carriers, the work amounted to an actual cost of \$21M dollars, respectively over-running the target cost by \$1M. The contractor's share of the overrun is 25%, which is \$500K. The target profit is then consequently reduced by the amount of the contractor's share. At the end of the project, the contractor would receive the \$21M in cost performance plus an earned profit of \$1.5M. The DoD then reaps the benefit of the total cost of the project being \$22.5M, a total of \$2M below the ceiling price. The \$750K represents the DoD 75% of the cost overrun (Garrett, 1997, p. 96). As the cost of the project increases, there is reverse correlation in the profit.

In this particular scenario, the question begs to be asked, "Do these ratios apply regardless of the cost?" The answer is no. When the PTA is met, the sharing cost

arrangements shifts to essentially a 0/100 share ratio. Mathematically, the PTA is described as the following formula:

$$PTA = \left\{ \frac{Ceiling\ Price - Target\ Price}{Buyer\ Share\ Ratio} \right\} + Target\ Cost$$

Equation 1. PTA Equation

(Garrett, 1997, p. 96)

Graphically, this formula can be displayed in the following representation:

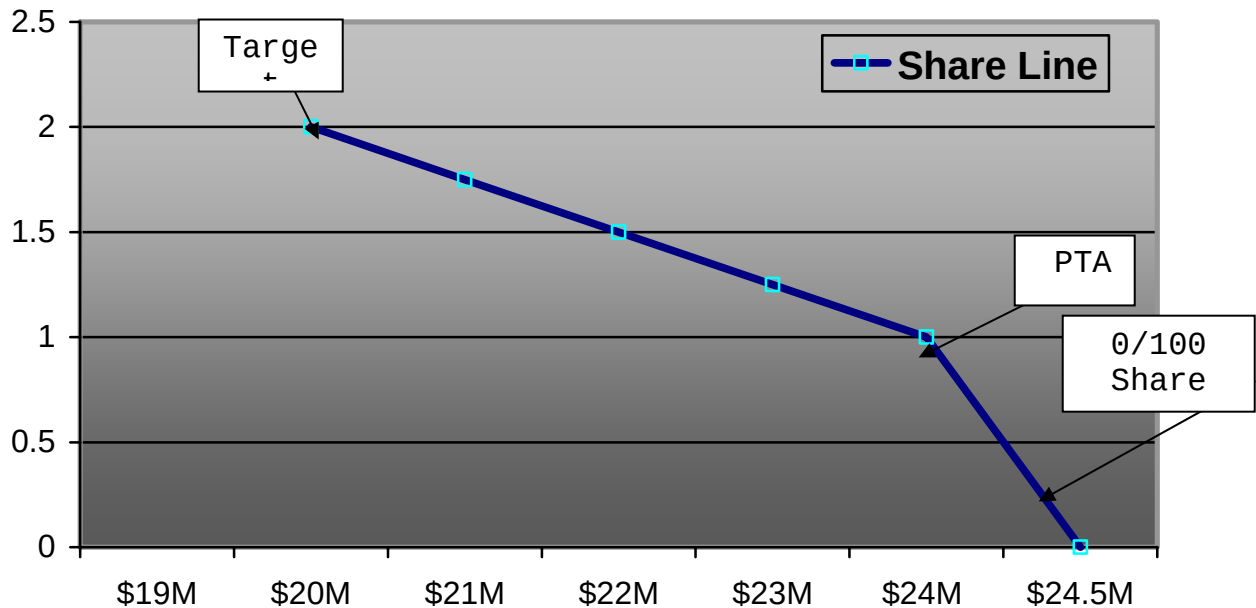


Figure 4. Share Ratio

(Garrett, 1997, p. 96)

Scenario 2:

Using the same scenario, let us assume that the contractor had a cost under-run for the same project. In

the scenario, the costs saved by the contractor have a greater benefit to both parties. Let us assume that the under-run is \$1M. Consequently, as described earlier, the contractors share is 50% or \$500K. The total cost that the contractor would be entitled to is \$500K plus the \$2M in target profit in addition to the \$19M in actual costs. This cumulatively brings the total to \$21.5M. The contractor in this scenario enjoys greater profit, while the buyer enjoys savings as well. The buyer's 50% is reflected by the \$21.5M cost, which is \$500K under the target price (Garrett, 1997, p. 96). Although there appears to be only one benefactor in this entire scenario, the contractor accumulates a greater profit by savings in cost, vice just having his cost covered in the overage scenario.

2. Incentive Fees Based on Schedule or Delivery Performance

In DoD procurement, the Government often wants things to happen "yesterday." We often motivate contractors with negative incentives for late delivery, such as liquidated damages. The FAR states that liquidated damages are not punitive and are not negative performance Incentive Fees; however, frequently this is how they are viewed (FAR, pp. 11-501). The purpose of liquidated damages is to compensate the Government for probable damages. Therefore, the liquidated damages rate must be a reasonable forecast of just compensation for the harm caused by late delivery or untimely performance of the particular contract. The CO should use a maximum amount or a maximum period for assessing liquidated damages, if these limits reflect the maximum probable damage to the Government (FAR, p. 11-501).

It is essential that Contracting Officers use good judgment when applying liquidated damages. They must consider the potential impact on both pricing competition and contract administration (*FAR*,, p. 11-501). Mainly, liquidated damages are used when the time of delivery or timely performance is so important that the Government may reasonably expect to suffer damage if the delivery or performance is delinquent; and the extent or amount of such damage would be difficult or impossible to either estimate accurately or prove (*FAR*, p. 11-501). Negative incentives such as liquidated damages are only one type incentive used to improve performance; positive incentives can be used to facilitate work as well.

A best practice for contracts is to seek positive Incentive Fees for early delivery and early schedule performance. One such example of successful incentives was a recent urgent need due to a devastating event affecting the livelihood of an entire metropolitan area. A portion of the I-580 Bridge in Oakland, CA, melted due to a gasoline tanker exploding into one of the support beams.

The California Department of Transportation (CALTRANS) was in dire need of a qualified contractor to quickly and inexpensively perform the restoration work. Thus, CALTRANS derived the following:

- CALTRANS officials worked to speed the process by preparing a list of potential contractors it knew could do the work quickly and by streamlining its process, clearing as much red tape as possible.
- Then they drew up a contract offering a \$200,000 bonus—with a limit of \$5 million—for each day the work was

done in less than 50 days and levying a \$200,000 penalty for each day after that deadline. (Cabanatuan, 2007, May 25)

The rebuild was complete in what many perceived to be impossible—a mere 25 days. According to the contractor on this job, CC Meyers, there were other externalities that contributed to the expedient replacement of the inter-connect. The non-adversarial teamwork of CALTRANS made flow of information and on-the-spot decision-making seamless. According to Carl Douglas, a production manager for one of the sub-contractors, Stinger Welding, a steel fabrication firm in Arizona:

CALTRANS came in and put good people in our shop, if there were any problems, we could go to them and get immediate answers. Usually (done by phone, fax or e-mail), it takes weeks. It was a breath of fresh air to have a Government agency come in and perform like that.

Stinger finished the girders in nine days—a job that would normally have taken about 45. (Cabanatuan, 2007, May 25)

Additionally, he mentions the flexibility of CALTRANS on some of their processes. In another example, instead of requiring the contractor to wait for detailed construction drawings to be approved, CALTRANS agreed to let the work start while they were being reviewed. It was a risk for both the contractor and CALTRANS...but was a relatively "safe bet" "because the work was so straightforward." It ended up saving about five days. (Cabanatuan, 2007, May 25)

When determining what type of performance Incentive Fees will be given to the contractor, the CO and the PM must understand what drives the industries' willingness to innovate and excel. In the I-580 rebuild, it was simple,

"It's not about making a huge profit, it's about getting the job done and pointing out that you're one of the best contractors in the industry" (Cabanatuan, 2007, May 25).

3. Incentive Fees Based on Quality Performance

The inherent issues of quality affect the performance of contracts. The plethora of administrative paperwork, to include but not limited to: deficient statements of work, poor contract administration, and performance delays, are indicative of quality shortcomings (Garrett, 1997, p. 100). A way that contractors and the DoD seek to mitigate quality issues is to be proactively involved in each project. This means that the IPT should work in cohesion using risk-mitigation tactics to offset known or probable issues with the procurement. The rankings and distribution of the risk will equate to tradeoffs in cost, schedule, or performance. The critical factor is determining which tradeoff is less of a risk to the specific project. Any neglect in these areas reduces the quality of the project and could result in increased costs, lengthier delivery, or decreased performance. All parties involved in the procurement are responsible for the overall quality of the project.

G. INHERENT PROBLEMS

When a PM or CO is writing contracts, there is not a one-size-fits-all approach to the application of Incentive Fees. Writing varies by personal style, but structure remains consistent within an organization. Before writing a contract, the CO and the PM must understand typical issues that arise from writing IF proposals.

Objective IF face three problematic issues:

They assume a level of buyer and seller competence that may not exist.

They assume many effects that may not occur.

They create serious challenges for contract administration. (Garrett, 1997, p. 100)

IF assume that both the Government and the contractor are fully reliable in their specific roles and responsibilities in the contract. This is frequently not the case. Contracting personnel sometimes find after contract award that the contractor has committed to unreasonable, vague, or interpretive Government expectations. In this scenario, open communication is absent, causing the Government to expect results that the contractor cannot provide (Garrett, 2007a, p. 11). Indeed, before the contract starts, it may already be behind schedule. This, in turn, may affect the delivery of the procurement, the funding of the procurement, as well as the quality of the end-product.

The second notion, assumptions of effects, relates to the understanding the industry and the company to which the DoD awarded the contract. In many cases, the Government assumes that providing the contractor with additional funds is an incentive to obtain greater performance. Although contract managers would approve of only one approach to objectively incentivized contracts, the DoD is discovering other means that produce desired results. Subsequent contract Award and recognition are a few incentives that are being experimented with currently as a driver for "above average" contractor performance. Aside from the above

assumptions, other problems stem from Incentive Fees statements. To write effective Incentive Fees contracts, many Contracting Officers seek to establish basic outlining principles that would facilitate a cognitive contract structure.

In order to mitigate the burden of administration, Contracting Officers should seek guidance in writing specialized Incentive Fee criteria. Using specialized incentives creates fee criteria that can be objectively measured, mitigating the administrative burden. According to Garrett, the following best practices should be used when writing Incentive Fees contracts:

- Think creatively. Creativity is a critical aspect in the success of performance-based Incentive Fees contracting.

- Avoid rewarding sellers for simply meeting contract requirements.

- Recognize that developing clear, concise, objectively measurable performance Incentive Fees will be challenging. Plan accordingly.

- Create a proper balance of objective Incentive Fees, cost, schedule, and quality performance.

- Ensure that performance Incentive Fees focus the seller's efforts on the buyer's objectives.

- Make all forms of performance Incentive Fees challenging, yet attainable.

- Ensure that Incentive Fees motivate quality control and that the results of the seller's quality control efforts can be measured.

Consider tying on-time delivery to cost and/or quality performance criteria.

Recognize that not everything can be measured objectively. Consider using a combination of objectively measured standards and subjective determination Incentive Fees.

Encourage open communication and ongoing involvement with potential sellers in developing the performance-based Statement of Work (SOW) and the Incentive Fees plan, both before and after issuing the formal request for proposals.

Consider including socio-economic Incentive Fees (non-SOW related) in the Incentive Fees plan.

Use clear objective formulas for determining the Incentive Fees.

Use positive and negative Incentive Fees, and ensure that they have limits. (Garrett, 1997, p. 102)

Contract administrators can use the above suggestions as a basic guide for how to write an effective Incentive Fees statement. In many organizations, leadership, industry, and effective style will produce a clear objective; the right incentive will decide the outcome.

Other inherent problems that may be attributable to inaccurate and ineffective contract writing, are as Farrior describes as "concerns over the imbalance of resources and workload with the acquisition force" thus leading to the last associated risk (Farrior, 2003, July, p. 31). Issues not mentioned, such as delays, many times are inherent with incentive-type contracts. According to the GAO, it discovered during its investigation that "because of Government delays, program officials decided to eliminate

delivery Incentive Fees included in the initial contract" (GAO, 2005, December, p. 29). This problem is inherent within the Government bureaucracy of programs and levels of management. This does not mean that the Incentive Fee structure failed, but that the Program Manager failed to ensure the Incentive Fees had inputs achieve the desired contract results. Awarding large amounts of fee for satisfactory performance and offering contractors multiple chances to earn previously withheld fees, program managers and contracting officers are continuing to foster an environment in which the DoD expects to pay, and contractors expect to receive, most of the entire available award pool, regardless of the project's outcome (GAO, 2005, p. 33).

The DoD, as well as agencies such as NASA and the Department of Homeland Security, continues to struggle in identifying when a particular contract mode and/or methodology would best fulfill Government needs. New methodologies require examination to determine if, in fact, there are other ways to achieve the end-result. Change must be evaluated. Many times, instead of researching the true motivation of the contractor, the DoD may dilute the motivational effectiveness of fees by paying significant amounts for merely satisfactory performance (GAO, 2005, p. 23). The bottom line is that regardless of Incentive Fees used, a program that is not well conceived, planned, managed, funded, and supported, may be easily subject to problems such as cost growth, schedule delays, and/or performance shortfalls (GAO, 2005, p. 14).

Just as the NASA FAR supplement emphasizes, cost control should be balanced against other performance requirement objectives, and the contractor should not be

incentivized to pursue cost control to the point of degrading the overall performance (NASA, 2007,p. 8). Some programs have structured fees to focus on acquisition outcomes, such as the Missile Defense Agency's Airborne Laser program. This contract includes structured Incentive Fees to link the demonstration of the system to the fee payments. This will ensure that they are more representative of the program's success (GAO, 2005, p. 4). In order for procurement officials to effectively manage incentive fees, basic principles must be reinstituted. Failure to use common-sense policy and acquisition skills will no doubt contribute to this. As the GAO claims, "Incentive Fees do not consistently motivate contractors" (GAO, 2005, p. 4). Lastly, although cost is the most commonly chosen performance variable, it may not be the motivating factor (Burt, Dobler & Starling, 2003, p. 442). Cost incentives will only operate effectively in an environment in which cost savings are reasonable. There are many ways to incentivize contractors. Partnerships with industry, trained and educated personnel, and a well-versed IPT can prepare contract managers for effective incentive tactics. Cost is the most commonly chosen performance variable (Burt, Dobler & Starling, 2003, p. 442).

H. SUMMARY

In summary, it is important to identify the true motivation of the contractor. Many studies performed by various institutes have discovered that 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 (GAO,

2005, p. 31). Contractors themselves have admitted that fees do motivate to some extent; however, the consensus is that they are not the primary means, in and of themselves, for increasing performance significantly (GAO, 2005, p. 31).

This chapter discussed key elements of Incentive Fees. The researchers contend that in order to better perform an analysis of the survey responses, the readers should understand the generalities of Incentive Fees. This chapter focused on the objectives of Incentive Fees, implementation, how to establish the proper Incentive Fee criterion, and the inherent problems with incentive fees. The next chapter will focus on the core of the research. It will analyze the survey material administered at the 45th Annual Aerospace and Defense Contract Management Conference.

V. ANALYSIS OF CONTRACTOR AND GOVERNMENT RESPONSES

A. INTRODUCTION

The preceding chapters provide the foundational support for comprehending what contract Incentive Fees and Award-fees are, which included the definition and the use of fee-type contracts. The purpose of this chapter is to analyze the data obtained during the 45th Annual Aerospace and Defense Contract Management Conference to determine if either Government and/or industry agreed or disagreed with the GAO reports. Before the data is analyzed, the GAO report will be reviewed; the researchers will examine the current issues and recommendations the GAO cited in its reports (06-66 (2005, December) & 06-409T (2005)) as an overview. We will then compare them to the data obtained from the surveys. In addition, an anonymous DoD Program Manager's (PM) comments pertaining to the GAO recommendations mentioned above will be analyzed. Then, an anonymous NASA Contracting Officer's (CO) opinion will be discussed (his comments are similar to the organizational issues that will be addressed from the GAO report 07-58) in order to examine NASA's processes. By doing so, the researchers hope to identify possible solutions the DoD may incorporate into its Incentive Fee and Award-fee contract processes. Lastly, this chapter will summarize the compiled data that was analyzed.

B. SURVEY OF INDUSTRY AND GOVERNMENT RESPONSES

The purpose for the surveys was to obtain both DoD personnel and contractors' opinions to determine if they agreed with the GAO reports (Dept. of the Air Force, 2002; GAO, 2005). The research was conducted at the 45th annual National Contract Management Association (NCMA) Aerospace and Defense conference in Garden Grove, California, from 26 through 27 July 2007.

Founded in 1959, the NCMA exists to enable the workforce to grow professionally, assess individual and organizational competency against professional standards, establish values, develop best practices, and provide access to skilled individuals, enabling enterprises to improve their buyer-seller relationships (NCMA, 2006). NCMA is a membership-based, professional society whose leadership is comprised of volunteer elected officers. The focus or theme for the NCMA conference this year was "Rules, Risks, and Rewards, The Changing Outlook for Aerospace and Defense Contracting." The 45th annual NCMA conference consist of knowledgeable acquisition and contracting management professionals and their familiarity with Government contracting. Contract management professionals attending the conference possessed experience and knowledge ranging from systems-level program management to base-level support contracting. Also attending the conference were contractors with years of contracting experience—ranging from operational, small-dollar contracts to multi-million dollar defense contracts. A major portion of the research findings

from this project came from Government and contractor surveys (See Appendices C and D) that were distributed at the NCMA conference.

The survey questions were developed with assistance from NPS Professors. All surveys were anonymous, only stating whether the individual was a Government employee or industry professional (a contractor that has worked on Government contracts). The survey questions presented at the conference were based on statements from the two reports (06-66 (2005, December) and 06-409T (2005)) written by the GAO.

The contractor's survey consisted of seven total statements assessing whether the individual agreed or disagreed with the reports' conclusions. Responses ranged from strongly agree to strongly disagree (See Appendices C and D). The Government and contractor surveys were comprised of identical statements. The Government surveys, however, included six additional statements that will be analyzed individually after the seven identical statements are analyzed. The additional Government statements relate more to the internal knowledge and in-depth understanding of the DoD.

There were 102 total responses, which included 26 Government responses (with 19% leaving comments), and 76 contractor responses (with 32% leaving comments). In the individual survey analysis section of the chapter, the options "Strongly Agree" and "Agree" will be combined for simplicity. This will also apply to the options "Strongly Disagree" and "Disagree." Thus, when the calculations are shown, "Agree", "Disagree" and "Neutral" are the only titles in the analysis.

C. BACKGROUND

1. Review of the GAO Report 06-66 & 06-409T

GAO Reports 06-66 (2005, December) and 06-409T (2005) are, in fact, two separate reports; however, these reports do identify similar issues. For instance, one topic noted in both reports relates to Award-fees in relation to contractor accountability for achieving desired outcomes. Another related example was the paying of contractor Award-fees for satisfactory performance and the granting of second chances to obtain unearned fees for a previous Award-fee period.

The DoD allows its contractors to receive billions of dollars due to financial Incentive Fees (Award and Incentive Fees). These fees are aimed at incentivizing the contractor to complete requirements with above-satisfactory performance in sections that are considered essential to an acquisition program's success. Award-fees are especially suitable in instances in which contracting and program officials cannot create objective IF fee targets associated to the cost, technical performance, or schedule.

The GAO was asked to verify if Award and Incentive Fees have been used successfully as a means for reaching the DoD's desired acquisition outcomes. The GAO review was conducted from February 2004 to November 2005. The GAO selected a prospective sample of 93 contracts from the study population of 597 DoD Award and Incentive Fees-fee contracts. These were active between fiscal years 1999 and 2003, included at least one fee using cost-plus-award-fee and cost-plus-incentive-fees-fee, as well as other contracts involving Award and Incentive Fee type contracts with a fee

valued at \$10 million or more during that period. Unless otherwise noted, the estimates in this report related to AF and IF contracts in this population, the subpopulation of Award-fee contracts, and the evaluation periods associated with contracts described in the two previously mentioned situations that were accomplished during the GAO review. The estimates of total Award-fees earned and total Award-fees earned after contractors received a second chance are based on all evaluation periods held from the start of the GAO sample contracts through the GAO's data collection phase (GAO, 2005, December, pp. 2-3).

Out of the 597 contract reviews by GAO, a sample of 93 contracts was selected: 52 contracts dealt with only Award-fee provisions; 27 contracts included only Incentive Fees provisions, and 14 had both Award and Incentive Fees provisions. The types of contracts for products and services analyzed in the GAO assessment included: ship construction, aircraft and aircraft-related procurements, non-research-and-development services, and research-and-development projects. The GAO interviewed program officials on issues relating to the growth, implementation, and effectiveness of the Award and Incentive Fees structures using a standard questionnaire. It also analyzed these officials' remedies for each of the 93 contracts in its sample. The GAO also accessed information related to these areas and examined fee payments in the context of program performance. The GAO gained insight from acquisition policy officials and also examined recent policy initiatives, reports, and audits related to the DoD's use of Award and Incentive Fees (GAO, 2005, December, pp. 2-3).

2. GAO Findings for 06-66

The GAO found that DoD customers are tolerating cost overruns and delays in order to receive the requested program or acquisition. The DoD existing methodology concerning monetary Incentive Fees reveals these truths has resulted in numerous unsuccessful attempts at holding the contractors liable for delivering and supporting fielded capabilities within cost and schedule baselines. While the DoD and contractors share the responsibility for program success, effective utilization of Award and Incentive Fees must be restructured to support program outcomes. The issue of contractors receiving awards for satisfactory performance generates from poor training among other inefficiencies within the DoD. This trend will affect critical milestones within programs and overall success of acquisition, if change does not occur. 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 the DoD expects to pay and contractors expect to receive most of the available Award-fee regardless of outcomes. In addition, the DoD 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 losses.

3. GAO Recommendations

GAO recommendations to improve the link between program outcome and contractor performance is the DoD must have accountability for the effects of the types of incentives used in relation to contractor results achieved. The

Secretary of Defense, Undersecretary of Defense for Acquisition, Technology, and Logistics incorporating seven actions, also mandated this.

The DoD must instruct the military services to restructure their Award-fee criteria so that they are more outcome-related, realistic, and ensure accountability for the overall outcomes. The DoD must also ensure that Award-fee structures are incentivizing exceptional contractor performance by only paying Award-fees for above-satisfactory performance, and require the appropriate approving officials to review new contracts to make certain that these actions are being carried out. The DoD has the ability to enhance its use of Award-fees on all open contracts by distributing DoD guidance on when the use of a roll over is acceptable. In the future, the DoD has an opportunity to refine its use of Award and Incentive Fees by creating a method for compiling Award and Incentive Fees-fee data within existing data systems to gauge the effectiveness of Award and Incentive Fees as a medium for sharpening contractor performance and achieving desired program outcomes. The GAO's final recommendation to the DoD is to establish a system to share reliable Incentive Fees strategies for the acquisition of different types of products and services with contracting and program officials throughout the DoD.

D. FINDINGS AND ANALYSIS

1. Analysis I

The DoD Acquisition Process for Weapons Programs Consistently Yields Undesirable Consequences—

Cost Increases, Late Deliveries to the War-Fighter, and Performance Shortfalls.

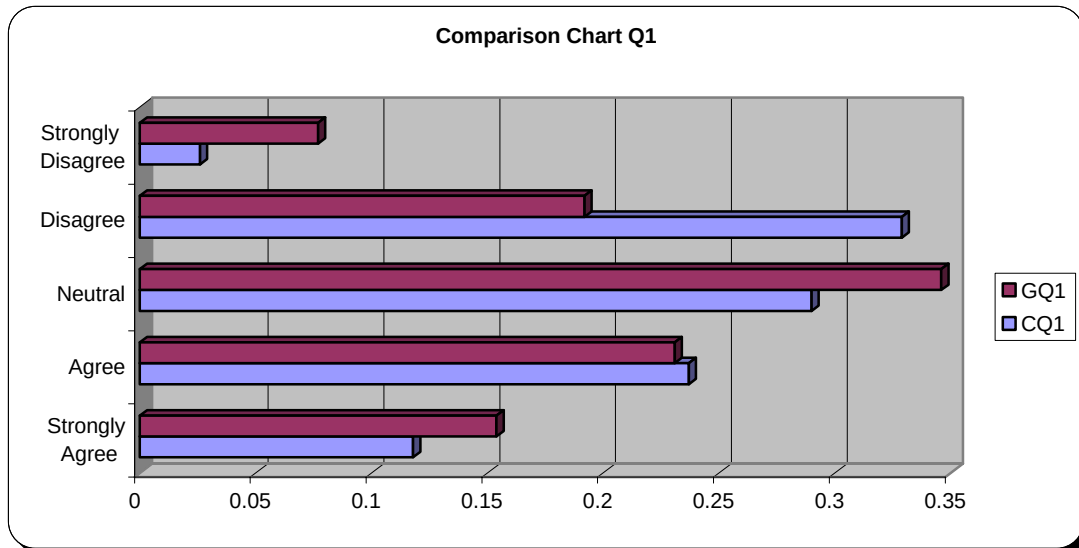


Figure 5. Comparison Chart Statement 1 Contractor Q1

Government Analysis

26.9% of Government respondents overall disagreed with this statement. 34.6% of Government personnel were neutral to Statement 1, while 38.5% overall agreed with the statement. (See comparison chart Q1 above.)

Contractor Analysis

35.5% of contractor respondents overall disagreed with the GAO report on the statement listed above. 29% of industry contractors were neutral on this statement, while 35.5% of the industry contractors who participated in the survey agreed with the statement. (See comparison chart Q1 above.)

Comparison Analysis

By evaluating the percentages of the surveyed responses, the researchers find that DoD contracts do not have adequate acquisition processes in place to meet the war-fighters' needs. Comprehensive analysis suggests, based on respondents' experience utilizing Award and Incentive Fees, that there is not an adequate process in place to meet mission needs and capabilities. This issue is generated by a number of internal and external deficiencies, like pre-planning for the acquisition program and collaborating with industry. In the pre-planning stages, the Government should be accomplishing market research, trying to understand the industry capabilities available to meeting mission requirements. This is only one solution to assist in conceptualizing requirements and what it will take to complete those requirements. Based on the GAO reports' assessment and the agreement of both the Government and industry, there are significant problems with the DoD acquisition process.

Listed below are some comments from Government and industry personnel. 26.9% of the Government acquisition employees disagreed with this statement. Survey 4 was included in that percentage, which mentioned that the GAO only used a fraction of the Incentive Fees and Award-fee contracts available to the DoD. If the GAO reviewed the entire list of contracts in the DoD, the numbers would then be scaled correctly. Survey 14 (contractor) makes mention as to why they did not have much success working on DoD acquisitions. The comments made by Survey 14 suggest other

areas that may have lead to the undesirable consequences. These specific surveys are cited below.

Government Survey 4

A few large dollar contracts incentivizing narrow areas without regard for larger cost, schedule, or quality issues skew the evaluation of hundreds of smaller Award-fee contracts properly managed and Award-fee applied.

Contractor/Industry Survey 14

1. The goal is to win the contract; however pricing is not always aligned with the requirement.

2. Performance metrics are not clear in the Request for Proposal (RFP) process.

3. Poor Statements of Work (SOW) both the agencies generated and contractor's proposals are usually poorly written and inconsistent with intent.

4. Clarification of system contracts and visibility into effort usually occurs after preliminary design.

5. Drawings, specifications are usually not finalized until the program has started.

6. Baseline cost is usually established on out- dated pricing with little visibility into the subcontracted effort until after award.

2. Analysis II

Award and Incentive Fees are not Effective Tools for Achieving the DoD Desired Acquisition Outcomes.

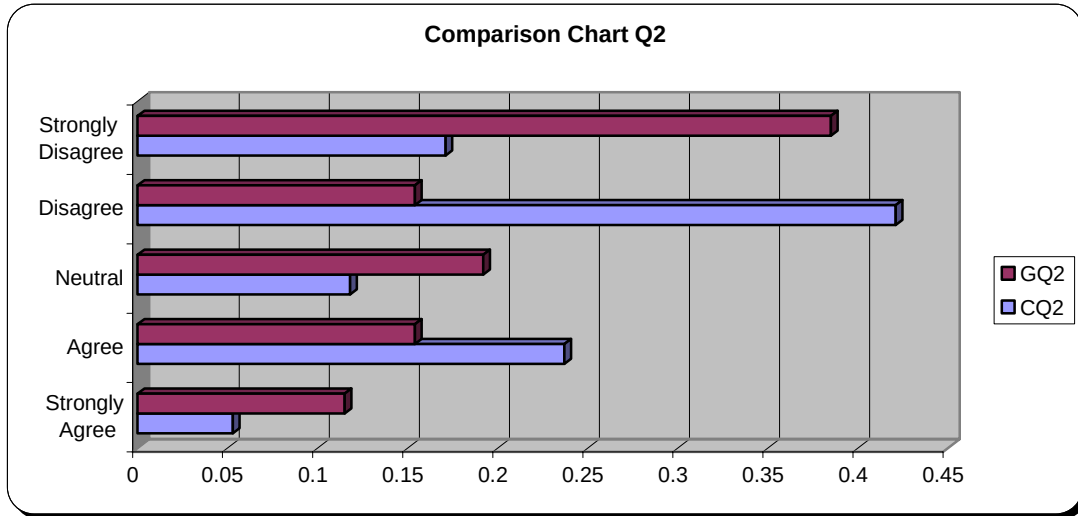


Figure 6. Comparison Chart Statement 2 Contractor Q2

Government Analysis

54.9% of Government respondents disagreed with this statement. 19.2% of Government respondents were neutral on Statement 2, while 26.9% overall agreed with this statement. (See comparison chart Q2 above.)

Contractor Analysis

59.2% of contractor respondents overall disagreed with the GAO report on Statement 2 listed above. 11.8% of industry contractors were neutral on this statement, while 29% of the contractors that participated in the survey agreed with this statement. (See comparison chart Q2 above.)

Comparison Analysis

The goal of Award and Incentive Fee contracts is to motivate contractor performance. Both the Government and the

contractor respondents involved in the survey agreed that Award and Incentive Fees are effective tools for obtaining desired outcomes, if executed properly. Therefore, there may be a discrepancy regarding the proper use of these types of Incentive Fee contracts. Most Government and contractor respondents believed that poor training and enforcement of the policies already in place was the dilemma. That observation was, in fact, the opposite of what was inferred in the GAO reports.

Listed below are some comments from both parties concerning this statement. Government Survey Respondent 1 was among the 54.9% that disagreed with this statement, but have some reservations as to how the Government utilizes Incentive Fees. Contractor Survey Respondent 7 was also among the majority of industry that disagreed with this statement.

Government Survey 1

The DOD acquisition process consistently delivers effective weapons systems. We have been the best-equipped military in the world. Incentive Fees, by and large, have been very poorly used, and when used not always enforced. Award-fees should be a small portion of the reward (earnings) available for any weapons system.

Contractor/Industry Survey 7

I am a contract representative for a CPAF contract. I believe that the Government has done an excellent job in managing this contract. A CPAF contract increases the opportunity for rewarding innovative suggestions that increase services and satisfaction for the Government. Award-fees also increase contractor performance. Our team

works extremely hard and always places customer service on the forefront of our minds. The metrics that are used to measure performance on this contract are all inclusive and very strict. The Government has truly set very high standards of performance.

3. Analysis III

The DoD Gives Contractors Multiple Chances to Earn Award-Fees that they Failed to Earn in Previous Evaluation Periods, Informally Known as "Roll Over."

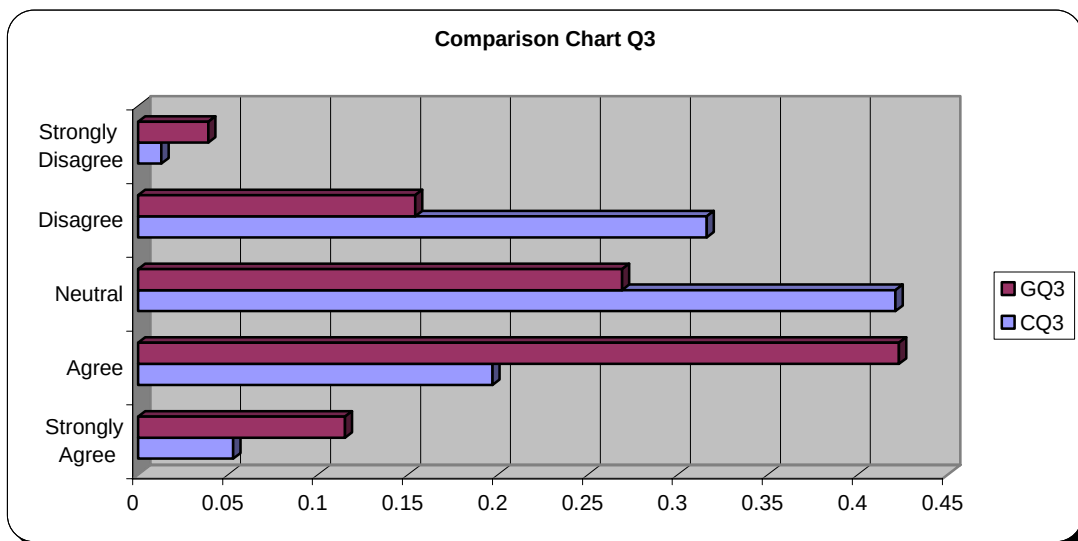


Figure 7. Comparison Chart Statement 3 Contractor Q3

Government Analysis

19.3% of Government respondents overall disagreed with this statement. 26.9% of Government personnel were neutral, while 53.8% overall agreed with the statement. (See comparison chart Q3 above.)

Contractor Analysis

32.9% of contractor respondents disagreed with the GAO report on Statement 3 listed above. 42.1% of contractor respondents were neutral, while 25% of the contractors that participated in the survey agreed with Statement 3. (See comparison chart Q3 above)

Comparison Analysis

Based on the data acquired from the survey, more than half of the Government respondents agreed with the GAO regarding this statement. The majority of the contractor respondents stayed neutral. The Air Force *Award-fee Guide* (2002) allows for "rollovers" in certain situations and with the approval of the FDO under section 4.5 of guide. In the NASA *Award-fee Contracting Guide*, it mentions that "roll over" is non-permissible in service contracting. When a fee remains from a previous period, "roll over" is not automatic. Specific provisions only make it applicable in certain scenarios. However, rolling over fees can be in the Government's best interest if a program has the potential for failure in some instances (Garrett, 2007a, p.13).

***No respondent comments were made pertaining to this statement.**

4. Analysis IV

Monetary Incentive Fees Provisions Improve Performance on DoD Contracts.

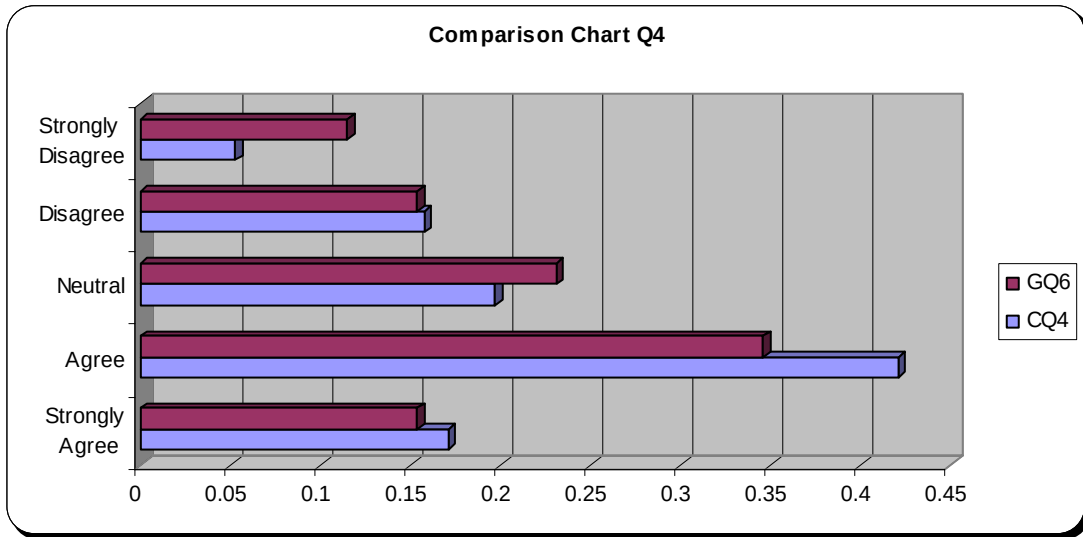


Figure 8. Comparison Chart Statement 4 Contractor Q4

Government Analysis

26.9% of Government respondents disagreed with this statement. 23.1% of Government respondents were neutral on this statement, while 50% overall agreed with Statement 4. (See comparison chart Q4 above.)

Contractor Analysis

21.1% of contractor respondents overall disagreed with the GAO report on the statement listed above. 19.7% of contractor respondents were neutral on this statement while 59.2% of the contractors that participated in the survey agreed with this statement. (See comparison chart Q4 above.)

Survey 21 comments on the respondent's company's experience with Award-fees (as in survey 4 above), and examines the cost on more of a "big picture," strategic level versus a tactical level.

Contractor Survey 21

In my experience Award-fees work, contractors work hard to earn max Award-fees. If they are handed out free "Award-fees", then someone is not doing their job and that should be fixed. The system works, do not break it just because a large program may have gone astray.

Comparison Analysis

Based on the cumulative percentages derived from the survey, it can be concluded that acquisition personnel on both sides of the process agree—when utilized properly, that monetary Incentive Fees do improve performance on contracts. Alternative Incentive Fee arrangements, in addition to Award and Incentive Fees, such as award terms, are also utilized by DoD to give the acquisition community other approaches to incentivizing contracts. The use of monetary Incentive Fees may be questionable according to the GAO; however, informal responses from the respondents of the NCMA conference indicate that it is a tremendous motivator.

5. Analysis V

Competitions for Funding on Contracts in Systems Acquisitions Lead to Underestimated Costs and Over-Promised Capabilities.

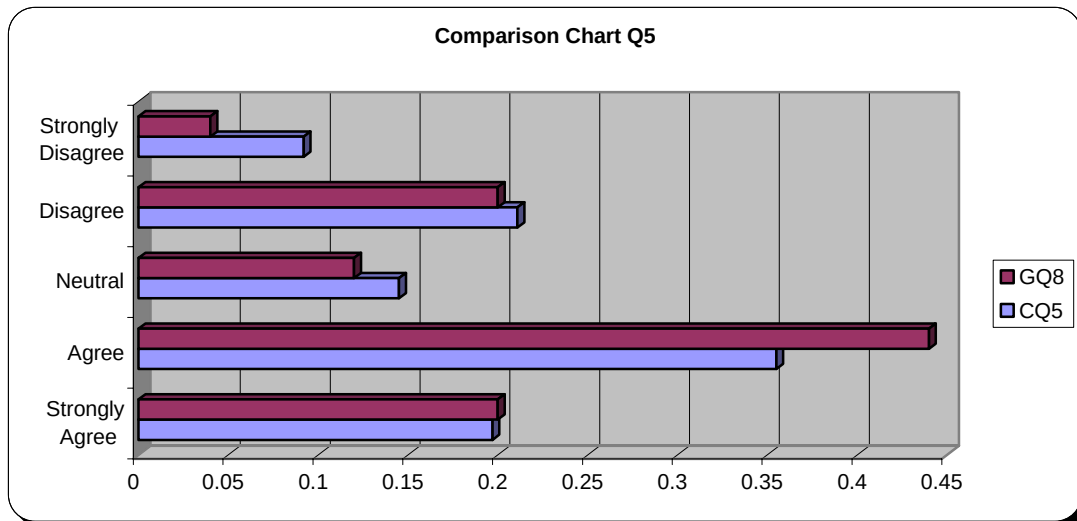


Figure 9. Comparison Chart Statement 5 Contractor Q5

Government Analysis

24% of Government respondents disagreed with this statement. 12% of Government respondents were neutral, while 64% agreed with this statement. (See comparison chart Q5 above.)

Contractor Analysis

30.3% of contractor respondents disagreed with the GAO report on this statement. 14.5% of contractor respondents were neutral, while 55.2% of the contractors that participated in the survey agreed with this statement. (See comparison chart Q5 above.)

Comparison Analysis

The majority of Government and contractor respondents taking part in the survey agreed with this statement. From their experience, Government engineers and cost analysts commonly underestimate cost using dated information or pricing catalogs to create estimates that are then evaluated side-by-side with the contractor's estimate. If the contractor wants the contract, the contractor would concede to the terms and conditions of the contract, knowing the contract requirements are unattainable. This issue would be corrected if the PM and CO would collaborate with the contractor early in the acquisition process and create a relationship with the contractor to ensure specifications are attainable and cost justifiable. According to other informal responses received from contract managers (Government and contractor) attending the conference, competition for funding on contracts in systems acquisition is a problem.

Shown below are some comments from industry concerning Statement 5. Survey 3 strongly disagreed with this statement. Survey 23 makes mention of the strain on contractors when funding and Government estimates are not accurate. Survey 2 also expresses some distress in dealing with the Government underestimating acquisition cost in past experiences.

Contractor/Industry Survey 3

I believe underestimated cost and over promised capabilities result not from competition but are determined from budgets based on estimates that are set before design

is completed. In other words, capabilities and features keep being designed after detailed estimates and program budgets are established.

Contractor/Industry Survey 23

Incentive Fees and Award-fees will be effective when contracts are awarded at high confidence cost estimates. Funding and competition leads to unrealistic cost estimates and performance baselines "out of the short."

Contractor/Industry Survey 2

I have managed CPAF contracts and feel that while it was difficult to satisfy to Government expectations, the taxpayer benefited from the situation. I believe the contracts work but it depends on both parties. I have experienced more often than not the Government underestimates actual acquisition cost for the program, which made it even tougher for the contractor.

6. Analysis VI

Outcome-Based Award-fee Criteria that are Both Achievable and Promote Accountability for Acquisition Outcomes will Optimize Award-Fees.

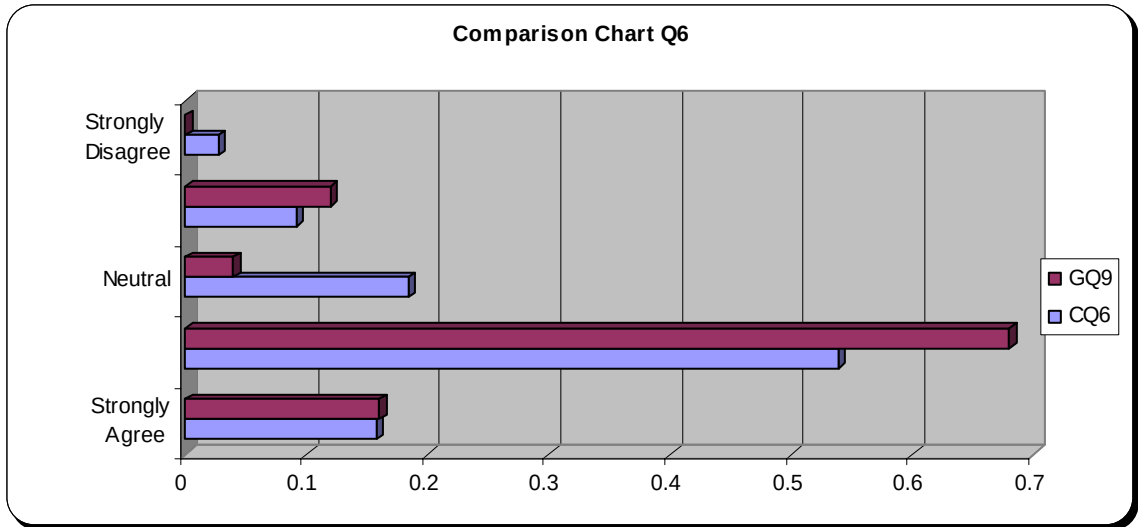


Figure 10. Comparison Chart Statement 6 Contractor Q6

Government Analysis

12% of Government respondents disagreed with this statement. 4% of Government respondents were neutral, while 84% overall agreed with this statement. (See comparison chart Q6 above.)

Contractor Analysis

11.9% of contractor respondents overall disagreed with the GAO report on the statement listed above. 18.4% of contractor respondents were neutral, while 69.7% of the contractors that participated in the survey agreed with the statement. (See comparison chart Q6 above.)

Comparison Analysis

The data from the surveys indicates that outcome-based Award-fee criteria that are both achievable and promote accountability for acquisition outcome will optimize Award-fees. By focusing more on acquisition outcomes and tying them into AF, the contractor and Government can ensure they understand exactly what evaluations will occur during the Award-fee period. For accountability purposes, the contractor is accountable for at least meeting the minimum standard of performance at the Award-fee period and is accountable for, more importantly, the program outcome. The Government carries the responsibility of evaluating the contractor. Evaluating the contractor also means monitoring cost, schedule, and performance, and giving the FDO an accurate assessment of the contract to incentivize the contractor to enhance performance or continue excellent performance.

Contractor/Industry Survey 9

The key to Award-fee success is indeed outcome-based criteria that focus on cost schedule and technical performance. Nevertheless, be careful on the "excellence" focus. I believe the focus should be on "success performance." If the contractor is meeting program performance, requirements and providing war fighter support, that deserves a reward. An over focus on "excellence" can miss focus on the performance success.

7. Analysis VII

The DoD Award-fee Structures Motivate Excellent Performance by Only Paying Award-Fees for Excellent Performance.

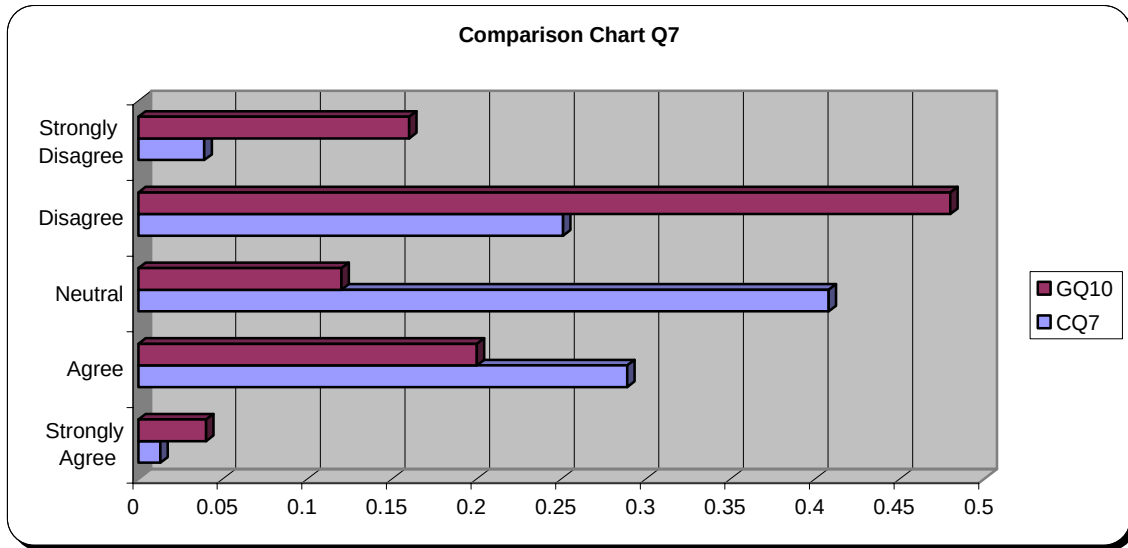


Figure 11. Comparison Chart Statement 7 Contractor Q7

Government Analysis

64% of Government respondents disagreed with the statement above. 12% of Government respondents were neutral on Statement 7, while 24% overall agreed with the statement. (See comparison chart Q7 above.)

Contractor Analysis

29% of contractor respondents overall disagreed with the GAO report on the statement listed above. 40.8% of contractor respondents were neutral, while 30.2% of the contractors that participated in the survey agreed with this statement. (See comparison chart Q7 above.)

Comparison Analysis

GAO reports 06-409T and 06-66 both mention the DoD inability to properly incentivize contractors and poor administration of Incentive Fee and Award-fee contracts. 64% of the Government respondents agreed with this statement. Most of the contracts review by the GAO had an Award-fee payout at each Award-fee period (regardless of contractor performance and schedule) of more than 90% of the available Award-fee.

Despite the contract modifications and changes to specifications, getting the war-fighters their requirements in a timely manner is the mission. When employed correctly, Incentive Fee and Award-fee contracts are two of the vehicles accessible for delivering capabilities to the Government beyond standard performance. However, the DoD is not properly employing Incentive Fees and Award-fees to encourage excellent contractor performance according to the respondents that participated in the survey.

Analysis of Additional Government Questions

The Government surveys completed at the NCMA conference consisted of 13 total statements, six more than the contractor survey. Those six additional questions are analyzed separately below.

8. Analysis VIII

The DoD Frequently Pays Most of the Available Award-Fee for what it Describes as Improved Contractor Performance, Regardless of Whether Outcomes Fell Short of, Met, or Exceeded Expectations.

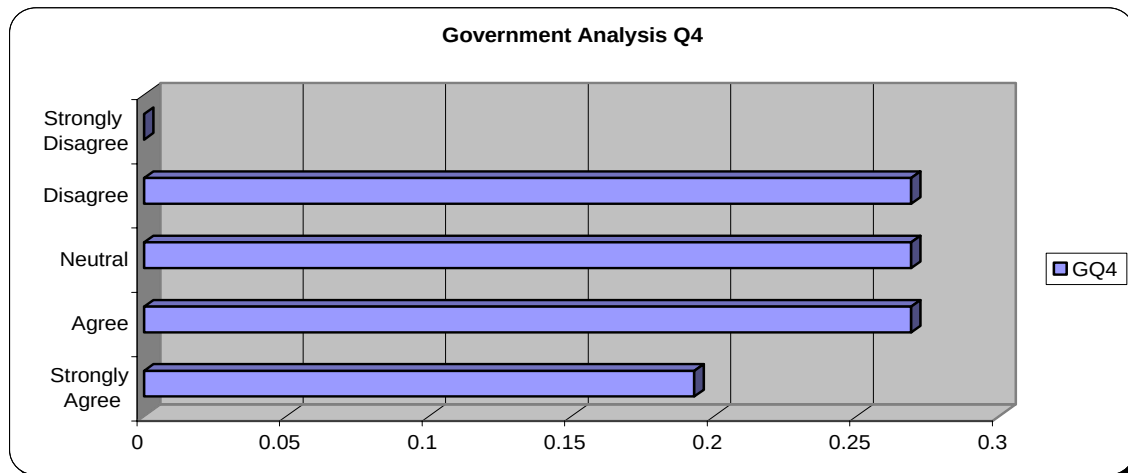


Figure 12. Comparison Chart Statement 8 Government Q4

Government Analysis

26.9% of Government respondents disagreed with the above statement. 26.9% of Government respondents were neutral on Statement 8, while 46.2% overall agreed with the statement. (See Government analysis chart Q4 above.)

Analysis of Government Statement

The Government respondents agreed with this statement. The DoD pays contractors Award-fees (from one PM perspective) because of the “likeability” factor, which has to do with wanting to have a good working relationship with the contractor. This topic is discussed later in the chapter. Time to administer and monitor the contractor’s performance on contracts is limited. So, for example, if the evaluator is not evaluating the contractors’ performance over a 6-month span, the project may never be completed the correct way. This disregard can contribute to last-minute, inaccurate performance assessments and recommendations to the Award Review Board by the monitors in order to keep

award-fee process moving and satisfy monitoring their requirements. This leads to the possibility of program acquisitions falling behind schedule, and ambiguity in the Government defining “excellent” performances (Garrett, 2007a, p. 14).

Training the performance monitors and ensuring performance evaluations are completed is a fundamental necessity in Award-fee contracts. Once the performance monitor completes the assessment of contractor performance based on the Award-fee plan, the contractor then would begin to understand that following the award plan is essential to receiving the available Award-fee for the period.

9. Analysis IX

The DoD Pays Contractors Award-Fees for Satisfactory Performance, Even Though the Acquisition Regulations and Guidance Intend Such Fees be Used to Motivate Excellent Performance.

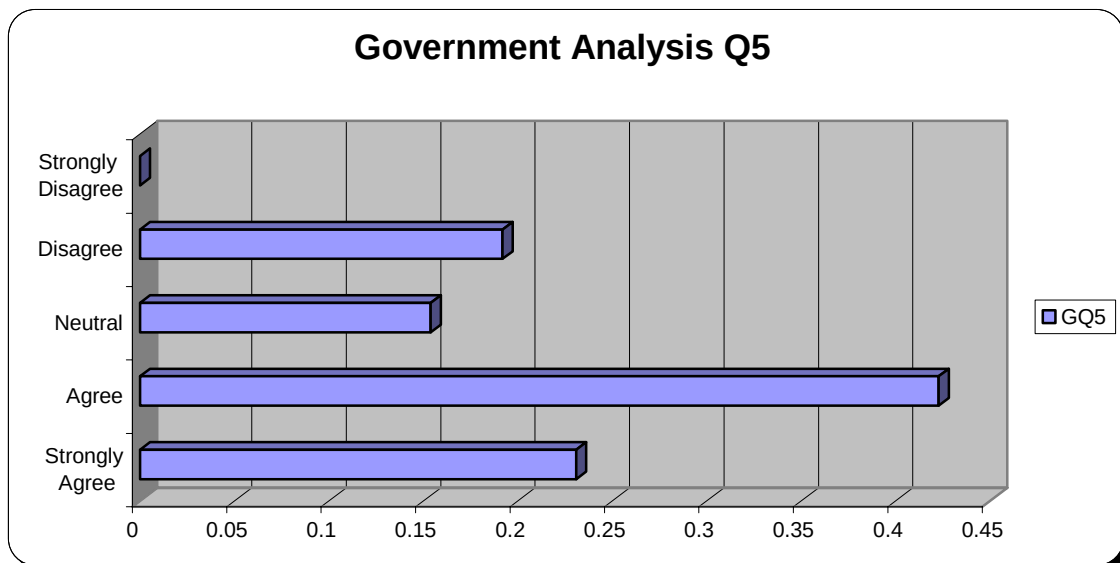


Figure 13. Comparison Chart Statement 9 Government Q5

Government Analysis

19.2% of Government respondents disagreed with this statement. 15.4% of Government respondents were neutral on Statement 9, while 65.4% agreed with this statement. (See comparison chart Q5 above.)

Government Survey 2

If Award and Incentive Fees were truly given for exceptional performance, then I believe they would be a better Incentive Fees. As it is now, most of the fee is given regardless of the performance so is little contractor Incentive Fees to manage the cost or performance. As with most things, lack of training has weakened the use and benefits of Award and Incentive Fees.

Analysis of Government Statement

Survey 2 mentions training as one of the reasons why the DoD is paying the contractor what it should be receiving for achieving excellent performance. However, training is just one of the many reasons why this is occurring with the DoD. There is also a lack of personnel to monitor contractor performance. When a monitor is assigned the responsibility of more than three or four contract-performance evaluations, the evaluation process may suffer. Whichever contract is the most important to the monitor will be the first to be evaluated, and the rest will follow somewhere else in the list of priorities. To break this habit, the DoD must retrain its monitors so that they understand the expectations and the purpose of Award-fee type contracts. The DoD must obligate the monitor and other members of the Award-fee determination board to follow policy "or else." (Dept. of the Air Force, 2002, pp. 13-17).

10. Analysis X

In the Development and Administration of Award-fee and Incentive Fees, Training is Inadequate.

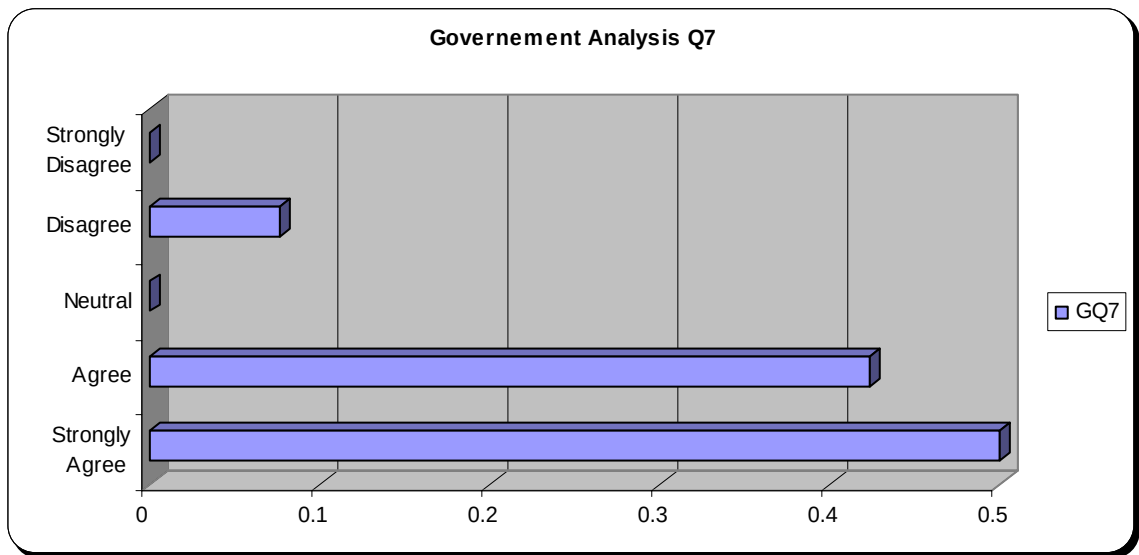


Figure 14. Comparison Chart Statement 10 Government Q7

Government Analysis

7.7% of Government respondents disagreed with this statement. 0% of Government respondents were neutral on Statement 10, while 92.3% overall agreed with this statement. (See Government Analysis chart Q7 above.)

Government Survey 5

The policy is there, but an execution mechanism is not. There is no consistency across the DoD; there is a lack of training, accountability and motivation to implement existing policy.

Analysis of Government Statement

Survey 5 makes the point that policy is in place, but policy is not adhered to. It is the responsibility of the Program Managers and the FDO to ensure policy compliance. If an organization is not following policy, consequences should be enforced and repercussions should follow. 92% of Government respondents agreed that training will begin to rectify this issue.

11. Analysis XI

The DoD has a Mechanism for Capturing Award and Incentive Fee Data within Existing Data Systems.

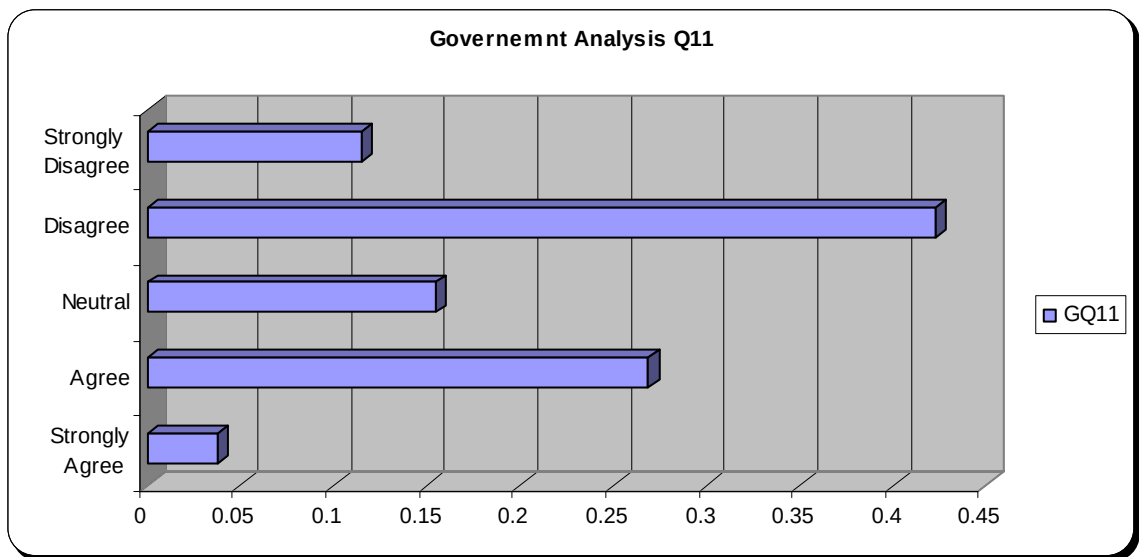


Figure 15. Comparison Chart Statement 11 Government Q11

Government Analysis

53.8% of Government respondents disagreed with the above statement. 15.5% of Government respondents were

neutral on Statement 11, while 30.7% overall agreed with the statement. (See Government Analysis Q11 below.)

Analysis of Government Statement

Government respondents partially agreed with GAO recommendations about collecting Award and Incentive Fees data and developing performance measures to evaluate the effectiveness of Award and Incentive Fees in improving acquisition outcomes. The DoD stated that the Director of the Office of Defense Procurement and Acquisition Policy with the assistance of military departments and defense agencies would be conducting that study. A little more than half of the Government respondents agreed with this suggestion. Once the information is collected, it will enable the DoD to see if Incentive Fee and Award-fee type contracts are effective motivators for contractors.

12. Analysis XII

The DoD Shares Proven Incentive Fees Strategies for the Acquisition of Different Types of Products and Services with Contracting and Program Officials Across the DoD.

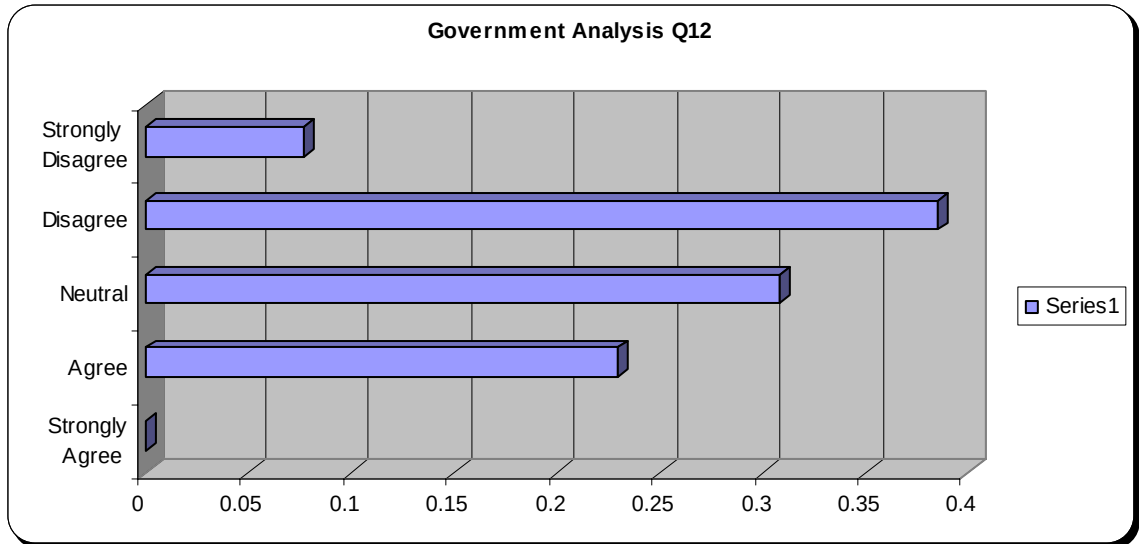


Figure 16. Comparison Chart Statement 12 Government Q12

Government Analysis

46.2% of Government respondents disagreed with this statement. 30.8% of Government respondents were neutral on Statement 12, while 23% overall agreed with the statement. (See Government Analysis Q12 below.)

Analysis of Government Statement 12

The DoD, according to the GAO reports, had no mechanism in place to evaluate the effectiveness of Incentive Fee and Award-fee contracts. In Fact, the DoD concurred with the GAO and developed a mechanism to share proven Incentive Fee

strategies (GAO, 2005, p. 16). If the DoD was relaying information about best practices, lesson learned, or proven strategies, then documentation was non-existent when the GAO completed its evaluation.

Almost half of Government respondents taking this survey at the NCMA conference disagreed with this statement, thus indicating that information sharing is a key issue.

13. Analysis XIII

The DoD has Developed Performance Measures to Evaluate the Effectiveness of Award and Incentive Fees as a Tool for Improving Contractor Performance and Achieving Desired Program Outcomes.

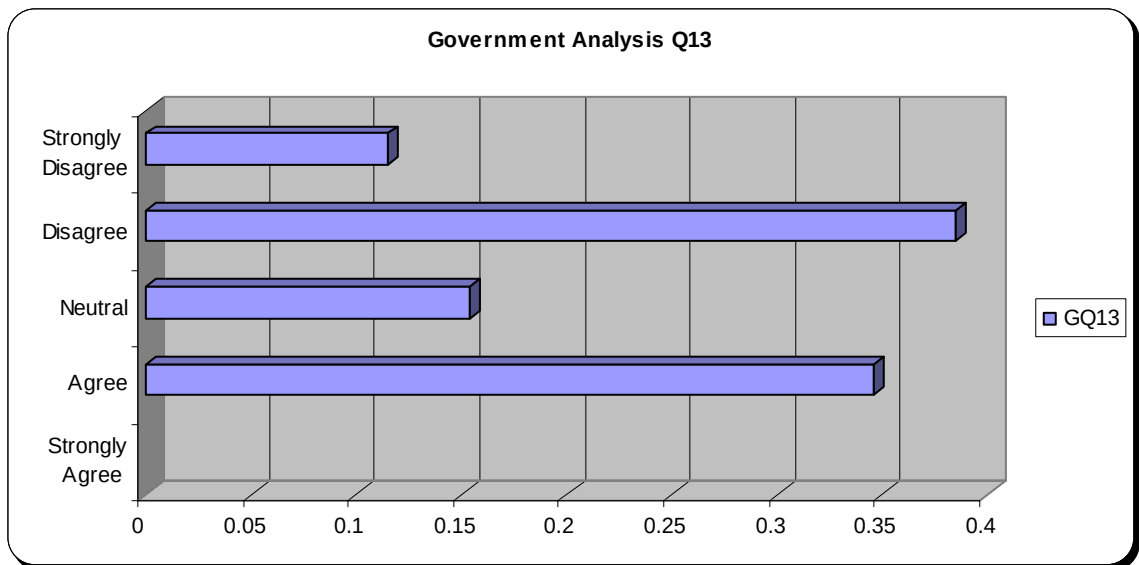


Figure 17. Comparison Chart Statement 13 Government Q13

Government Analysis

50% of Government respondents disagreed with this statement. 15.4% of Government respondents were neutral on

Statement 13, while 34.6% overall agreed with the statement. (See Government Analysis Q13 below.)

Analysis of Government Statement 13

As mentioned in Analysis 12, the DoD has already acknowledged that it had not established a means to share the effectiveness of Incentive Fees and Award-fees. These issues correlate with each other. The resolution of one will assist the DoD in gaining insight into a feasible approach for the other. Again, the majority of the Government respondents disagreed with this statement. Without a single access point for acquisition information, it will be difficult for organizations to acknowledge measurement capabilities.

E. DOD ANONYMOUS PM PERSPECTIVE

Additionally, information and insight about this report was obtained from an anonymous Government program manager (PM), currently serving in the United States Air Force. This anonymous PM completed a paper on his experience with Government contracts in relation to some of the issues the GAO pointed out during their review. The anonymous PM research and perspective will be discussed relating to the GAO report (GAO, 2005, December).

GAO reports 06-66 (2005, December) and 06-409T (2005) both address similar recommendations and mention the DoD use of Incentive Fees and Award-fees on programs acquisitions and/or requirements. The GAO's most significant findings (as mentioned earlier) were based on the DoD inability to correlate the program outcome to the Award-fees, the need to maximize the use of contractor motivators to increase

contractor performance, and the DoD lack of a mechanism for capturing the data to evaluate effectiveness of Incentive Fees and Award-fees in motivating the contractor to achieve above-standard/satisfactory performance.

The anonymous PM research paper based on GAO report 06-66 focused on why Government Award-fee practices failed to achieve desired program outcomes. The PM agreed with the GAO assessment involving Award-fees paid in relation to schedule, mentioned in Statements 4 and 5 of the Government survey, and disagreed with Statements 1 and 10 of the same survey listed below.

1. The DoD Acquisition process for weapons programs consistently yields undesirable consequences—cost increases, late deliveries to the war-fighter, and performance shortfalls.

4. The DoD frequently pays most of the available Award-fee for what it describes as improved contractor performance, regardless of whether outcomes fell short of, met, or exceeded expectations.

5. The DoD pays contractors Award-fees for satisfactory performance even though the acquisition regulations and guidance intends for such fees to be used to motivate excellent performance.

10. The DoD Award-fee structure motivates excellent contractor performance by only paying Award-fees for excellent performance.

The PM suggested the failure, from his experience, stems from the desire to maintain a good Government and contractor relationship, the priority of Award-fee administration, the use of inappropriate Award-fee criteria, and the payment of fees for only satisfactory performance.

Desire to maintain a good Government and contract relationship

The anonymous PM also cited Maslow's hierarchy of needs, focusing on the social needs at this level: that some individuals want to be liked by others with whom they associate or have a relationship. The PM states that this is, in fact, true for the Government. It wants to have a good "working" relationship within the organization as well as with the contractor. This type of relationship turns out to be more significant in CPAF-type contracts, in which the Award-fee period comes into play. During the Award-fee period, the performance monitors assess how well the contractor performed in relation to the schedule or plan for that period. It is during the evaluation stage that the monitor's judgment becomes clouded by the "likeability" factor, which affects the true rating of the contractor performance and the end-product of the program or acquisition.

A higher performance rating given to the contractor during the Award-fee period means more money for the contractor at the end of each Award-fee period. That additional fee paid to the contractor based on "likeability," or a personal relationship, has the potential to increase acquisition cost and create future delay if such issues are not already present in the contract. The long-term effects of this manner of evaluation change the Incentive Fee type contracts like CPAF or CPIF, evolving them into a less effective motivator for contractor performance.

Priority of Award-fee administration by monitors

The Air Force *Award-fee Guide* (2002) mentions numerous precautions for using Award-fees. It states that contracts

including Award-fee Incentive Fees require an added administrative and management effort and should only be used when the contract amount, performance period, and expected benefit warrant the additional administrative and management effort (p. 2). Award-fee precautions are also mentioned in section 3.2, entitled "Criteria for Selecting Award-fee Contracts." This section warns Contracting Officers to document the contract file as to why they are selecting Award-fees and also show that a cost benefit analysis was conducted and that the benefits of the procurement outweighed the administrative burden and/or cost associated. *Federal Acquisition Regulation* 16.405-2b(iii), as well as the *NASA Award-fee Contracting Guide* (2001) mandates that an analysis be completed before a program utilizes the Award-fee type contract.

The daily tasks associated with Award-fee contracts administration include heavy monitoring by the performance monitors; this can sometimes become a chore. Eventually, the increased workload from this type of contract gets pushed further and further down the list of priorities. In addition, some program managers are utilized as monitors. They are then responsible for monitoring their programs as well as supervising other specialists or monitors in other areas of their program. At times, this responsibility can become quite challenging because the subject-matter expert may be allocated to more than one program/project at any given time. Should the expert, in some cases the engineer, have more important evaluations to complete (as stated earlier), work may get pushed further and further back. Then, at the end of the evaluation period, the performance monitor may submit a desirable score, despite the

contractor's sub-standard performance, either reflecting favoritism towards the contractor or reflecting the performance monitor's lack of interest.

Use of Inappropriate Award-fee Criteria

Both the DoD and NASA were cited in GAO reports (06-66, 07-58) for their use of numerous sub-factors in evaluating the contractor performance. However, as mentioned previously, both the NASA *Award-fee Guide* (2001) and the Air Force *Award-fee Guide* (2002) mention that too many factors and sub-factors can dilute contractor focus and performance (Dept. of the Air Force, 2002, Sec 6.5.3).

Payment of Fees for Satisfactory Performance

The GAO and the anonymous author both share the same opinion on Award-fees payment for "satisfactory" performance, asserting that such payment fails to incentivize the contractor to perform above the minimum contract standards. By compensating the contractor for minimum contract performance, the PM and CO fail to hold the contractor accountable for program outcomes.

The GAO report 06-66 (2005, December) states the DoD may be weakening the motivational effectiveness of Incentive Fees and Award-fees by paying significant fees for minimum or satisfactory performance. In the GAO study, the sample showed more than half of Government "Award-fee only" contracts paid out 70% or higher for "acceptable, average, expected, good, or satisfactory" performance, with only 12% of the contracts paying no fee for this category (GAO, 2005, December, p. 24). There is very little motivation in this case for the contractor to achieve excellent performance because the majority of the Award-fee, if not all that is

available, is being paid regardless of satisfactory performance or acquisition cost overruns.

The PM mentioned that if the DoD has a desire to Award-fees for satisfactory performance, the strategy then would be then to raise the base fee. The latter portion of the Award-fee pool would then be in place distinctively for incentivizing excellent contractor performance. In GAO report 06-66 (2005, December), almost two-thirds of the contracts reviewed included a zero base fee. Having a zero base fee creates a stronger Incentive Fee to pay for average work performance because the Government feels obliged to give the contractor more of the Award-fee pool, which is considered definite profit, due to having a zero base fee (GAO, 2005, December).

F. NASA ANONYMOUS CO PERSPECTIVE

The researchers gained another perspective during the NCMA conference by gathering data from a NASA contracting officer who has experience working as a contracting officer in the DoD. NASA is a different organization; however, some similarities can be drawn between it and the DoD. For example, the GAO report that was completed on NASA, GAO report 07-58 (2007, January), listed problems and recommendations similar, if not identical, to those attributed to the DoD. Therefore, any experience from similar organizations is considered relevant to this research project.

NASA's anonymous CO did not completely agree with Statement 4:

The DoD frequently pays most of the available Award-fee for what it describes as improved contractor performance, regardless of whether outcomes fell short of, met, or exceeded expectations.

The anonymous CO, having worked in both environments at some point as a contracting officer, stated that NASA's culture and environment is somewhat different from the DoD. In the DoD, rules and regulations govern the administration of most contracts, and contracting officers direct the contractors. At NASA, in some situations, the engineer is viewed as having little or no regard for the contracting officer's responsibility in the acquisition or program development and outcomes. In other words, the engineers advise and/or direct the contractors to perform and/or modify work as they see fit. Then, they ask the contracting officer to justify, modify, and/or correct their (the engineer's) actions. This type of habit also affects performance and evaluation for the contractor.

If the evaluation factors are already established between the contractor and Government, and the engineer adds additional requirements or specifications to the list that are not identified under the performance factors and sub-factors, confusion will arise. For instance, the contractor might easily assume that because the engineer advised the contractor to make changes or modify something, the performance evaluation factor will change as well. When the changes are not generated from the contracting officer (who would then change the performance evaluation plan), the contractors may or may not receive the entire available Award-fee for a given period.

However, changes should not be occurring on the performance evaluation plan, without notifying the contracting officer? Overall performance outcome and evaluation factors or sub-factors may not always relate to those issues causing the contractor to receiving payment for subpar performance of contracts. The Government can also take some of the blame in the cost overruns and schedule delays.

G. SUMMARY

The information collected from the surveys distributed at the 45th Annual Aerospace and Defense Contract Management Conference was analyzed, along with the comments from a Government Program Manager and Contracting Officer. The comments from Government and Contractor/Industry also were examined to find out whether Acquisition professionals agreed with the GAO reports 06-66 and 06-409T. Overall, the responses from the survey and comments suggest that the DoD should focus on training and administration of Award-fees, and that often, the DoD pays for satisfactory performance. These findings correlate to a few of the GAO conclusions regarding fees. It can be inferred from the survey results that many contractors feel that fees are commensurate with performance. Other comments also suggest that a "partnership" and understanding between each organization should be a focus in the acquisition process.

Provided in this chapter was an in-depth analysis of the responses obtained from the 45th Annual Aerospace and Defense Contract Management Conference. While some of the information presented a distinct correlation in the opinions from contract managers, others did not. The researchers

contend that further analysis of this issue may present information that may be beneficial to the Government and industry. The next chapter will discuss potential areas for further research as well as conclusions and recommendations.

VI. CONCLUSIONS, RECOMMENDATIONS, AND AREAS FOR FURTHER RESEARCH

A. INTRODUCTION

The previous chapter discussed the acquisition workforce respondents' views, based on the surveys presented at an NCMA conference in Garden Grove, CA, on 26 and 27 July 2007. The purpose of this chapter is to conclude whether the DoD is using Incentive Award-fees correctly. The conceptual summary will begin to answer the general question: "Is the DoD using Incentive and Award-fees appropriately?" and the principle conclusion will summarize the information obtained from the surveys and research attained in addition to the three statements made by the GAO relating to the DoD and its use of Incentive and Award-fees. Then recommendations and areas for further research will complete this chapter.

B. ANALYSIS OF RESPONSES PRINCIPLE CONCLUSIONS

1. Conceptual Summary

In reviewing the data collected during the research, the researchers highlighted several problems in relation to the method in which the DoD utilizes Incentive and Award-fees to motivate contractor performance. The conclusions associated with research vary, however, when compared to the GAO reports analyzed in our research. Indeed, it appears there are clear discrepancies in the implementation and administration of Incentive and Award-fee contracts, and those inconsistencies prevent the contracts from working as originally intended. The major effects of under-utilizing the Incentive and Award-fee process are financially costly

and can ultimately freeze a mission. A change is necessary, but the question is, what other changes have to occur to improve the way Incentive and Award-fee contracts are enforced? Policies and guides are in place, but the training and oversight to enforce these policies and guides are not apparent (per contracts reviewed by the GAO). The research clearly indicates that changes are necessary. But in most cases, it appears changes or improvements would improve efficiency, not necessarily effectiveness.

2. Principle Conclusions

The conclusions of this study are based on the analysis of the respondents primarily compared and contrasted to the GAO reports 06-66 and 06-409T. This study examined the improper use and administration of Incentive and Award-fees. The research gathered feedback based on anonymous surveys provided at the 45th Annual Aerospace and Defense Contract Management Conference. The intent of the research was to analyze the findings by surveying a sample population. Excerpts from the GAO reports placed in a Likert model survey gave the researchers qualitative information to determine if the GAO's findings are reflective of the administrative and contractual actions of the Government and industry contract managers. Three of the main findings of the GAO were that the DoD:

- Evaluates contractors on Award-fee criteria that are not directly related to key acquisition outcomes,
- Pays contractors a significant portion of the available fee for what award plans describe as "acceptable, average, expected of satisfactory performance", and
- Gives the contractors at least a second opportunity to earn initially unearned or deferred fees. (GAO, 2005, Intro)

The first statement listed above refers to Government personnel tying Award-fees to program outcome. The GAO reports stated that DoD programs did not structure Award-fees in a way that motivates contractors to achieve (or holds contractors accountable for achieving) desired acquisition outcomes. Almost half of the Government personnel surveyed agreed with this statement. Tying Award-fees in to program outcome are both the recommendations from James I. Finley (Deputy Under Secretary of Defense, 2006, March 29) and the GAO.

Statement two listed above from the GAO states that the Government is giving a significant portion (more than 50%) of the available Award-fee to the contractor for satisfactory performance. 46.2% of the Government respondents agreed with this statement based on the analysis of Statement 4 of the Government survey. Policy written in 2006 by James I. Finley and Shay Assad (Director of Defense Procurement and Acquisition Policy), recommend the following criteria: awarding zero fees for an unsatisfactory rating, no more than 50% for a satisfactory rating, 50%-75% for a good rating, 75%-90% for an excellent rating, and 90%-100% for an outstanding rating (GAO, 2007; NCMA, 2006).

Statement three above states that the DoD gives the contractors at least a second opportunity to earn initially unearned or deferred fees, referred to as "rollovers." More than 50% of the Government agreed with this statement, while the majority of contractors stayed neutral. Policy written in 2006 by James I. Finley also addressed when to roll over Award-fees. Award-fee Guides written for each service branch mention that rolling over Award-fees should only occur in exceptional cases to maintain the integrity of the Award-fee evaluation process. The policy is in place, but it is ultimately up to the PM and the FDO to ensure enforcement.

Incentive and Award-fee contracts offer the Government a tool to allow the contractor to achieve exceptional

performance, if used correctly. The Government must fully understand how to relate performance evaluation factors to the program outcome, and then communicate that relationship clearly to the contractor. Partnerships between both parties can create more risk-sharing and open communication that may mitigate future acquisition delays and cost overruns—a relationship that starts at the planning stage of the acquisition.

The research supported the GAO's contention that the DoD could improve: training, use, and administration of IF and AF contracts. With policy available, contract managers should focus on these key areas to make the use of Incentive and Award-fees more effective.

C. RECOMMENDATIONS

Additionally, the researchers believe that there are benefits from qualitative research on GAO reports. The following recommendations are made:

1. GAO

- When analyzing DoD procurement, separate the analysis by magnitude. The researchers suggest that there is a tremendous disparity between the programs analyzed by the GAO and those "lesser dollar" procurements utilizing Award and Incentive Fee structures. Changing the magnitude of projects analyzed may present different results.
- Assist in developing a database that uses procurement information for internal use. The sharing of information and instant access to metrics is deemed as a critical concern for the

GAO. The GAO undoubtedly has seen the intricacies of many organizations in the federal Government, and, therefore, may assist in providing a transferrable operation for beta testing.

2. Industry

- Ensure that the proposal submission is realistic based on actual cost. If all bid proposals are accurate by this measure, this may urge the DoD to reevaluate its future budgetary requests and cost estimates for complex programs.
- Collaborate with the DoD to educate the Department on effective incentives for industry corporations and cost-estimating.
- Collaborate with the DoD to self-evaluate the corporation's performance. This assessment can assist in identifying both the areas of improvement and the areas of excellence prior to a fee award.

3. Government

- Reestablish structured, disciplined acquisition processes.
- Invest in the rebuilding and knowledge rehabilitation of the Acquisition workforce.
- Strengthen partnerships for information sharing between services, departments, and industry.

- Contract structure and incentives linked to mission success and/or other objective requirements.
- Utilize hybrid incentive contracts minimizing over-complexity, while addressing issues linked to cost schedule and performance. (Pawlikowski, 2007)

The researchers recommend both agencies (the GAO and DoD) focus on opposite ends of the spectrum to meet a common goal. With the GAO focusing on “where” the problem is generated and at what magnitude, the DoD can effectively tailor the above recommendations to efficiently mitigate GAO findings.

D. AREAS FOR FURTHER RESEARCH

1. Government Acquisition

To further analyze this information, the researchers conclude that this area can be investigated more in the areas of magnitude (considering the sample size surveyed), service analysis, type of program analysis (i.e., shipbuilding, aircraft procurement, tank procurement), and funding availability. Segregation of projects in these areas may depict a trend in areas that use Award and Incentive Fees appropriately, as well as show consistent results. If it is discovered that particular programs and or services continue to properly incentivize contractors, the DoD and industry should analyze the factors that contributed to the success of that program. Researchers can then examine whether the success of the program is commensurate to GAO suggestions.

Additionally, in efforts to understand GAO citations in the reports, contracting personnel must pay closer attention to the entire Award and Incentive Fee process as a whole. By this, the researchers have concluded (based on the survey that was posed to industry and the collective data that was utilized by the GAO) that their data analysis does reflect the majority of the contracts utilizing Award and Incentive Fees properly. By investigating only the programs with contract fees of \$10M, the GAO isolates many successful program endeavors using Incentive Fee structures. There are programs that successfully distribute Award and Incentive Fees; these, however, were not captured in GAO's analysis. Furthermore, the programs analyzed by the GAO that have well-known Nunn-McCurdy breaches, such as the Space-based Inferred Systems, can be considered outliers to how the majority of the acquisition community operates under Award and Incentive Fees. Other programs that were evaluated have significantly high risks—such as the Comanche reconnaissance attack helicopter, F/A 22 Raptor tactical fighter aircraft, and the Joint Strike Fighter tactical fighter aircraft (GAO, 2005, December). The GAO's specific focus of contracts implies that these particular programs are the norm and negates the intangible net benefits that are difficult to measure.

The GAO did not take into consideration many of the non-quantitative benefits associated with the continuation of the procurement, for instance critical acquisitions for supporting war-fighter capabilities. In many cases, these intangible benefits can be derived in many different facets. These items can be subjective in nature; however, they can affect the result of a cost-benefit analysis. If the GAO

had begun to use this methodology in its algorithmic equation, there remains a probability that the benefits of the overall costs would outweigh the cost attributed to the described overruns in the reports. For future research, the intangible benefits that are associated with many programs should be computed into the GAO numerical estimates of +/- 25% that concludes the DoD is wasting \$8 billion dollars.

Although the GAO states "inadequate funding" can adversely affect acquisitions in its opening statement to Congress, the issue is not brought to the forefront again in the entire report. As a basis for further research, the GAO should consider evaluating the adverse effects of having inadequate project funding this leads to consistent criticism relating to the inflated cost associated with many acquisition programs. The GAO lists many reports in its reference list that relate best practices discovered by acquisition programs; unfortunately, the GAO neglects to focus on one of the primary drivers of acquisition: the funding. The GAO should evaluate the initial funding instead of starting from the end result of the issue, such as Award and Incentive Fees Fee structure), the GAO should consider reviewing the inputs prior to starting the Acquisition process. Such examples with final cost of procurements. Examples include, but are not limited to, the PPBE, politics, and the user requirements for the acquisition. documents to determine feasibility. By gaining knowledge on how these issues affect the acquisition process, the GAO may assist the procurement community in mitigating these problems for larger acquisitions.

Many contract actions require an intimate knowledge of the FAR and the PPBE. Not only should the IPT and the contracting officer understand the acquisition process, it is equally advantageous for the team to acquire in-depth knowledge of the product that is being acquired. According to the GAO, one of the "successful use(s) of fees is supported by the level of product knowledge attained by officials and their ability to leverage this knowledge" (GAO, 2005, December, p. 30). The GAO cites the example of the Patriot Advanced Capability-3 missile. One reason for the success of the program is the competent understanding of the acquisition IPT. Contracting officers and the IPT must understand that the acquisition process is an ongoing development on both sides. As technology and other variable inputs change, it is essential that DOD contract managers are constantly monitoring, looking for, and mitigating associated risks. "Success does exist at the individual contract level, but DOD will need to leverage this knowledge if it hopes to identify proven Incentive Fee strategies across a wide variety of DOD Acquisitions" (GAO, 2005, December, p. 33). According to the GAO:

The fundamental lack of knowledge and program instability is consistently cited as the main reasons for DOD's poor acquisition outcomes. DOD uses these fees in an attempt to mitigate the risks that it creates through a flawed approach. (p. 33)

In conclusion, the Government, with the assistance of GAO, should analyze the following:

- The impact of Government delays
- The impact of insufficient funds

- Intangible benefits of continued progress
- Smaller acquisitions utilizing Award and Incentive Fees

These remedies may assist in de-scoping a difficult issue so that it is easier to grasp conceptually.

2. Industry

The researchers recommend that further research be committed to evaluating best practices of innovative companies in the 21st century. These successful corporations may offer the DoD a glimpse into effective Incentive Fee practices that give desired results. Some of the recommended companies are Google and Yahoo, just to name two. Although these firms primarily deal in IT, the researchers believe that there may be processes that can be implemented in the DoD, much like that of Toyota's "lean" principle that the Government continuously attempts to apply as a one-size-fits-all solution.

APPENDIX A. NASA AWARD-FEE CONTRACTING GUIDE

3.6.1 Award-fee Rating Table

NASA uses the rating table below for all Award-fee contracts. It includes adjectival ratings as well as a numerical scoring system of 0-100. The Earned Award-fee (or interim Award-fee amounts in the case of interim evaluations) is calculated by applying the total numerical score to the Award-fee pool. For example, a numerical score of 85 yields an Award-fee of 85 percent of the Award-fee pool for that evaluation period. The table below lists the Award-fee evaluation adjectival ratings with their corresponding score ranges. In addition, a narrative description is also provided to assist the Performance Evaluation Board in applying the ratings. Criteria for evaluation factors and sub-factors should reflect the table. (NASA, 2001, Sec. 3.6.1)

Adjective Rating	Range of Performance Points	Description
Excellent	(100-91)	Of exceptional merit; exemplary performance in a timely, efficient and economical manner; very minor (if any) deficiencies with no adverse effect on overall performance.
Very Good	(90-81)	Very effective performance, fully responsive to contract requirements; contract requirements accomplished in a timely, efficient and economical manner for the most part; only minor deficiencies.
Good	(80-71)	Effective performance; fully responsive to contract requirements; reportable deficiencies, but with little identifiable effect on overall performance.
Satisfactory	(70-61)	Meets or slightly exceeds minimum acceptable standards; adequate

	results; reportable deficiencies with identifiable, but not substantial, effects on overall performance.
Poor/ Unsatisfactory (< 61)	Does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; deficiencies in one or more areas, which adversely affect overall performance.

- Any factor receiving a grade of "Poor/ Unsatisfactory" (less than 61 points) will be assigned zero performance points for purposes of calculating the Award-fee amount (includes cost performance).
- The contractor will not be paid ANY Award-fee when the total Award-fee score is "Poor/Unsatisfactory" (less than 61 points).
- In order to earn a total overall rating of "Excellent," the contractor must be under cost, on or ahead of schedule, and be rated "Excellent" for Technical Performance (GAO, 2005).

APPENDIX B. AWARD-FEE FINDINGS AND DETERMINATION

This constitutes a determination of Award-fee earned by (Contractor's Name), under Contract (#ABC) with the (Government).

The Performance Evaluation Board, acting under the authority of the Award-fee plan and Contract #(ABC), has completed its evaluation of the contractor's performance for the period (date) through (date).

The Board's assessment of the contractor's performance and its recommendation to the undersigned Fee Determination Official for the aforementioned period is a rating of (Excellent, Good, Satisfactory, or Unsatisfactory) with a score of (0%-100%) which equates to a recommended Award-fee in the amount of (\$__).

FINDINGS

Upon review of the Board's considerations in arriving at its recommendation and the contractor's response thereto, I hereby find the (0%-100%), an (Excellent, Good, Satisfactory, or Unsatisfactory) rating, to be a proper assessment of the contractor's performance for the stated period.

DETERMINATION

The contract provides for a potential Award-fee of (\$__) for the current evaluation period.

Based upon the findings set forth above, I hereby determine that the contractor is awarded fee, pursuant to Contract #(ABC) in the amount of (\$__) for the period ending (date).

John I. Doe

Fee Determination Official

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APPENDIX C. GOVERNEMENT SURVEY

This questionnaire is anonymous; DO NOT provide your name and or ANY organizational information.

Recent GAO reports have stated the "DOD has paid billions in Award and Incentive Fees regardless of acquisition outcomes" and that the "DOD wastes billions through poorly structured Incentive Fees." The purpose of this questionnaire is to survey contract managers, to assess your opinion of DoD Award and Incentive Fees on DoD contracts. The GAO determined that contractors were awarded Award-fees for meeting basic contract requirements. FAR section 16 outlines the procedures and methodologies in which Award and Incentive Fees are utilized. The GAO report indicates that these guidelines are not being properly applied or followed.

- 1 = Strongly Agree
- 2 = Agree
- 3 = Neutral
- 4 = Disagree
- 5 = Strongly Disagree

The DoD Acquisition process for weapons programs consistently yields undesirable consequences: cost increases, late deliveries to the war-fighter, and performance shortfalls.

1	2	3	4	5
Award and Incentive Fee are not effective tools for achieving the DoD desired Acquisition outcomes.				
1	2	3	4	5

The DoD gives contractors multiple chances to earn Award-fees that they failed to earn in previous evaluation periods, informally known as "roll over."

1	2	3	4	5
The DoD frequently pays most of the available Award-fee for what it describes as improved contractor performance, regardless of whether outcomes fell short of, met, or exceeded expectations.				

1	2	3	4	5
The DoD pays contractors Award-fees for <u>satisfactory</u> performance even though the acquisition regulations and guidance intend for such fees to be used to motivate <u>excellent</u> performance.				

APPENDIX D. CONTRACTOR SURVEY

This questionnaire is anonymous; DO NOT provide your name and or ANY organizational information.

Recent GAO reports have stated the "DOD has paid billions in Award and Incentive Fees regardless of acquisition outcomes" and that the "DOD wastes billions through poorly structured Incentive Fees." The purpose of this questionnaire is to survey contract managers to assess your opinion of DoD Award and Incentive Fees on DoD contracts. The GAO determined that contractors were awarded Award-fees for meeting basic contract requirements. FAR section 16 outlines the procedures and methodologies in which Award and Incentive Fees are utilized. The GAO report indicates that these guidelines are not being properly applied or followed.

- 1 = Strongly Agree
- 2 = Agree
- 3 = Neutral
- 4 = Disagree
- 5 = Strongly Disagree

The DoD Acquisition process for weapons programs consistently yields undesirable consequences: cost increases, late deliveries to the war-fighter and performance shortfalls.

1 2 3 4 5
Award and Incentive Fees are not effective tools for achieving the DoD desired Acquisition outcomes.

1 2 3 4 5
The DoD gives contractors multiple chances to earn Award-fees that they failed to earn in previous evaluation periods, informally known as "roll over."

1 2 3 4 5
Monetary Incentive Fees provisions improve performance on DoD contracts.

1 2 3 4 5
Competitions for funding on contracts in systems acquisitions lead to underestimated costs and over-promised capabilities.

1 2 3 4 5

Outcome-based Award-fee criteria that are both achievable and promote accountability for acquisition outcomes will optimize Award-fees.

1	2	3	4	5
The DoD Award-fee structures motivate excellent performance by only paying Award-fees for excellent performance.				
1	2	3	4	5

Please provide any additional information in this comments section that you feel relevant. Thank you for your time and participation.

APPENDIX E. SURVEY RESPONSE PERCENTAGES

Analysis of Government and Contractor Surveys					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
CQ1	11.80%	23.70%	29.00%	32.90%	2.60%
GQ1	15.40%	23.10%	34.60%	19.20%	7.70%
CQ2	5.30%	23.70%	11.80%	42.10%	17.10%
GQ2	11.50%	15.40%	19.20%	15.40%	38.50%
CQ3	5.30%	19.70%	42.10%	31.60%	1.30%
GQ3	11.50%	42.30%	26.90%	15.40%	3.90%
CQ4	17.10%	42.10%	19.70%	15.80%	5.30%
GQ6	15.40%	34.60%	23.10%	15.40%	11.50%
CQ5	19.70%	35.50%	14.50%	21.10%	9.20%
GQ8	20.00%	44.00%	12.00%	20.00%	4.00%
CQ6	15.80%	53.90%	18.40%	9.20%	2.70%
GQ9	16.00%	68.00%	4.00%	12.00%	0.00%
CQ7	1.30%	28.90%	40.80%	25.10%	3.90%
GQ10	4.00%	20.00%	12.00%	48.00%	16.00%
GQ4	19.30%	26.90%	26.90%	26.90%	0.00%
GQ5	23.10%	42.30%	15.40%	19.20%	0.00%
GQ7	50.00%	42.30%	0.00%	7.70%	0.00%
GQ11	3.80%	26.90%	15.50%	42.30%	11.50%
GQ12	0.00%	23.00%	30.80%	38.50%	7.70%
GQ13		34.60%	15.40%	38.50%	11.50%

Table 1. Government and Contractor Survey Response Percentages by Question

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LIST OF REFERENCES

- Assad, S., Director, Defense Procurement and Acquisition Policy. (2007, April 24). Memorandum: *Proper use of Award-fee contracts and Award-fee provisions*. Washington, DC: DoD.
- Ault, D.K., & Handy, J.B. (1986, May). *Smarter contracting for installation services*. Springfield, MD: Logistics Management Institute.
- Burman, A.V. (2000, October 1). Innovative incentive fees. Government Executive.Com. Retrieved May 5 June 2007, from <http://www.govexec.com/features/1000/1000market.htm>.
- Burt, D.N., Dobler, D.W., & Starling, S.L. (2003). World-class supply management. Winston, A., Higham, T., Eds., *The key to supply chain management* (7th ed.) (pp. 442-447). Boston, McGraw-Hill/Irwin.
- Cabanatuan, M. (2007, May 25). A-MAZE-ING; His reputation on the line, contractor finishes repair early, and I-580 reopens [Electronic version]. *San Francisco Chronicle*. Retrieved June 5, 2007, from San Francisco Chronicle online.
- Cibinic J. Jr., & Nash, R.I. (1998). *Formation of Government contracts* (3rd Ed.). St. Louis, MO: Washington University Press.
- Department of the Air Force. (2002). *Department of the Air Force Award-fee guide*. Washington, DC: author.
- Farrior, C. CPM. (2003, July). Contract management. *The Management of Downsizing*, 26-31. Retrieved 5 May 2007, from http://cmlc.ncmahq.org/kc/main/kc_frame4p.asp.
- Federal Acquisition Regulation*.(FAR) Current through FAC 2005-21.
- Finley, J.I., Deputy Under Secretary of Defense (Acquisition and Technology). (2006, March 29). Memorandum: *Award-fee contracts (FAR 16, DFAR 215, DFAR 216)*. Washington, DC: Office of the Under Secretary of Defense.

- Fox, J.R. (1974). *Arming America: How the US Buys Weapons*. Boston, Division of Research, Graduate School of Business Administration, Harvard University; [distributed by Harvard University Press, Cambridge, Mass.
- GAO. (2007). *Fiscal year 2008 budget request* (Government Accountability Report 07-547T). Washington, DC: author. Retrieved October 1, 2007, from GAO.gov.
- GAO. (2007, May 28). *Defense acquisitions, success of advanced SEAL delivery system hinges on establishing a sound contracting strategy and performance criteria* (GAO-07-745) [Electronic version].. Retrieved June 5, 2007, from Business Source Complete.
- GAO. (2007, January). *NASA procurement, use of Award-fees for achieving program outcomes should be improved* (GAO-07-58). Washington, DC: author.
- GAO. (2005, December). *Defense acquisitions, DOD has paid billions in award and incentive fees regardless of acquisitions outcomes* (GAO-06-66). Washington, DC: author.
- GAO. (2005). *DOD has paid billions in award and incentive fees regardless of acquisition outcomes* (Government Accountability Office Report 06-409T). Report to the Sub-committee on Readiness and Management Support, Committee on Armed Services, US Senate. Washington, DC: author.
- GAO. (2004). *The GAO, an introduction*. Retrieved October 10, 2007, from <http://www.gao.gov/about/history/introduction.htm>.
- Garrett, G.A. (2007a). Incentive fees and Award-fee contracting, lessons learned and best practices. *Contract Management*, 8-14. Retrieved May 9, 2007, from http://www.ncmahq.org/publications/cm/docs/CM_May07_p12.pdf.
- Garrett, G.A. (2007b). *World-class contracting 4th ed.* Cch, Chicago, IL.
- Garrett, G.A. (1997). *World-class contracting, 100+ best practices for building successful business relationships*. ESI International, Arlington, VA.

- Golec, J. (1993, November). The effects of incentive fees compensation contracts on the risk and return performance of commodity trading advisors. *Management Science* 39(11), 1396-1406 [Electronic version]. Retrieved June 5, 2007, from Business Source Complete.
- Gill, J.H. (2000, September). A new approach to Award-fee contracting. *Contract Management*, VOL(ISSUE), 19-20.
- Goodwin, J. (1985). Brotherhood of arms, *General Dynamics and the business of defending America* 1st ed. Times Books, New York, NY.
- Kaufman, D., *Wright Patterson AFB faces budgetary shortfall*. (2007). Retrieved April 3, 2007, from <http://www.wpafb.af.mil/news/story.asp?id=123049716>.
- NASA. *Federal Acquisition Regulation Supplement(NFS. Current through FAC 2004-28, June 2007*.
- NASA. (2001). *Award-fee contracting guide*. Washington, DC: US Government Printing Office. Retrieved from <http://www.hq.nasa.gov/office/procurement/regs/afguidee.html>.
- NCMA. (2006). NCMA mission statement. Retrieved October 10, 2007, from <http://ncmahq.org/>.
- Negotiating the Incentive Fees experience. (2005, August). *Incentive Fees*, 179, 50-53 [Electronic version].. Retrieved June 5, 2007, from Business Source Complete.
- Palmer, K. (2005, August). Government Executive, Cheap rewards, 37(13), 22-22. [Electronic version]. Retrieved June 5, 2007, from <http://www.govexec.com/features/0805-01/0805-01na3.htm>.
- Pawlikowski, E.M. (2007). *Air Force space and missile systems (SMC) power point brief*. NCMA 45th Annual Aerospace and Defense Contract Management Retrieved July 27, 2007, from the 45th Annual Aerospace and Defense Contract Management Conference.
- Perkins, B. (2004, May 10). Risk/reward contracts, Laying the Foundations. *Computer world*, 38(19), 37-37. Retrieved June 5, 2007, from Business Source Complete.

- Rogin, J. (2007, March 19). DOD renews acquisition reform by focusing on unearned fees. *Federal Computers Weekly* [Electronic version]. Retrieved June 5, 2007, from http://www.fcw.com/print/13_8/news/97963-1.html.
- Schade, D.F. (1990, December). *Fixed price Award-fee, an economic motivational and contracting theory analysis*. Monterey, CA: Naval Postgraduate School.
- Summers, W. (1995). Program Manager, *Incentivizing, an effective motivator?* LOCATION: Defense Acquisition University. Retrieved May 1, 2007, from <http://www.dau.mil/pubs/pm/pmpdf95/summers.pdf>.
- Synder, T.J. (2002). *Analysis of Air Force Award-fee and award term*. Alabama: Air Command and Staff College Air University Maxwell.
- Synder, T.J. (2001). Analysis of Air Force contract implementation. *Air Force Journal of Logistics*, [Electronic version] Retrieved June 2007, from http://findarticles.com/p/articles/mi_m0IB0/is_2_25/ai_79210046.
- Venable, T.B. (2000). *Using effective contractual incentive fees to obtain superior contractor performance*. Master's Thesis, Department of System Management. Monterey, CA: Naval Postgraduate School.
- Wight, T.E. (1984). *An evaluation of Award-fee determination process in cost-plus-Award-fee contracts in major weapon systems acquisition*. Master's Thesis, Department of Systems Management. Monterey, CA: Naval Postgraduate School.
- Williams, C., Deputy SAFAQ.(2006). *World wide contracting conference* [Video]. Retrieved April 15, 2007, from <https://134.205.252.194/saf/aqc/conference/worldwide2006/index.cfm>.

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