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# Inspector General

United States  
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### **Acronyms**

BLS	Bureau of Labor Statistics
CAS	Cost Accounting Standards
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
DFARS	Defense Federal Acquisition Regulation Supplement
DPAP	Defense Procurement and Acquisition Policy
ECEC	Employer Costs for Employee Compensation
ECI	Employer Cost Index
EPA	Economic Price Adjustment
ERISA	Employee Retirement Income Security Act of 1974
FAR	Federal Acquisition Regulation
FPRA	Forward Pricing Rate Agreement
IG	Inspector General
OSD	Office of the Secretary of Defense
PGI	Procedures, Guidance, and Information

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INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-4704

May 28, 2008

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION,  
TECHNOLOGY, AND LOGISTICS  
ASSISTANT SECRETARY OF THE AIR FORCE  
(FINANCIAL MANAGEMENT AND COMPTROLLER)  
NAVAL INSPECTOR GENERAL  
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Report on Effect of Payments Into Boeing Pension Funds on Economic Price  
Adjustment Clauses in DoD Contracts (Report No. D-2008-099)

We are providing this report for information and use. We considered management comments on a draft of this report in preparing the final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Henry F. Kleinknecht at (703) 604-9324 (DSN 664-9324) or Ms. Rebecca L. Yovich at (703) 604-9423 (DSN 664-9423). See Appendix F for the report distribution. The team members are listed inside the back cover.

A handwritten signature in cursive script, reading "Richard B. Jolliffe", is positioned above the printed name.

Richard B. Jolliffe  
Assistant Inspector General  
Acquisition and Contract Management

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~~This report contains contractor information that may be company confidential or proprietary. Section 1905, title 18, United States Code, and section 423, title 41, United States Code, provide special penalties for the unauthorized disclosure of company confidential or proprietary information. This report must be safeguarded in accordance with DoD Regulation 5400.7 R.~~

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## Department of Defense Office of Inspector General

Report No. D-2008-099

May 28, 2008

(Project No. D2006-D000CH-0226.000)

### Effect of Payments Into Boeing Pension Funds on Economic Price Adjustment Clauses in DoD Contracts

#### Executive Summary

**Who Should Read This Report and Why?** Defense acquisition and contracting officials who award contracts that incorporate an economic price adjustment (EPA) clause that uses the Bureau of Labor Statistics (BLS) employment cost index for total compensation in the aircraft manufacturing industry (ECI 3721) should read this report. It discusses why the index has significantly increased since 2003 and how a single contractor can influence the index.

**Background.** The DoD multiyear contracts with The Boeing Company (Boeing) include the Air Force C-17 Globemaster III aircraft, the Navy F/A-18 E/F Super Hornet aircraft, and the Army AH-64D Apache Longbow helicopter. All three of these contracts included an EPA clause for labor adjustments using the BLS ECI 3721 and Global Insight forecasts of the index. The purpose of an EPA clause is to provide adjustments to the contract price as a result of changes in the economic behavior of the national economy. The objective is that the contractor shall neither realize economic benefit nor incur economic loss by reason of abnormal economic fluctuations. The Defense Federal Acquisition Regulation Supplement (DFARS) states that the “basis of an index should not be so large and diverse that it is significantly affected by fluctuations not relevant to contract performance, but it must be broad enough to minimize the effect of any single company, including the anticipated contractor(s).”

**Results.** The Air Force C-17 Globemaster III, the Navy F/A-18 E/F Super Hornet, and the Army AH-64D Apache Longbow contracts with Boeing experienced significant price increases, calculated at about \$1.9 billion, because of abnormal increases in the BLS index used in the contract EPA clauses. BLS uses contributions to pension funds to measure expenses, and Boeing reported \$8.0 billion in pension contributions to BLS; however, only [REDACTED] was an actual Cost Accounting Standards pension expense. The [REDACTED] difference is a prepayment credit that Boeing will expense in future years through forward pricing rates recoverable under both Government and non-Government contracts. Boeing’s pension contributions explained more than 99 percent of the change in the BLS index.

As a result, the different accounting for pension costs created a situation that would have amounted to a duplicate recovery of costs when Boeing charged the prepayment credits to future DoD contracts because DoD already accounted for these costs as part of the EPA for these multiyear contracts. We calculated that the EPA liability DoD would owe Boeing should be between \$90.2 million and \$260.3 million versus the total of the negotiated and proposed settlement amounts of \$566.5 million, a difference or windfall profit to Boeing of between \$306.2 million and \$476.3 million.

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We identified a material internal control weakness. In addition to determining that Boeing's pension contributions explained more than 99 percent of the increase in the ECI 3721, we determined that Boeing comprises about [REDACTED] of the ECI 3721. Boeing reimburses BLS for costs associated with collecting and publishing the ECI 3721 through a contract with the Aerospace Industries Association. The action taken by the Director, Defense Procurement and Acquisition Policy (DPAP) to revise the DFARS Procedures, Guidance, and Information 216.203-4, "Contract Clauses," to prohibit the use of the total compensation and benefits portions of the aircraft manufacturing index, and further revising the DFARS Procedures, Guidance, and Information to prohibit the use of the wages and salaries portion of the aircraft manufacturing index as the basis for labor cost adjustments in DoD EPA clauses should correct the material weakness identified in this report. Additionally, in conjunction with the Service Acquisition Executives, the Director, DPAP should evaluate whether EPA clauses are necessary in multiyear contracts and should closely monitor abnormal cost increases in multiyear contracts with EPA clauses to ensure that the contract adjustments are a result of economic behavior as intended for the clauses. See the Finding section of the report for the detailed recommendations.

**Management Action Taken During the Audit.** The Director, DPAP took action during the audit to resolve the issues that we identified. In addition to revising the DFARS Procedures, Guidance, and Information, at the direction of the Under Secretary of Defense for Acquisition, Technology, and Logistics, the Director, DPAP led an Office of the Secretary of Defense/tri-Service negotiating team to reach a settlement with Boeing that was consistent with the audit results. The negotiating team identified a higher EPA liability of \$792.9 million and reached a settlement with Boeing for \$272.3 million (DoD would owe Boeing \$272.3 million instead of \$792.9 million). The Director's prompt action to resolve this issue avoided a cost of \$520.6 million for DoD and the taxpayers.

**Management Comments and Audit Response.** The Director, DPAP concurred with the report recommendations. All comments were responsive; therefore, additional comments are not required. See the Finding section of the report for a discussion of management comments and the Management Comments section of the report for the complete text of the comments.



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## Background

**DoD Multiyear Contracts With Boeing.** The Boeing Company (Boeing) is the world's leading aerospace company and the largest manufacturer of commercial jetliners and military aircraft combined. Boeing is organized into two business units: Boeing Commercial Airplanes and Boeing Integrated Defense Systems. Boeing is the world's second largest defense company. Boeing's DoD multiyear contracts include the Army AH-64D Apache Longbow helicopter, the Air Force C-17 Globemaster III aircraft, and the Navy F/A-18 E/F Super Hornet aircraft. The Army awarded Boeing a multiyear procurement production contract valued at \$2.3 billion to buy 269 AH-64D Apache Longbow helicopters on September 29, 2000. The Air Force awarded Boeing a multiyear procurement production contract valued at \$9.7 billion to buy 60 C-17 Globemaster III aircraft on August 14, 2002. The Navy awarded Boeing a multiyear procurement production contract valued at \$8.6 billion for 210 F/A-18 E/F Super Hornet aircraft on December 29, 2003. All three of the contracts included an economic price adjustment (EPA) clause for labor adjustments using the Bureau of Labor Statistics (BLS) employment cost index for total compensation aircraft manufacturing (ECI 3721)<sup>1</sup> and Global Insight forecasts of the index. The materials adjustments were based on various BLS producer price indexes. For more information on the producer price indexes used in the EPA clauses, see Appendix B.

**Bureau of Labor Statistics.** The U.S. Department of Labor, BLS "is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics." It is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data to the American public, the U.S. Congress, other Federal agencies, State and local governments, businesses, and labor. BLS provides an array of data on inflation and consumer spending, wages, earnings and benefits, productivity, safety and health, international labor statistics and price indexes, occupational outlooks, demographics, and employment.

**Transparency of BLS Data.** BLS data are protected by the Confidential Information Protection and Statistical Efficiency Act of 2002, so users of BLS indexes have no insight into what is contained in the indexes. The Confidential Information Protection and Statistical Efficiency Act of 2002 states that data collected under a pledge of confidentiality for exclusively statistical purposes cannot be disclosed or used for any purpose other than a statistical purpose. The BLS pledge of confidentiality is as follows:

The Bureau of Labor Statistics, its employees, agents, and partner statistical agencies, will use the information you provide for statistical purposes only and will hold the information in confidence to the full

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<sup>1</sup> The BLS employment cost index for total compensation aircraft manufacturing is also referred to by Global Insight as ECIWSS3721NS and ECIPCAIRNS. In March 2006, BLS changed the basis for the employment cost index from the Standard Industrial Classification system to the North American Industry Classification System. The new code for aircraft manufacturing is 336411. For purposes of consistency in this report, we will refer to the index as ECI 3721.

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extent permitted by law. In accordance with the Confidential Information Protection and Statistical Efficiency Act of 2002 (Title 5 of Public Law 107-347) and other applicable Federal laws, your responses will not be disclosed in identifiable form without your informed consent.

BLS does not publish the contents or supporting data for the indexes that it publishes, including identification of companies that comprise the aircraft manufacturing index and would not provide any of the data regarding the ECI 3721 to the audit team. Therefore, the audit team obtained data regarding Boeing's pension contributions reported to BLS directly from the Boeing Director of Actuarial Services.

**History of ECI 3721.** In the early 1990s, Boeing, McDonnell Douglas, BAE Systems, and Northrop Corporation hired the Aerospace Industries Association to create a new index (ECI 3721) because the companies realized that not all costs were being recovered under the existing indexes: the production workers average hourly rate index and the production workers average hourly rate plus benefits index. Because the ECI 3721 is a special index outside BLS's normal services, Boeing has a contract with the Aerospace Industries Association to reimburse BLS for the costs associated with collecting and publishing the ECI 3721. The value of Boeing's contract with the Aerospace Industries Association is about [REDACTED] annually. For more details on the history of the ECI 3721, see Appendix C.

**Economic Price Adjustment.** The purpose of an EPA clause is to provide adjustments to the contract price as a result of changes in the economic behavior of the national economy. The objective is that the contractor shall neither realize economic benefit nor incur economic loss by reason of abnormal economic fluctuations. Federal Acquisition Regulation (FAR) Section 17.109, "Contract Clauses," states that a contracting officer should include an EPA clause in a multiyear contract likely to warrant a labor and material costs contingency in the contract price. FAR 16.203-2, "Application," states that fixed-price contracts with an EPA may be used when there is doubt concerning stability of market or labor conditions during the extent of contract performance. Specifically, price adjustments should be limited to contingencies beyond the contractor's control.

The Defense Federal Acquisition Regulation Supplement (DFARS) Procedures, Guidance, and Information (PGI) 216.203-4, "Contract Clauses," provides guidelines for contract adjustments based on cost indexes of labor or materials. DFARS PGI 216.203-4 recommends three general series published by BLS when constructing an index for an EPA: industrial commodities of the producer price index; employment cost index for wages and salaries, benefits, and compensation cost for aerospace industries (ECI 3721); and wage and income series by Standard Industrial Classification. However, the DFARS states that the "basis of the index should not be so large and diverse that it is significantly affected by fluctuations not relevant to contract performance, but it must be broad enough to minimize the effect of any single company, including the anticipated contractor(s)."

The Boeing Estimating System Manual also states that EPA clauses are meant to protect both the company and its customers against unanticipated or abnormal

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fluctuations in the economy that could substantially affect contract profitability. Boeing's policy is to include EPA clauses in all proposals for fixed-price contracts with a period of performance greater than 2 years beyond the current year. The manual states that when developing an EPA clause, it is important to select the BLS index that will mirror the expected inflation where the work will be performed and that for aircraft workers, BLS incorporates the Boeing data into ECI 3721. The manual states that effective January 2, 2001, ECI 3721 was the preferred index for labor cost escalation for Boeing-performed aircraft design and manufacture.

**Global Insight.** Global Insight is an independent economic forecasting company that provides comprehensive economic, financial, and political information to support planning and decision making for various countries, regions, and industries, including both private industry and DoD.

**Action Taken by the Director, Defense Procurement and Acquisition Policy.** During the audit, the Director, Defense Procurement and Acquisition Policy (DPAP) took prompt action to resolve issues that we identified. He revised the DFARS PGI 216.203-4 to prohibit the use of the total compensation and benefits portions of the aircraft manufacturing index and to alert contracting officers to avoid using an index that can be unfairly influenced by a single company. He briefed the Under Secretary of Defense for Acquisition, Technology, and Logistics on the matter and at his direction, the Director, DPAP led an Office of the Secretary of Defense (OSD)/tri-Service negotiating team that reached a settlement with Boeing that was consistent with the audit results.

## Objective

The overall objective of the audit was to determine the effect that payments into the Boeing pension fund have on multiyear DoD contracts using an EPA clause. See Appendix A for a discussion of the scope and methodology.

## Review of Internal Controls

We identified a material internal control weakness as defined by DoD Instruction 5010.40, "Managers' Internal Control (MIC) Program Procedures," January 4, 2006. DFARS PGI 216.203-4 requires that the basis of a BLS index should not be so large and diverse that it is significantly affected by fluctuations not relevant to contract performance, but it must be broad enough to minimize the effect of any single contractor. The BLS ECI 3721, used in the EPA clauses of three DoD multiyear contracts, increased 27.9 percent from 2003 through 2005. This increase occurred because BLS calculated the index with Boeing's \$8.0 billion contributions to its pension plans instead of Boeing's [REDACTED] pension costs. This resulted in significant unjustified cost increases on the Air Force C-17 Globemaster III, the Navy F/A-18 E/F Super Hornet, and the Army AH-64D Apache Longbow contracts that were not related to economic behavior.

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We determined that Boeing's pension contributions (including prepayment credits) explained more than 99 percent of the increase in the ECI 3721 (see Appendix D). BLS data are protected by the Confidential Information Protection and Statistical Efficiency Act of 2002, so users of BLS indexes have no insight into what is contained in the indexes. We also determined that Boeing comprises about [REDACTED] of the ECI 3721 and reimburses BLS for costs associated with collecting and publishing the ECI 3721 through a contract with the Aerospace Industries Association. The action already taken by the Director, DPAP to revise DFARS PGI 216.203-4 and implementing Recommendation 1. should correct the material weakness identified in this report. We will send a copy of the final report to the senior official in charge of internal controls for the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics.

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## Earnings on DoD Multiyear Contracts

DoD multiyear contracts with Boeing experienced significant price increases due to abnormal increases in the BLS employment cost index for total compensation aircraft manufacturing (ECI 3721) used in the EPA clauses. The significant price increases calculated at about \$1.9 billion<sup>2</sup> were not caused by “unanticipated economic fluctuations” as intended for the EPA clauses, and affected multiyear contracts for the Air Force C-17 Globemaster III, the Navy F/A-18 E/F Super Hornet, and the Army AH-64D Apache Longbow. The anomaly in the BLS index related specifically to the benefits portion of the index; it occurred because:

- From 2003 through 2006, Boeing reported \$8.0 billion in pension fund contributions or costs to BLS; however, only [REDACTED] was an actual Cost Accounting Standards (CAS) pension expense. The [REDACTED] difference is a prepayment credit that Boeing will expense in future years through forward pricing rates (overhead) recoverable under both Government and non-Government contracts.<sup>3</sup>
- BLS uses contributions to pension funds to measure expenses (costs). However, except for tax purposes, pension contributions by Boeing do not equate to a pension expense that is regulated by CAS.

As a result, the different accounting for pension costs created a situation that would have amounted to a duplicate recovery associated with pension funding when Boeing charged the prepayment credits to future DoD contracts, because DoD already accounted for these costs as part of the EPA for these multiyear contracts. We calculated that the EPA liability DoD would owe Boeing should be between \$90.2 million and \$260.3 million versus the total of the negotiated and proposed settlement amounts of \$566.5 million, a difference or windfall profit to Boeing of between \$306.2 million and \$476.3 million. In response to a working draft of this report, the Director, DPAP led an OSD/tri-Service negotiating team to arrive at a settlement with Boeing that was consistent with the audit results. The negotiating team identified a higher EPA liability of \$792.9 million and reached a settlement with Boeing for \$272.3 million (DoD would owe Boeing \$272.3 million instead of \$792.9 million). The Director’s prompt action to resolve this issue avoided a cost of \$520.6 million for DoD and the taxpayers.

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<sup>2</sup> The calculated contract price increases vary depending on quarter and year of the data used for the calculation.

<sup>3</sup> Beginning in 2004 and 2005, the Employee Retirement Income Security Act of 1974 for Internal Revenue Service purposes required that the actuarial value of pension assets be calculated conservatively using long-term investment-grade corporate bond rates of about 5.5 percent, while CAS uses a more realistic rate for actively managed pension plans of 8.5 percent.

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## Increases on DoD Multiyear Contracts Related to BLS Index

DoD multiyear contracts with Boeing experienced significant price increases due to abnormal increases in the BLS ECI 3721 used in the EPA clauses. The significant price increases calculated at about \$1.9 billion<sup>4</sup> were not caused by “unanticipated economic fluctuations” as intended for the EPA clauses and affected multiyear contracts for the Air Force C-17 Globemaster III, the Navy F/A-18 E/F Super Hornet, and the Army AH-64D Apache Longbow. The anomaly in the BLS index related specifically to the benefits portion of the index and more specifically to pension contributions.

**BLS National Compensation Survey.** The BLS National Compensation Survey provides comprehensive measures of occupational earnings, compensation cost trends, benefit incidence, and detailed benefit provisions. BLS field economists collect the national compensation survey data by visiting establishments across the country and asking a series of questions related to the business activity, occupations, employees, benefits offered, and duties and responsibilities of the job. The BLS published compensation cost trends are the Employment Cost Index (ECI) and the Employer Cost for Employee Compensation (ECEC).

**Employment Cost Index.** The ECI is a quarterly measure of changes in labor costs. It shows changes in wages and salaries and benefit costs, as well as changes in total compensation. The data are presented as a total for all workers and separately for private industry and for State and local government workers. It also reports compensation changes by industry, occupational group, union and nonunion status, region, and metropolitan and nonmetropolitan status.

The ECI is designed to measure how compensation paid by employers would have changed over time if the industry or occupation composition of employment had not changed from a base period, so it uses fixed weights. The data presented in the ECI have a variety of different uses, including EPAs in long-term purchase contracts.

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<sup>4</sup> The Air Force contract increased by \$647.5 million, the Navy contract increased by \$1,211.7 million (labor only), and the Army contract increased by \$45.8 million, as shown in Table 7.

Table 1 shows the components of ECI 3721 for the first quarters of 2001 through 2006. Note that from March 2003 through March 2005, ECI 3721 benefits increased by 64.4 percent (from 59.2 to 97.3) and total compensation increased by 27.9 percent (from 76.7 to 98.1), while wages and salaries increased by only 5.8 percent (from 93.4 to 98.8) over the same period.

	<u>March 2001</u>	<u>March 2002</u>	<u>March 2003</u>	<u>March 2004</u>	<u>March 2005</u>	<u>March 2006</u>
Total compensation	66.9	70.2	76.7	83.3	98.1	90.9
Wages and salaries	86.8	90.8	93.4	96.0	98.8	101.9
Benefits	46.1	48.6	59.2	70.1	97.3	79.1

**Employer Costs for Employee Compensation.** The ECEC is a survey that shows the employer's average hourly cost for total compensation and its components. Total compensation consists of wages and salaries and total benefit costs. Total benefit costs are broken down further into paid leave, supplemental pay, insurance, retirement and savings, legally required benefits, and other benefits. The ECEC reports cost data in dollar amounts and as percentages of compensation and breaks out the data by civilians and State and local workers, and then by white-collar, blue-collar, and service groups.

Table 2 shows the components of the ECEC for the aircraft manufacturing industry for the first quarters of 2001 through 2006. Note that from March 2003 through March 2005, the ECEC benefits increased by 69.3 percent (from \$17.14 to \$29.02) and total compensation increased by 30.4 percent (from \$45.85 to \$59.79), while wages and salaries increased by only 7.2 percent (from \$28.71 to \$30.77) over the same period. Additionally, from March 2003 through March 2005, the retirement and savings portion of benefits related to pension contributions increased by almost 500 percent (from \$2.40 to \$13.84).

**Table 2. Employer Costs for Employee Compensation**

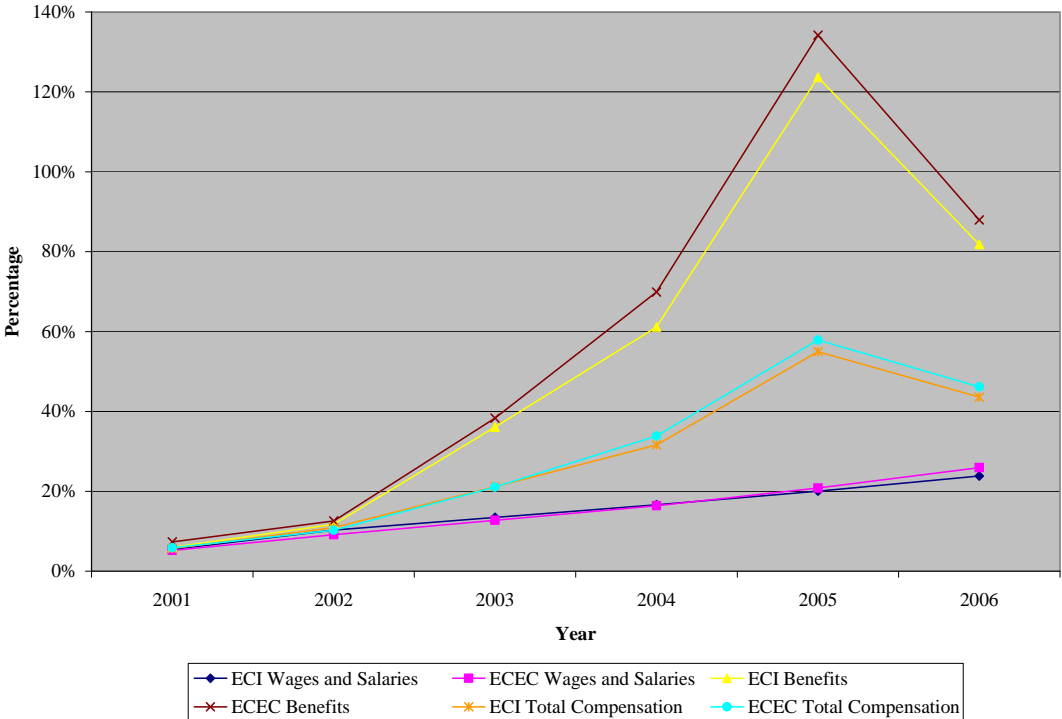
	March 2001	March 2002	March 2003	March 2004	March 2005	March 2006
Total compensation	\$40.09	\$41.75	\$45.85	\$50.70	\$59.79	\$55.36
Wages and salaries	26.71	27.80	28.71	29.65	30.77	32.07
Benefits	13.30	13.95	17.14	21.05	29.02	23.29
Paid leave	3.69	3.82	4.02	4.28	4.41	4.79
Supplemental pay	1.79	1.78	2.81	1.89	2.34	3.16
Insurance	3.13	3.51	4.18	4.50	4.39	4.64
Retirement and savings	1.36	1.41	2.40	6.43	13.84	6.96
Legally required	3.12	3.20	3.50	3.66	3.74	3.75
Other	0.21	0.22	0.23	0.29	0.30	*

\*These benefits were dropped from the ECEC for the aircraft manufacturing industry beginning in March 2006.

**Differences Between the ECI and ECEC.** According to BLS, the same data are used to calculate the ECI and ECEC. However, the ECEC is different from the ECI because it uses current weights versus fixed weights to measure the current cost of employee compensation, and it does not control for shifts in the distribution of employment across an industry or occupation. For example, the total compensation ECI 3721 is a fixed composite of 68 percent wages and salaries and 32 percent benefits. The total compensation ECEC 3721 varies because it is calculated at current weights. From 1989 through 2003, wages and salaries ranged from 63 to 69 percent of total compensation and benefits ranged from 31 to 37 percent of total compensation. However, from 2004 through 2006, wages and salaries ranged from 51 to 58 percent of total compensation and benefits ranged from 42 to 49 percent of total compensation. Therefore, although the ECI and ECEC for the aircraft manufacturing industry have the same source data, the reported results vary slightly. For more on the difference between the ECI and ECEC, see Appendix D.



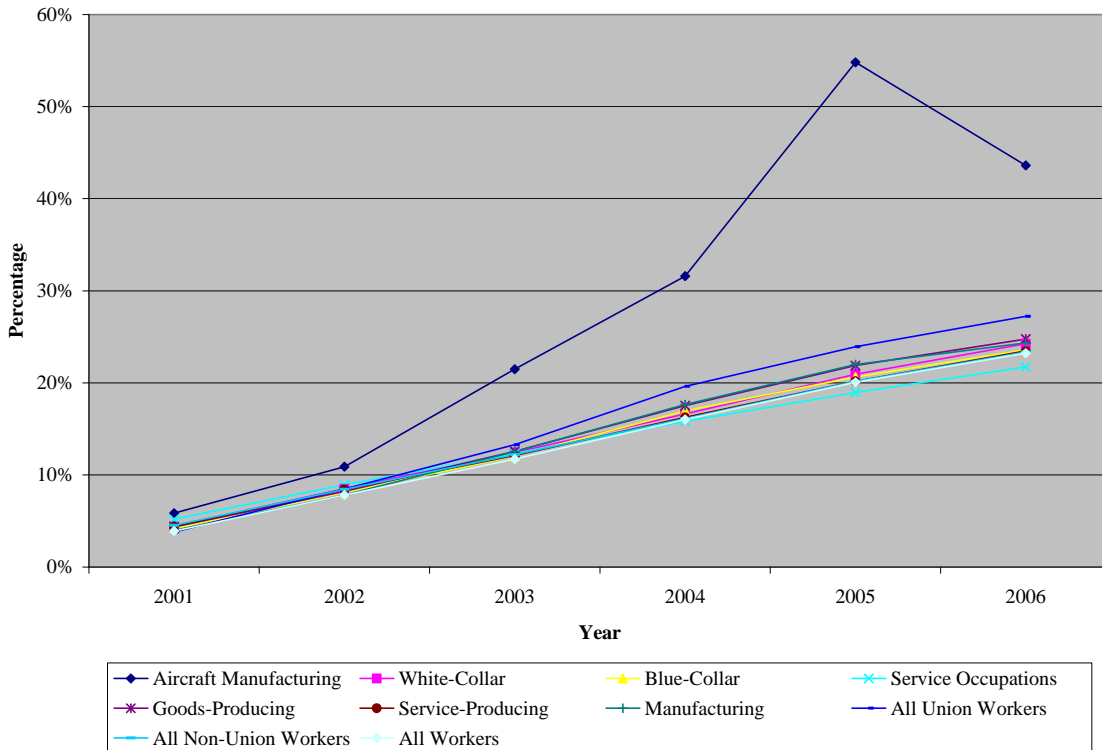
Figure 1 shows a cumulative comparison of the ECI and ECEC for the aircraft manufacturing industry by total compensation, wages and salaries, and benefits. As shown in the figure, the benefits index spiked dramatically, and as a result, so did the total compensation index. During the 6 years shown in the figure, the wages and salaries index steadily escalated by 24 percent, while from 2001 through 2005, the benefits index escalated by 124 percent before dropping to a cumulative escalation of 82 percent in 2006.



**Figure 1. Comparison of ECI and ECEC Total Compensation, Wages and Salaries, and Benefits in the Aircraft Manufacturing Industry (Cumulative)**

**ECI 3721 Spike Not Indicative of Economic Behavior.** We also reviewed all of the BLS total compensation indexes that had data available for total compensation, wages and salaries, and benefits from 2001 through 2006 to determine whether the increase in the aircraft manufacturing industry mirrored any other index or if this increase was seen elsewhere in the economy.

Figure 2 shows that the ECI 3721 significantly increased while the ECIs for the manufacturing, goods, and service industries, and other employee groups including union, non-union, white-collar, and blue-collar did not increase nearly as dramatically as the aircraft manufacturing industry.



**Figure 2. Comparison of ECI 3721 With ECIs for Other Industries and Occupations (Cumulative)**

In the early 1990s, the ECI 3721 included BAE Systems, Northrop Corporation, Boeing, and McDonnell Douglas. In 1994, Northrop Corporation acquired Grumman Corporation, and since February 2001, Northrop Grumman reports to the Securities and Exchange Commission under Standard Industrial Classification Code 3812, "Search, Detection, Navigation, Guidance, Aeronautical, and Nautical Systems and Instruments," not under Standard Industrial Classification Code 3721, "Aircraft." In 1997, Boeing and McDonnell Douglas merged. According to Boeing documents, Boeing represents more than [REDACTED] of the index. Additionally, Global Insight stated that "given the size of the industry at over 200,000 workers and the size of the Boeing workforce that could be reasonably allocated to aircraft manufacturing, it seems clear that the company would comprise [REDACTED] of the BLS sample." Boeing has become a dominant force in the ECI 3721 and as stated by Boeing, [REDACTED]. Boeing also noted that the big drivers in benefits are pension funding, health care, and nonproduction bonuses. While we did see a spike in nonproduction bonuses in 2006, we did not evaluate whether the bonuses were appropriate.

**Contract EPA Increases.** The dramatic spike in the ECI 3721 caused increased EPA costs on the Air Force C-17, Navy F/A-18 E/F, and Army Apache Longbow contracts. This increase is especially noticeable in the Air Force and Navy estimated EPA liabilities. Using the third quarter 2004 Global Insight forecast, the Air Force estimated that the FY 2006 and FY 2007 EPA liability would be \$95.4 million and \$73.0 million, respectively. One year later, using the third quarter 2005 Global Insight forecast, the estimated EPA liability had increased to \$278.8 million and \$231.8 million for the same years. As shown in Table 3, this resulted in a doubling of the estimated total EPA liability for the Air Force C-17 multiyear contract.

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>Total</u>
Third quarter 2004	\$35.5	\$101.4	\$ 95.4	\$ 73.0	\$305.3
Third quarter 2005	35.5	101.4	278.8	231.8	647.5

Using the second quarter 2004 Global Insight forecast, the Navy estimated that it would owe \$201.8 million for the labor portion of the EPA liability on the F/A-18 E/F multiyear contract. A year later, using the second quarter 2005 Global Insight forecast, the Navy estimated the labor portion of the EPA liability to be \$1.2 billion, as shown in Table 4. The Navy cost analyst stated that growth in the ECI 3721 drove 99 percent of the difference between the estimates.

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Total</u>
Second quarter 2004	\$42.8	\$ 40.4	\$ 40.9	\$ 38.5	\$ 39.2	\$ 201.8
Second quarter 2005	42.8	251.7	277.8	309.4	330.0	1,211.7

## **Boeing Pension Contributions**

The anomaly in the BLS index related specifically to the benefits portion of the index and occurred because, from 2003 through 2006, Boeing reported \$8.0 billion in pension fund contributions or costs to BLS; however, only [REDACTED] was an actual CAS pension expense. The [REDACTED] difference is a prepayment credit that Boeing will expense in future years through forward pricing rates (overhead) recoverable under both Government and non-Government contracts.

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**Pension Accounting.** There are different sets of rules for pension accounting and each rule has different requirements. For purposes of this report, we will discuss the Employee Retirement Income Security Act of 1974 (ERISA), which regulates cash contributions to pension plans and Internal Revenue Service reporting; and CAS, which regulates costs on Federal Government contracts.

ERISA is a Federal law that sets minimum standards for most voluntarily established pension and health plans in private industry to provide protection for individuals in these plans. ERISA was established to protect employee benefit rights and to regulate the tax deductibility of pension payments. ERISA requires payment of flat-rate and variable premiums to the Pension Benefit Guaranty Corporation for underfunded pension plans. The variable premium is a percentage of the underfunded amount of the pension plans, using the Pension Benefit Guaranty Corporation's definition of plan liabilities and assets. According to the Boeing Director of Actuarial Services, that definition almost always results in a liability larger than plan assets in today's economic environment.

The primary purpose of CAS is to enhance the uniformity and consistency of contractor cost accounting practices in accounting for Government contract costs. Specifically, CAS 412 and 413 are designed to ensure that pension costs are properly measured, adjusted, and allocated to cost objectives. According to the Boeing Director of Actuarial Services, CAS is one of the many measures that Boeing considers when it comes time to fund pension plans, but under the recent economic environment, CAS happens to have the lowest threshold of required funding, with a definition of pension liabilities often 40 to 60 percent lower than other funding agencies, including the Pension Benefit Guaranty Corporation.

CAS allowable pension costs and ERISA limitation amounts can be significantly different during a given year because of different assumptions, amortization schedules, actuarial methods, and actuarial accrued liability interest rate assumptions.

Beginning in 2004 and 2005, ERISA required for Internal Revenue Service purposes that the actuarial value of pension assets be calculated conservatively using long-term investment-grade corporate bond rates of about 5.5 percent. CAS requires the unfunded actuarial liability to be adjusted for interest at the valuation rate of interest, but CAS does not define the valuation rate of interest. However, Boeing's CAS 412 forecast worksheets show that Boeing applies an interest rate of [REDACTED]. While the 5.5 percent ERISA rate may be appropriate for companies without actively managed (invested) pension plans, Boeing has an actively managed pension plan that historically has earned more than [REDACTED]. We plan to address this issue and issues related to CAS and ERISA harmonization required by the Pension Protection Act of 2006 in a future audit.

According to Boeing, CAS is used to allocate pension and all overhead expenses to all large business units, including Boeing Commercial Airplanes. Pension expense under Integrated Defense Systems business units is part of forward pricing rates and is recoverable under Government contracts. Costs are passed to business units using the forward pricing rate published by Boeing Cost Management.

**Boeing Pension Contributions and Pension Costs.** According to documents provided by the Boeing Director of Actuarial Services, Boeing reported \$8.0 billion in pension contributions to BLS from 2003 through 2006.<sup>5</sup> These pension contributions are treated as a cost by BLS. However, Boeing’s allowable CAS pension cost for those years was significantly less (only [REDACTED]). Table 5 shows the difference between Boeing’s pension contributions reported to BLS and Boeing’s CAS pension costs.

**Table 5. Difference Between Boeing CAS Pension Cost and Pension Contributions Reported to BLS  
(in millions)**

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>Total</u>
Boeing pension contributions	\$302.0	\$1,692.5	\$4,236.7	\$1,800.0	\$8,031.2
Boeing CAS pension cost	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Difference</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

The [REDACTED] difference between Boeing’s pension contributions and CAS pension costs is a prepayment credit. A prepayment credit results when Boeing contributes more to the pension plan than the assigned pension cost. CAS 412-30[23] defines prepayment credit as the amount funded in excess of the pension cost assigned to an accounting period that is carried forward for future recognition. These prepayment credits are used to cover future pension costs and are expensed at that time.

**CAS Harmonization.** Public Law 109-280, “Pension Protection Act of 2006,” August 17, 2006, acknowledges that minimum contributions under ERISA and Government reimbursable pension plan costs under CAS differ and directs the CAS Board to review and revise CAS 412 and CAS 413 to harmonize them with the minimum required contributions under ERISA. The “Cost Accounting Standards Pension Harmonization Rule” is to be finalized by January 1, 2010. Large Government contractors, those with Government contract revenues exceeding \$5 billion for the previous year and having pension costs that are assignable under those contracts that are subject to CAS 412 and 413, do not have to comply with the new funding requirements until the effective date of the Pension Harmonization Rule or January 1, 2011, whichever occurs sooner.

**Boeing Statement on Contributions.** In response to the DoD Inspector General (IG) preliminary audit results, Boeing stated that its pension contributions were prudent. Specifically, Boeing stated that:

The period the IG has chosen to examine is unlike any other in defined benefit funding history, due to a post-9/11 [September 11, 2001]

<sup>5</sup> The \$8.0 billion Boeing reported to BLS in the years 2003 through 2006 was for pension contributions that Boeing made in the years 2002 through 2005.

market impact, a severe market crash, and falling interest rates, all of which caused real economic fluctuations significantly impacting the aerospace manufacturing industry. Boeing was compelled by the events surrounding 9/11 to provide \$8 billion of unanticipated, replacement pension funding toward its long term obligations for future pension payments. These were real costs caused by unquestionably real economic fluctuations, with equally real tax and financing costs and implications. There is no assurance that any part of the [REDACTED] of the direct contributions in excess of currently assignable CAS costs will be recovered by Boeing under future contracts over the 15 future years in which they will be amortized under CAS, much less that any such recovery will cover Boeing's cost of money for these extraordinary current contributions or any of the indirect costs and taxes.

Boeing stated that its funding of underfunded pension plans to ensure the security of its employees was hardly "voluntary" as Boeing would have faced severe consequences had it chosen to do nothing with regard to funding the plans. According to Boeing, the pension contributions were more than the ERISA minimum required amounts in order to avoid the following adverse consequences.

- The Pension Benefit Guaranty Corporation premium cost, which was an estimated allowable cost of [REDACTED] per year.
- A minimum funding obligation to contribute an additional [REDACTED] or more, in 2005 or later, or an additional estimated excise tax of [REDACTED] [REDACTED] per year.

**Discretionary Versus Required Contributions.** We asked the Boeing Assistant Controller what amount of the Boeing pension contributions from 2002 through 2005 were the mandatory ERISA required funding and what amount were discretionary funding. As shown in Table 6, only \$9.9 million of \$8.3 billion were mandatory ERISA required contributions.

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>Total</u>
Minimum required	\$ 0.0	\$ 0.0	\$ 9.9	\$ 0.0	\$ 9.9
Discretionary funding	517.5	3,175.0	2,781.8	1,850.0	8,324.3
<b>Total Contribution</b>	<b>\$517.5</b>	<b>\$3,175.0</b>	<b>\$2,791.7</b>	<b>\$1,850.0</b>	<b>\$8,334.2</b>

Additionally, when describing its pension funds to shareholders, employees, and other interested parties, Boeing uses the discretionary pension contributions and pension fund status as an indicator of the company's financial strength in both the annual reports and the Boeing newsletter, *Frontiers*. Specifically, in the

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August 2005 *Frontiers* newsletter, Boeing stated the following regarding its pension funding.

Q [Question]: How well-funded are Boeing's pension plans?

A [Answer]: All Boeing-sponsored pension plans meet the minimum funding requirements. We put \$4.4 billion in the pension plans last year [2004]. The vast majority of these contributions were discretionary, which means they were above and beyond what we were required to contribute. So far in 2005, we've contributed \$1 billion, and we'll continue to look at opportunities to make additional contributions. Boeing is committed to maintaining strong and secure pension funds for our retirees and employees.

In an article in the September 2005 *Frontiers* newsletter, Boeing stated the following regarding what it will do with several billion dollars in cash.

Boeing has clear priorities for its cash .... Options for cash use also include supporting pension plans. Boeing's retirement plans are secure and well-funded in part because of \$4.4 billion in discretionary pension contributions during 2004 and \$1 billion so far this year [2005]. Another \$550 million contribution is expected before year's end, according to a recent Boeing filing with the U.S. Securities and Exchange Commission.

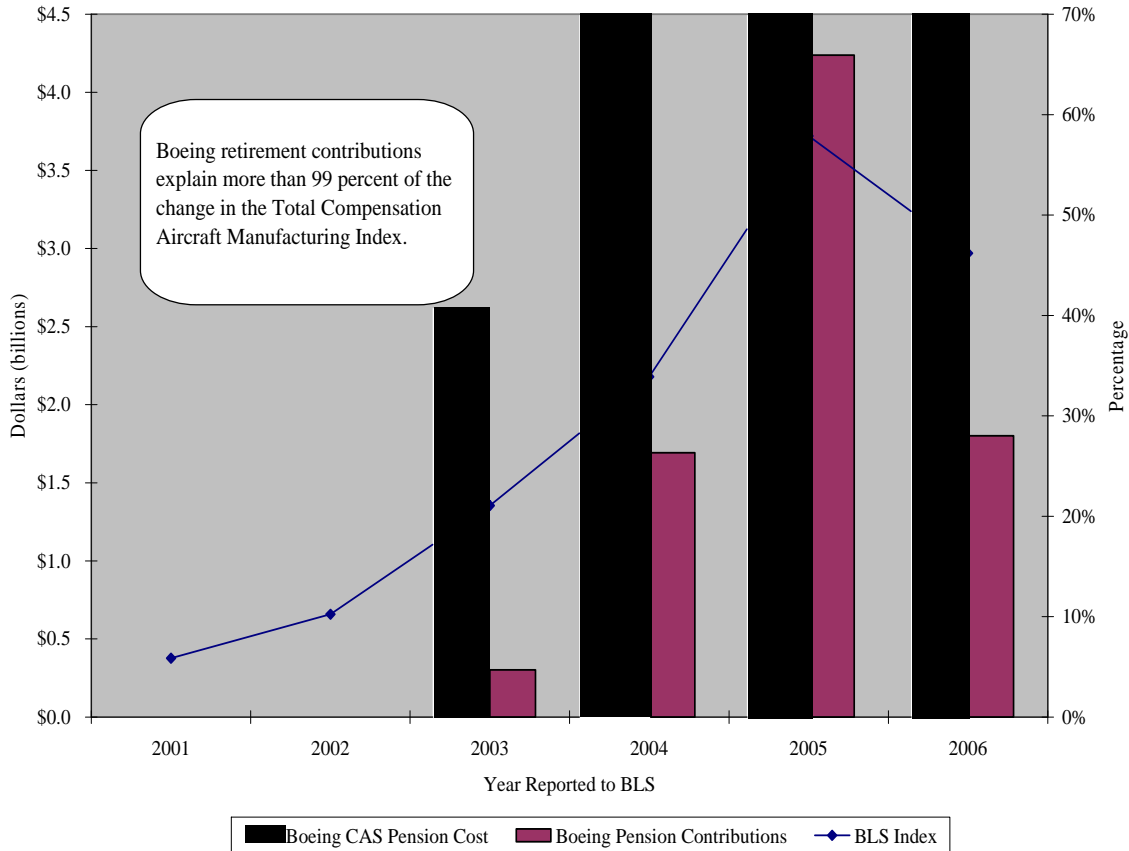
In addition, in each Boeing annual report from 2002 through 2006, Boeing stated that almost all of its contributions to pension plans were voluntary to improve the funded status of the plans. In the 2004, 2005, and 2006 annual reports, Boeing also stated that required pension contributions under ERISA regulations were not expected to be material in 2005, 2006, and 2007. Moreover, in the 2002 Annual Report, Boeing had a special note to its financial statements regarding "Accounting for the Impact of the September 11, 2001, Terrorist Attacks"; however, none of the financial impacts discussed losses in Boeing's pension funds.

## **BLS Measurement of Pension Costs**

The anomaly in the BLS index related specifically to the benefits portion of the index. It occurred because BLS uses contributions to pension funds to measure expenses (costs); however, except for tax purposes, pension contributions by Boeing do not equate to a pension expense that is regulated by CAS. As previously stated, from 2003 through 2006, Boeing reported \$8.0 billion in pension contributions to BLS, while only [REDACTED] was an actual pension expense under CAS.

Figure 3 shows that Boeing's retirement contributions reported to BLS correlate significantly with the BLS ECEC for total compensation in the aircraft

manufacturing industry.<sup>6</sup> The DoD IG Quantitative Methods Directorate determined that the Boeing retirement contributions had a strong positive correlation to the increase in the BLS ECEC for the aircraft manufacturing industry. Specifically, the DoD IG Quantitative Methods Directorate stated that the Boeing retirement contributions explained 99.94 percent of the change in the ECEC for retirement and savings. For more information on the DoD IG Quantitative Methods Directorate analysis and methodology, see Appendix D.



**Figure 3. Boeing CAS Pension Cost, Pension Contributions Reported to BLS, and the Cumulative Change in the BLS ECEC Index for Total Compensation**

According to the Defense Contract Audit Agency (DCAA) and the Defense Contract Management Agency (DCMA), Boeing did not violate any ERISA, CAS, or FAR rules when it made the contributions to its pension plans. For a summary of reviews conducted by DCAA and DCMA, see Appendix E. However, we have determined that the large Boeing pension contributions reported to BLS introduced great volatility and caused the index to spike. This spike occurred because the BLS benefits data include cash pension contributions, and cash pension contributions are not indicative of underlying economics.

<sup>6</sup> The retirement contributions that Boeing reports to BLS affect the ECI and ECEC in March of the next year. For example, in March 2005, Boeing reported to BLS \$4.2 billion contributions to its pension plans for 2004.



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## What Boeing Knew

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

---

[REDACTED]

- [REDACTED]
- [REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

### Original Settlements Offered

Although Boeing settled with the Navy in November 2005 and with the Army in February 2006, and offered to settle with the Air Force in March 2006, the settlements were not based on a methodology similar to the Boeing internally recommended options: to remove pension costs from the ECI 3721 or to use a hybrid index.

The Boeing settlement offer to the Air Force was based on the timing of the index. The Boeing settlement offer to the Navy was based on a buyout of Boeing and Northrop Grumman labor at 50 percent of the ECI 3721 and average hourly earnings indexes and leaving the material indexes unchanged. The buyout was to recognize inflation that had already occurred. Under the settlement, the basis of future labor adjustments would be the Boeing FPRA in place at the time of adjustment. Neither the Air Force nor the Navy settlement offers included any retroactive changes to the EPA payments that had already been made. Boeing did not offer a settlement or any other form of EPA relief to the Army.

**Original Air Force Settlement Offer.** On March 16, 2006, the Boeing C-17 Contracts, Estimating, and Pricing Director stated that, at the request of the Air Force C-17 Systems Group and due to the circumstances surrounding the substantial increase in the labor benefits index used in the EPA clause, Boeing entered into discussions starting in November 2005 to reach an alternative settlement value. The Air Force had already paid Boeing \$35.5 million for the FY 2004 adjustment and \$101.4 million for the FY 2005 adjustment, for a total of \$136.9 million. Boeing's settlement offer for the FY 2006 and FY 2007 EPA liability was \$168.4 million, for a total EPA liability of \$305.3 million; the same amount projected using the third quarter 2004 Global Insight forecast.

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On April 6, 2006, the C-17 System Program Office Contracts Division Chief stated that the Air Force had suggested changing the EPA clause to use existing Boeing FPRAs to adjust for economic fluctuations, or hybrid labor indexes that would normalize the benefits portion of the labor index. He stated that while Boeing had considered these approaches, Boeing had only agreed to consider changing the time frame of the indexes identified in the clause. The Air Force did not immediately accept the Boeing settlement offer, and instead decided to defer settlement until the DoD IG audit results were available. On May 2, 2007, Boeing notified the Air Force that it still stood by its offer to settle the FY 2006 and FY 2007 EPA liability for \$168.4 million.

**Original Navy Settlement.** On July 27, 2005, Boeing notified the Navy that there was a problem with the ECI 3721. Specifically, in a memorandum to the Commander, Naval Air Systems Command, the Boeing F/A-18 Contracts and Pricing Manager stated that while most indexes have shown modest growth, the ECI 3721 had shown substantial growth in actual and forecasted values. He stated that Boeing believed the ECI 3721 was no longer useful in the EPA clause calculation and that Boeing was open to discussions with the Navy in hopes of finding a mutually agreeable solution to this issue.

In November 2005, the Navy negotiated with Boeing for more favorable EPA terms, at a cost of [REDACTED] to the Navy. The Navy contracting officer issued a modification to the contract EPA clause, replacing the use of the ECI 3721 and average hourly earnings index, used for Northrop Grumman labor, with Boeing's FPRAs and removed Northrop Grumman labor from the EPA baseline. The revised EPA clause was applicable to FY 2007 through FY 2009. The revised EPA clause stated that before calculating EPA adjustments for Boeing labor, the FPRAs data must be normalized to exclude the impact of any accounting changes, mergers, acquisitions, divestitures, and realignments. According to the contracting officer, the intent of this language was to prevent Boeing from being able to directly influence the EPA liability calculations.

As of March 2007, the Navy had paid Boeing \$94.9 million for the EPA liability for FY 2005 through FY 2007 labor. Under the settlement agreement, FY 2008 and FY 2009 were subject to a minimum bill of [REDACTED] and [REDACTED] for labor. Therefore, as a result of the settlement, the minimum Navy labor EPA bill would be [REDACTED].<sup>7</sup> However, the contracting officer stated that in early 2007, when Boeing Integrated Defense Systems published its FPRAs, the Navy learned that the FPRAs had increased substantially, partially because Boeing changed the actuarial tables, which increased the projected level for its Pension Value Plan. According to the contracting officer, DCAA did not consider this to be an accounting change; therefore, its effect was not excluded by the revised contract EPA language.

The contracting officer stated that upon an initial review of the Boeing FY 2007 FPRAs, he calculated a potential EPA [REDACTED]. The contract included a special provision that

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<sup>7</sup> Because the Navy materials EPA liability flows through to Northrop Grumman, we have not discussed it here. For more detailed discussion of the materials impact on the Navy F/A-18 E/F contract, see Appendix B.

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required that any abnormal FPRA changes resulting from matters such as reorganization would require that the FPRA be normalized to ensure that those abnormal events did not affect the purpose of the FPRA. However, the contracting officer stated that the normalization of the FY 2007 FPRA was not in accordance with the contract. In the spring of 2007, Boeing offered to delay the calculation of the FY 2008 effect and to use the January 2008 FPRA to calculate the adjustment for FY 2008 and FY 2009. The contracting officer stated that [REDACTED] and the contracting officer verbally accepted this offer. [REDACTED] and the contracting officer believed there would be no adjustment for either FY 2008 or FY 2009.

According to the contracting officer, during negotiations with the OSD/tri-Service team, Boeing stated that if the January 2008 rates were normalized, the FY 2008 and FY 2009 adjustments would each [REDACTED], for a total of [REDACTED]. The contracting officer stated that he analyzed Boeing's normalization and discovered that the [REDACTED] was due to a CAS noncompliant accounting change. The contracting officer and the OSD/tri-Service team did not agree with Boeing's position.

**Original Army Settlement.** Boeing did not offer a settlement or any other relief to the Army for the Apache Longbow EPA liability. As of February 2006, the Army had paid Boeing \$45.8 million in accordance with the EPA clause. According to the contracting officer, the contract was extended to March 31, 2007, but the majority of the contract had been completed and there would be no further payments for EPA liability. Boeing did not notify the Army about the increase in the index, or that it believed that the index was "no longer useful" in EPA calculations, as it notified the Navy. Therefore, the Army paid the entire EPA liability. In response to our draft report, Boeing stated that it did not notify the Army about the increase in the index because Boeing personnel did not appreciate the situation until after that contract had been virtually completed.

## **Methodology to Calculate EPA Impact on DoD Multiyear Contracts**

As previously stated, Boeing internally identified four solutions to "fix" the anomaly in the ECI 3721, but dismissed two of the options when recommending long-term and short-term solutions. To solve the index problem in the long term, Boeing recommended pursuing the request to BLS to remove pension contributions from the ECI 3721. To solve the index problem in the short term, Boeing recommended the use of a hybrid index, composed of 68 percent ECI 3721 wages and salaries and 32 percent total private industry benefits.

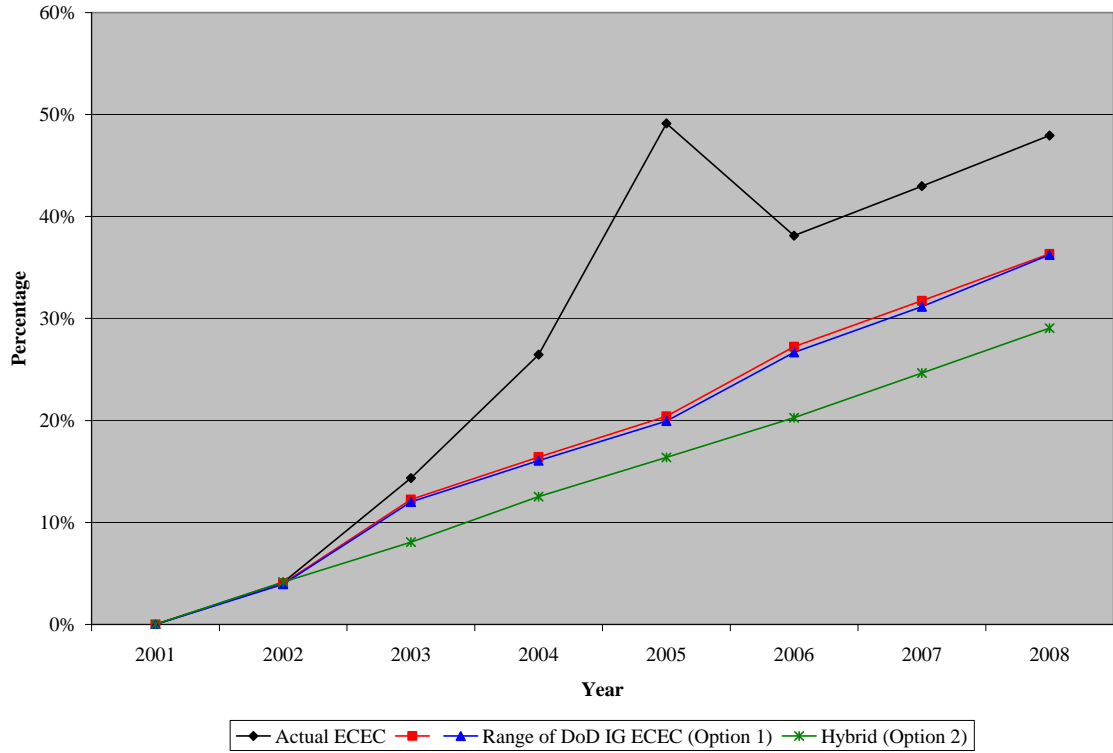
We basically agree with Boeing on either of these approaches and based our calculations accordingly. We calculated the EPA impact on DoD multiyear contracts using both a variation of Boeing's long-term solution, removing Boeing's pension prepayment credits from the index (Option 1) and Boeing's short-term hybrid index solution (Option 2).

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**Option 1.** The Air Force, Navy, and Army EPA calculations were based on the ECI 3721, which included anomalies due to the large Boeing pension contributions. According to BLS, the same information is used to calculate the ECI and ECEC cost data for the aircraft manufacturing industry. Because the ECI does not delineate the specific elements of benefits, we used ECEC data to identify the effect of Boeing retirement contributions on the total compensation aircraft manufacturing industry index. Using the ECEC allowed the DoD IG Quantitative Methods Directorate to back out the [REDACTED] prepayment credit and create a new index, the DoD IG calculated ECEC. The DoD IG Quantitative Methods Directorate reported the new index as a range of values. This calculation using the ECEC data is conservative (favors Boeing) because actual weighting of benefits is used versus fixed weighting used for the ECI. The fixed weighting of the ECI puts more emphasis on labor, 68 percent, which has not increased as significantly as benefits. For detailed information on the DoD IG calculated ECEC and the DoD IG Quantitative Methods Directorate methodology, see Appendix D.

**Option 2.** The hybrid index, Boeing's recommended short-term solution, replaces the volatile aircraft manufacturing benefits index with a broader base for benefits, thus smoothing the effects of Boeing's large pension contributions. The hybrid index is composed of 68 percent ECI 3721 wages and salaries and 32 percent total private industry benefits index. We changed the contract baselines from the ECI 3721 to the hybrid index and followed the contract specified dates for EPA calculations when applying the hybrid index to the EPA models. The Air Force contract stated that the EPA should be calculated using the forecast in effect as of November 30 of the fiscal year. Therefore, we used the third quarter 2003 Global Insight forecast to calculate the FY 2004 adjustment and so on for each remaining year. The Navy contract stated that the forecast in effect as of the previous July 31 should be used to determine the adjustment. Therefore, we used the second quarter 2004 Global Insight forecast to calculate the FY 2005 adjustment and so on for each remaining year. The Army contract stated that the fourth quarter forecast from the previous year should be used to calculate the EPA for each lot. Therefore, we used the fourth quarter 2002 Global Insight forecast to calculate the 2003 adjustment and so on for each remaining year.

Figure 4 shows a cumulative comparison of the DoD IG calculated ECEC and the hybrid index with the actual ECEC, including the Global Insight forecast for 2007 and 2008. As shown in the figure, there is a significant difference between the actual ECEC and the DoD IG calculated ECEC (Option 1) and the hybrid index (Option 2).



**Figure 4. Comparison of the Actual ECEC, the DoD IG Calculated ECEC (Option 1) and the Hybrid Index (Option 2) (Cumulative)**

Using basically the same long-term and short-term solutions internally identified by Boeing, we calculated that the EPA liability DoD would owe Boeing should be between \$90.2 million and \$260.3 million, versus the total of the negotiated and proposed settlement amounts of \$566.5 million, a difference or windfall profit to Boeing of between \$306.2 million and \$476.3 million. See Table 7 for a breakout by the different multiyear contracts.

**Table 7. Cost Effect and Abnormal Boeing Earnings**  
(in millions)

	<u>C-17</u>	<u>F/A-18 E/F<sup>1</sup></u>	<u>Apache</u>	<u>Total</u>
EPA liability (ECI 3721)	\$ 647.5	\$ 1,211.7	\$ 45.8	\$ 1,905.0
Proposed/actual settlement amount [Paid to date]	305.3 (P) [136.9]	215.4 <sup>2</sup> (A) [94.9]	45.8 (A) [45.8]	566.5 [277.6]
DoD IG (Option 1) (range)	150.3–167.6	23.8–29.2	28.6–30.1	202.7–226.9
Hybrid (Option 2)	54.7	62.6	11.7	129.0
Settlement range	54.7–167.6	23.8–62.6	11.7–30.1	90.2–260.3

<sup>1</sup>Labor costs only for the Navy F/A-18 E/F.  
<sup>2</sup>Includes potential FPRA increase of ██████████ for FY 2008 and ██████████ for FY 2009.

**Air Force EPA Using DoD IG and Hybrid Options.** Using the third quarter 2005 Global Insight forecast, the Air Force estimated that its total EPA liability for the C-17 multiyear contract would be \$647.5 million. Boeing offered to settle with the Air Force for a total EPA bill of \$305.3 million. Using the DoD IG calculated ECEC (Option 1), the Air Force calculated that the range of the total EPA liability should be between \$150.3 million and \$167.6 million. Using the hybrid index (Option 2), we calculated that the Air Force would owe Boeing \$54.7 million for the total EPA.<sup>8</sup>

<sup>8</sup> The C-17 contract included a trigger band of approximately 1 percent of the annual lot price. If the absolute value of the calculated adjustment was greater than the trigger band value, then the full adjustment amount would be due. Otherwise, the adjustment amount was to be zero. We did not consider the trigger band in our calculations. If the trigger band was applied, then there would be no adjustment for the Boeing EPA using the hybrid index. The EPA liability would consist only of the ██████████ price adjustment for Vought, which was included in the contract as a pass-through to the Air Force.



Table 8 shows the Air Force estimated EPA liability, the proposed Boeing settlement amount, the DoD IG calculated ECEC, and the hybrid index.

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>Total*</u>
FY 2006 EPA liability	\$ 35.5	\$ 101.4	\$ 278.8	\$ 231.8	\$ 647.5
Proposed/actual settlement amount	35.5 (A)	101.4 (A)	95.4 (P)	73.0 (P)	305.3
DoD IG (Option 1) (range)	23.1–25.1	38.8–43.2	47.8–53.6	40.5–45.7	150.3–167.6
Hybrid (Option 2)	0.8	13.1	31.5	9.3	54.7

\*Totals may appear inconsistent because we rounded the source data.

Boeing stated that the Air Force C-17 multiyear II contract included both a 25-percent price reduction and significant resulting performance risk to Boeing. Boeing stated that on May 2, 2007, it reiterated its willingness to settle both the FY 2006 and FY 2007 EPAs on the C-17 contract for a combined amount of \$168.4 million. Boeing stated that this amount was not only \$226.4 million less than Boeing's remaining \$394.8 million contractual entitlement, but was also the amount that the Air Force funded and expected to pay.

**Navy EPA Using DoD IG and Hybrid Options.** Using the second quarter 2005 Global Insight forecast, the Navy estimated that the labor EPA liability would be \$1.2 billion. Under the revised EPA clause, the Navy settled with Boeing for a minimum bill of [REDACTED] for labor, but because the [REDACTED] in 2007, the Navy potentially had an additional contractual obligation of [REDACTED] for the FY 2008 EPA liability for labor and [REDACTED] for the FY 2009 EPA liability for labor, for a total of \$215.4 million. Using the DoD IG calculated ECEC for labor costs (Option 1), the Navy calculated that the total labor costs would be between \$23.8 million and \$29.2 million.<sup>9</sup> Using the hybrid index (Option 2), we calculated that the total labor costs would be \$62.6 million.<sup>10</sup>

Table 9 shows the comparison of the projected Navy EPA liability for labor, the labor cost under the Navy settlement, and the labor impact using both the DoD IG option and the hybrid option.

<sup>9</sup> The labor costs calculated with the DoD IG calculated ECEC (Option 1) include the cost of both Boeing labor and Northrop Grumman labor. See Table 10 for a detailed breakout of the labor costs.

<sup>10</sup> The labor costs calculated with the hybrid index (Option 2) include the cost of both Boeing labor and Northrop Grumman labor. See Table 11 for a detailed breakout of the labor costs.

**Table 9. Navy Labor Settlement and Alternative Index Calculations**  
(in millions)

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Total*</u>
Projected liability	\$ 42.8	\$ 251.7	\$ 277.8	\$ 309.4	\$ 330.0	\$ 1,211.7
Labor settlement	42.8	25.0	27.1	█	█	█
Total increase				58.7	61.8	215.4
DoD IG (Option 1) (range)	4.7–6.1	6.0–8.1	6.8–8.2	2.7–3.4	3.5–3.3	23.8–29.2
Hybrid (Option 2)	13.8	36.7	15.6	1.7	(5.3)	62.6

\*Totals may appear inconsistent because we rounded the source data.

According to a Boeing document, the Navy settlement was based on a Navy “buy out” of the Boeing ECI 3721 index and the Northrop Grumman average hourly earnings index at a 50 percent discount to recognize inflation that had already occurred. Therefore, we included the labor for both Boeing and Northrop Grumman when comparing the EPA liability for labor on the F/A-18 E/F contract using the DoD IG calculated ECEC (Option 1) and the hybrid index (Option 2) to the settlement, even though under the original clause, the Northrop Grumman labor was considered a material cost in the EPA calculations.

As shown in Table 10, the Boeing labor using the DoD IG calculated ECEC (Option 1) was negative; Boeing would owe the Navy between █ and █. However, the Northrop Grumman labor was █, which caused the total EPA liability for labor that the Navy would owe Boeing to range from \$23.8 million to \$29.2 million.

**Table 10. DoD IG (Option 1) Labor Calculation**  
(in millions)

<u>Year</u>	<u>Boeing Labor (ECI 3721)</u>	<u>Northrop Grumman Labor (Average Hourly Earnings)</u>	<u>Total*</u>
FY 2005	█	█	█
FY 2006	█	█	█
FY 2007	█	█	█
FY 2008	█	█	█
Total*	█	█	\$23.8–\$29.2

\*Totals may appear inconsistent because we rounded the source data.

As shown in Table 11, the Boeing labor using the hybrid index (Option 2) was [REDACTED] and the Northrop Grumman labor was [REDACTED], which caused the total EPA liability for labor that the Navy would owe Boeing to be \$62.6 million.

**Table 11. Hybrid (Option 2) Labor Calculation**  
(in millions)

<u>Year</u>	<u>Boeing Labor (ECI 3721)</u>	<u>Northrop Grumman Labor (Average Hourly Earnings)</u>	<u>Total*</u>
FY 2005	[REDACTED]	[REDACTED]	[REDACTED]
FY 2006	[REDACTED]	[REDACTED]	[REDACTED]
FY 2007	[REDACTED]	[REDACTED]	[REDACTED]
FY 2008	[REDACTED]	[REDACTED]	[REDACTED]
FY 2009	[REDACTED]	[REDACTED]	[REDACTED]
Total*	[REDACTED]	[REDACTED]	\$62.6

\*Totals may appear inconsistent because we rounded the original data.

**Army EPA Using DoD IG and Hybrid Options.** The Army paid Boeing the entire EPA liability of \$45.8 million. Using the DoD IG calculated ECEC (Option 1), we calculated the range of the EPA liability would have been \$28.6 million to \$30.1 million. Using the hybrid index (Option 2), we calculated that Army's EPA liability would have been \$11.7 million. Table 12 shows the EPA liability paid and the EPA liabilities calculated using the DoD IG calculated ECEC and the hybrid index.

**Table 12. Army EPA Payments and Alternative Index Calculations**  
(in millions)

	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>Total*</u>
EPA liability paid	\$ 0.1	\$ 0.7	\$ 4.8	\$ 15.3	\$ 18.9	\$ 5.9	\$ 45.8
DoD IG (Option 1) (range)	0.1-0.1	0.3-0.4	5.5-5.8	9.3-9.8	10.5-11.0	2.9-3.1	28.6-30.1
Hybrid (Option 2)	0.0	0.2	1.4	3.1	5.4	1.5	11.7

\*Totals may appear inconsistent because we rounded the source data.

Boeing stated that the Apache multiyear II contract cannot be equitably adjusted without consideration of an Apache multiyear I contract offset. Specifically, Boeing stated that DoD IG has failed to take into account the Apache multiyear I

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contract, in which the price to the Government was decreased by \$48.6 million although Boeing's costs increased by more than \$75 million.

**Contract Terms.** The Air Force C-17 Globemaster III, Navy F/A-18 E/F Super Hornet, and the Army AH-64D Apache Longbow contracts all included language in the EPA clause regarding discontinued indexes, stating that the parties should mutually agree on an appropriate substitute for the discontinued index. The EPA clauses also stated that in the event BLS or Global Insight alters its method of calculating the index, appropriate adjustments must be made by the parties to place the changed index on a basis comparable to the index calculated before the change. Additionally, the Air Force C-17 Globemaster III contract included the following language regarding any errors identified in the index calculations:

Once a price adjustment under this clause has been made, further adjustments shall not be made unless BLS or Global Insight acknowledges a significant error (an error that would impact the price of any lot by more than \$500,000) was made in the indices used in calculation of any adjustment.

**DoD IG Analysis.** In March 2007, we presented and discussed our analysis and conclusions with officials from BLS and Global Insight.

**BLS Response.** The audit team asked the Chief, Division of Compensation Data Estimation at the BLS Office of Compensation and Working Conditions whether BLS would consider changing its methodology of collecting data for retirement and savings contributions and costs. We also asked whether BLS would acknowledge that there was an abnormality in the index calculation for the years where Boeing made the large prepayment credits in its pension plan contributions. The Chief, Division of Compensation Data Estimation, responded that:

...we have reviewed our procedures for collection of data on employer's cost of defined benefit retirement plans. We believe that the current procedures are appropriate and best-suited to a broad-based measure such as the Employment Cost Index. Given the voluntary nature of our data collection and the wide variety of business and government operations from which data are obtained, it is essential that our procedures reflect generally understood compensation practices and rely upon available records. Data reported for the aircraft manufacturing industry in 2001-06 are consistent with established collection procedures.

**Global Insight Response.** The audit team also asked the Global Insight Senior Economist, Industry Practices whether Global Insight would acknowledge that what happened with the prepayment credits constitutes a significant error. The Senior Economist responded that:

Global Insight really isn't in a position to weigh in on whether or not the BLS has erred here. As well, we do not feel that we have contributed to any significant error in our forecasting of this series. So, unfortunately, our response would have to be that, no, we would not be able to definitively say that there was a significant error committed.

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The terms of the contract EPA clauses allow the Services to adjust EPA terms only if BLS or Global Insight discontinue an index or change the method for calculating the index. In addition, the Air Force can adjust the EPA contract terms if BLS or Global Insight identify a significant error was made in the index. In response to our concerns, BLS would not agree that its procedures for data collection needed to be changed and neither BLS nor Global Insight would acknowledge that a significant error was made in the ECI 3721. The Air Force, Navy, and Army contracting officers all made decisions regarding payment of the EPA liability with the information that was available to them at the time; however, we have shown that the ECI 3721 has lost its usefulness. Because Boeing could control the changes in the ECI 3721, DoD contracting officers will need to use an index other than the ECI 3721 for EPA clauses in DoD contracts.

**Duplicate Recovery.** The different accounting for pension costs created a situation that would have amounted to a duplicate recovery associated with pension funding when Boeing charged the prepayment credits to future DoD contracts, because these costs were already accounted for as part of the EPA for the DoD multiyear contracts. As previously stated, Boeing reported \$8.0 billion in pension contributions to BLS for the years 2003 through 2006, which BLS treated as a cost, but Boeing's allowable CAS pension cost for those years was only [REDACTED]. The [REDACTED] difference between the pension contributions and CAS pension costs is a prepayment credit. Because BLS considered the entire pension contribution as a cost, the ECI 3721 spiked and created significant unjustified increases of \$1.9 billion on three DoD multiyear contracts that used the index for the basis of the EPA liability calculations.

Boeing can use its [REDACTED] pension prepayment credits to cover future pension costs, and the prepayment credit would be expensed at that time to both DoD and commercial contracts. Pension expense under Boeing Integrated Defense Systems business units is part of forward pricing rates and is recoverable under DoD contracts. Consequently, DoD would essentially pay Boeing twice for the same pension costs. If DoD pays Boeing for the EPA liability as calculated based on the ECI 3721, DoD will be paying for the pension prepayment credit through the EPA clause. Then when Boeing expenses the prepayment credit to cover future pension costs, DoD will pay Boeing through its forward pricing rates. Because of the requirements of the Pension Protection Act to harmonize CAS and ERISA, this duplicate recovery of costs may occur soon.

**Boeing Position.** Boeing was aware of the abnormal cost trend in the benefits portion of the ECI 3721 in August 2005 and identified alternative solutions to the index problem. Specifically, one of the alternatives was to use a hybrid index consisting of aircraft manufacturing wages and salaries and private industry benefits. Using the hybrid index instead of the ECI 3721, Boeing internally identified that the F/A-18 program EPA liability would be [REDACTED] versus [REDACTED], and the C-17 program EPA liability would be [REDACTED] versus [REDACTED]. Boeing did not apply this hybrid index solution to the programs affected by the ECI 3721 anomalies, even though the Vice President-Controller of Boeing Integrated Defense Systems directed in December 2005 that the hybrid index be used to arrive at more probable estimates of the effect of EPA clauses on revenue or cost in the Boeing internal quarterly estimate at completion reviews.

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We met with senior Boeing officials several times in an attempt to resolve the EPA issue. Boeing strongly maintained that there were no legal or contractual grounds to reform or rewrite contractual terms and conditions properly reached between the United States and the contractor. Boeing stated that it understands that the DoD IG may encourage amendments to FAR and new EPA clauses for future contracts, but there is no contractual or legal basis for the Government to unilaterally rewrite its contractual obligations. In addition, Boeing stated that the United States cannot avoid an agreement reached by a contracting officer merely by suggesting that the bargain was improvident.

## Management Action Taken During the Audit

**Management Action Related to the BLS Index.** On September 11, 2007, we briefed the Director, DPAP on our audit findings and verbally recommended that he revise the DFARS PGI 216.203-4, "Contract Clauses," because it suggested using the ECI for aircraft manufacturing total compensation, benefits, and wages and salaries in contract EPA clauses. On October 9, 2007, the Office of DPAP issued a draft revision of the guidance that directed DoD contracting officers to use caution when incorporating EPA provisions in contracts. The revised policy informed DoD contracting officers that the ECI for aircraft manufacturing total compensation and benefits had become ineffective for use as the basis for labor cost adjustments in DoD EPA clauses. In addition, it stated that if a total compensation index was desired, contracting officers should consider the use of a hybrid index. On January 10, 2008, DFARS PGI 216.203-4 was revised to update guidance on the use of EPA provisions in DoD contracts.

After meeting with the Office of DPAP, we obtained additional information from Boeing that showed that Boeing reimburses BLS for the costs associated with collecting and publishing the ECI 3721 through a contract with the Aerospace Industries Association. Additionally, Boeing comprises approximately [REDACTED] of the ECI 3721. The DFARS PGI 216.203-4, "Contract Clauses," states that the basis of the index must be broad enough to minimize the effect of any single company, including the anticipated contractors. However, Boeing has become the dominant force in the ECI 3721 and as stated by Boeing, [REDACTED]. Therefore, the Director, DPAP should further revise the guidance to also prohibit the use of the ECI for aircraft manufacturing wages and salaries in EPA clauses in DoD contracts.

**Management Action Related to the Final Settlement.** In response to a working draft of this report, the Director, DPAP briefed the Under Secretary of Defense for Acquisition, Technology, and Logistics, and at his direction, led an OSD/tri-Service negotiating team to negotiate with Boeing on the total amount due for the EPA liability on the three contracts. On March 12, 2008, Boeing and the negotiating team reached agreement on the following settlement details:

- The Air Force, having already paid \$136.9 million for labor cost adjustments, will make no further payments under the C-17 EPA clause, and the parties agree that this includes satisfaction of the Air Force's obligation to Boeing for its subcontract with Vought.

- The Navy, having already paid approximately \$94.9 million for labor cost adjustments under the F/A-18 E/F EPA clause, will make one additional payment of \$19 million. No additional payments for labor cost adjustments will be made for any reason. Material related calculations will remain unchanged and be paid in accordance with the EPA clause.
- The Army, having already paid the entire EPA liability of \$45.8 million on the Apache Longbow contract, will be entitled to the work described in seven Boeing requests for equitable adjustment, valued at \$24.3 million, at no cost to the Government. Boeing will withdraw the requests for equitable adjustment and will not be entitled to their specific issues.

Table 13 details the total contract liability, the Boeing position/contractual liability prior to OSD/tri-Service negotiations, the final settlement, and the cost avoided.

	<u>C-17</u>	<u>F/A-18 E/F</u>	<u>Apache</u>	<u>Total</u>
EPA liability	\$647.5	\$1,211.7	\$45.8	\$1,905.0
Boeing position/contractual liability prior to negotiations	531.7*	215.4	45.8	792.9
Final settlement	136.9	113.9	21.5	272.3
<b>Cost Avoided</b>	<b>\$394.8</b>	<b>\$ 101.5</b>	<b>\$24.3</b>	<b>\$ 520.6</b>

\* As shown in Table 7, the original Boeing settlement offer to the Air Force was \$305.3 million; however, on January 9, 2008, Boeing withdrew the offer. The Air Force contractual liability under the EPA clause was \$531.7 million.

Although the total final settlement is slightly above the range we identified, we recognize that the Navy and Boeing previously addressed the anomaly in the ECI 3721 and agreed on a revised EPA clause and settlement in November 2005. The Director, DPAP and his OSD/tri-Service negotiating team have reached a settlement with Boeing that is consistent with the results of the audit and will avoid a cost of \$520.6 million for DoD and the taxpayers.

**Future Multiyear Contracts.** The purpose of an EPA clause in multiyear contracts is to allow for adjustments when there are concerns about the market or labor conditions, specifically contingencies beyond the contractor’s control. The intent of the EPA clause was not for Boeing to recover voluntary pension

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contributions. The DFARS states that the basis of an index must be broad enough to minimize the effect of any single company. However, because Boeing comprises about [REDACTED] of the ECI 3721, Boeing's significant voluntary pension contributions caused an anomaly in the index that was not representative of underlying economic conditions. As a result, Boeing would have received a windfall profit of between \$306.2 million and \$476.3 million through the EPA clauses in the three contracts. Contractually and legally, Boeing may have had the ability to enforce the contract clauses and collect these "abnormal" earnings. The Director, DPAP, in conjunction with the Service Acquisition Executives, should evaluate whether EPA clauses are necessary in multiyear contracts and also should closely monitor abnormal cost increases in multiyear contracts with EPA clauses to ensure that the contract adjustments are a result of economic behavior as intended for the clauses.

## Management Comments on the Finding and Audit Response

**Management Comments.** The Director, DPAP consolidated comments from the three Services in his comments to the draft report. He stated that prior to the OSD/tri-Service team negotiations with Boeing, Boeing and the Military Departments discussed settlements in varying degrees and at different times. He therefore requested that the "initial Boeing offer" in Table 13 be changed to read "Boeing position/contractual liability with the Military Departments prior to Tri-Service negotiations." The OSD/tri-Service negotiating team also identified a higher EPA liability of \$792.9 million.

The management comments included a more detailed discussion of the original Navy settlement and the [REDACTED]. Specifically, the Navy contracting officer stated that using the Boeing FY 2007 FPRA, he calculated a [REDACTED] for FY 2008 and [REDACTED] for FY 2009. However, Boeing offered to delay the calculation of the [REDACTED] and to use the FY 2008 FPRA for the EPA. During negotiations with the OSD/tri-Service team, Boeing stated that FY 2008 and FY 2009 would have a total [REDACTED] if the FY 2008 FPRA was normalized. The contracting officer and the OSD/tri-Service team did not agree with Boeing's position.

**Audit Response.** We agree with the comments and revised the report as appropriate.



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## Recommendation, Management Comments, and Audit Response

**We recommend that the Director, Defense Procurement and Acquisition Policy:**

**1. Revise the Defense Federal Acquisition Regulation Supplement Procedures, Guidance, and Information 216.203-4, "Contract Clauses," to prohibit the use of the employment cost index for aircraft manufacturing industry wages and salaries in economic price adjustment clauses in DoD contracts.**

**Management Comments.** The Director, DPAP concurred. He stated that on January 10, 2008, DPAP revised the Defense Federal Acquisition Regulation Supplement Procedures, Guidance, and Information 216.203-4, "Contract Clauses," to prohibit the use of the employment cost index for total compensation aircraft manufacturing industry in contract economic price adjustment clauses. He stated that DPAP would further modify the PGI to require that any contract including an economic price adjustment provision be submitted to DPAP for concurrence prior to inclusion of the provision in any resultant contract.

**Audit Response.** We consider the comments responsive.

**2. In conjunction with the Service Acquisition Executives, evaluate whether economic price adjustment clauses are necessary in multiyear contracts and closely monitor abnormal cost increases in multiyear contracts with economic price adjustment clauses to ensure that the contract adjustments are a result of economic behavior as intended for the clauses.**

**Management Comments.** The Director, DPAP concurred. He stated that he will issue a general policy memorandum to the Service Acquisition Executives alerting them to closely monitor economic price adjustment contract provisions and will include reporting requirement thresholds concerning the economic price adjustment provisions.

**Audit Response.** We consider the comments responsive.

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## Appendix A. Scope and Methodology

We conducted this performance audit from March 2006 through March 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We met with the Assistant Secretary of the Air Force for Acquisition; the Director, DPAP; the Deputy Assistant Secretary of the Navy for Acquisition and Logistics Management; the Commander, U.S. Air Force, Aeronautical Systems Center; and the Executive Director, Army Aviation and Missile Command Acquisition Center. We also met with additional officials from the Office of DPAP and the Office of the Deputy Assistant Secretary of the Air Force for Contracting. We met with several Boeing Integrated Defense Systems executives, including the President and Chief Executive Officer, and the Vice President and Chief Financial Officer. We interviewed and obtained documentation on the EPA clauses from the personnel of the Air Force C-17 Systems Group, Wright-Patterson Air Force Base, Ohio; Naval Air Systems Command, Patuxent River, Maryland; and U.S. Army Aviation and Missile Command, Redstone Arsenal, Huntsville, Alabama. We met with officials from BLS and Global Insight to obtain information about the ECI and ECEC for the aircraft manufacturing industry. We interviewed and obtained documentation on Boeing's pension costs from DCAA personnel at the DCAA Rainier Branch Office, Seattle, Washington, and the DCAA Boeing St. Louis Resident Office, St. Louis, Missouri. We also met with the DCAA Boeing Corporate Resident Office and the DCMA Corporate Administrative Contracting Officer for The Boeing Company in Chicago, Illinois. In addition, we interviewed and obtained documentation from Boeing personnel in Seattle, Washington, and Chicago, Illinois.

We reviewed the FAR and DFARS for guidance on EPA clauses in multiyear contracts. We reviewed CAS 412, CAS 413, ERISA, and the Pension Protection Act of 2006 for guidance on pension funding and accounting. We reviewed the multiyear contract EPA clauses and the cost models used by the Air Force, Navy, and Army to calculate the adjustments. Specifically, we reviewed EPA calculations for FY 2004 through FY 2007 for the Air Force C-17 Globemaster III, FY 2005 through FY 2009 for the Navy F/A-18 E/F Super Hornet, and 2001 through 2006 for the Army AH-64D Apache Longbow.

We obtained and reviewed data from BLS, including ECI data for the aircraft manufacturing industry on the Standard Industrial Classification basis for 2000 through 2005 and on the North American Industry Classification System basis for 2006, and ECEC for aerospace industries data for 2000 through 2006. We calculated percent changes for the aircraft manufacturing industry total compensation, wages and salaries, and benefits to compare the ECI with the ECEC for March 2001 through March 2006. BLS did not provide supporting documentation for the ECI and ECEC for the aircraft manufacturing industry

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because the data are protected by the Confidential Information Protection and Statistical Efficiency Act of 2002.

We reviewed the Boeing Retirement Contributions reported to the BLS for 2000 through 2005, obtained from the Boeing Director of Actuarial Services. We also reviewed the Boeing CAS 412 pension cost and claims worksheets obtained from the DCAA Rainer Branch Office, along with the DCAA audit reports to identify pension costs and prepayment credits for 2000 through 2005.

On July 10, 2007, we issued an Office of Inspector General subpoena to the Boeing Associate General Counsel for Boeing documents relating to the aircraft manufacturing index used for EPAs in multiyear contracts; the effect of Boeing's pension contributions reported to BLS on the aircraft manufacturing index; and the effect on multiyear contracts or indirect rates relating to the different treatment of pension costs under ERISA or Internal Revenue Code regulations and CAS.

The scope of our audit was limited to the review of the Air Force C-17 Globemaster III, Navy F/A-18 E/F Super Hornet, and Army AH-64D Apache Longbow contract EPA clauses. We did not review the effect of the ECI 3721 anomaly on any of DoD and Boeing's foreign military sales contracts.

**Use of Computer-Processed Data.** We did not use computer-processed data to perform this audit.

**Use of Technical Assistance.** The DoD IG Quantitative Methods Directorate assisted with the audit. The Quantitative Methods Directorate analysts identified the correlation between Boeing's pension contributions and the increase in employer compensation costs in the aircraft manufacturing industry. They also calculated the ECEC for total compensation in the aircraft manufacturing industry for 2001 through 2006, replacing the retirement and savings portion of the index with Boeing's pension costs instead of Boeing's pension contributions. A Global Insight Senior Economist calculated forecasted ECEC data for 2007 and 2008 using the ECEC calculated by the Quantitative Methods Directorate. See Appendix D for detailed information about the DoD IG Quantitative Methods Directorate and Global Insight calculations and methodology.

**Government Accountability Office High-Risk Area.** The Government Accountability Office has identified several high-risk areas in DoD. This report provides coverage of the "Strategic Human Capital Management," "DoD Approach to Business Transformation," and "Contract Management" high-risk areas.

## Prior Coverage

No prior coverage has been conducted on the effect of pension fund contributions on EPA clauses in DoD multiyear contracts during the last 5 years.

## Appendix B. Producer Price Index and Economic Price Adjustments for Materials

BLS publishes the producer price index, which is a family of indexes that measures the average change over time in selling prices received by domestic producers of goods and services. Producer price indexes measure price change from the perspective of the seller. Uses of the producer price index data include contract escalation, indicator of overall price movement at the producer level, measure of price movement for particular industries and products, comparison of industry-based price data to other industry-oriented economic time series, and forecasting. The producer price indexes listed in Table B-1 were included in the Air Force C-17 Globemaster III, Navy F/A-18 E/F Super Hornet, and the Army AH-64D Apache Longbow contracts for EPAs related to materials.<sup>1</sup>

**Table B-1. Producer Price Indexes in the EPA Clauses of the Air Force, Navy, and Army Contracts**

Contract	SIC <sup>1</sup> Index	NAICS <sup>2</sup> Index	Title
Air Force C-17 Globemaster III	PPI3728NS	PPI336413	Aircraft Parts and Equipment
Navy F/A-18 E/F Super Hornet	PPI2821NS	PPI325211	Plastic Materials and Resins
	WPIIND	WPIPIND	Industrial Commodities
	WPI102501NS	WPIP102501	Aluminum Mill Shapes (Nonferrous Metals)
	PPI33562NS	PPI3314913	Titanium Mill Shapes (Nonferrous Metals)
	WPI10	WPIWP10	Metals and Metal Products (Steel) (Fabricated Metals)
	PPI3671NS	PPI334411	Electron Tubes, All Types (Electronic Components)
Army AH-64D Apache Longbow	WPIIND	WPIPIND	Industrial Commodities

<sup>1</sup>Standard Industrial Classification.  
<sup>2</sup>North American Industry Classification System.

**Air Force and Army Materials.** The EPA for materials on both the Air Force C-17 and Army Apache Longbow contracts had only a minor effect on the overall EPA calculation. Therefore, we included the materials EPA calculations in the EPA calculations discussed in the finding.

<sup>1</sup> In 2004, BLS changed the basis for industry classification in the producer price index program from the Standard Industrial Classification system to the North American Industry Classification System.

**Navy Materials.** As previously discussed, the Navy and Boeing negotiated a settlement and revised EPA clause after identifying a large increase in the liability for labor. The material indexes remained unchanged; however, the weights were redistributed after the average hourly earning index for Northrop Grumman labor was removed from the material portion of the EPA. Table B-2 shows a comparison of the materials portion of the EPA liability under the original EPA clause and the revised EPA clause.

**Table B-2. Materials Effect Comparison Between Original and Revised EPA Clause**

	<u>Weight</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Total</u>
	(in millions)						
<b>Northrop Grumman Materials</b>							
<u>Original EPA Clause</u>							
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Original Clause</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Northrop Grumman Materials</b>							
<u>Revised EPA Clause</u>							
[REDACTED]	[REDACTED]				[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]				[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]				[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]				[REDACTED]	[REDACTED]	[REDACTED]
<b>Subtotal Revised Clause</b>		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
<b>Difference</b>		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

\* Actual Payment.

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Using the original EPA clause, the materials portion of the EPA would be [REDACTED].<sup>2</sup> To identify the materials liability under the original clause, we followed the contract-specified dates for EPA calculations. The Navy contract stated that the forecast in effect as of the previous July 31 should be used to determine the adjustment. Therefore, we used the second quarter 2004 Global Insight forecast to calculate the FY 2005 adjustment, and so on for each remaining year.

With the revised EPA clause negotiated as part of the settlement, the Navy adjusted the forecast used for calculations to the forecast in effect as of the previous April 30, so we used the first quarter 2007 Global Insight forecast to calculate the FY 2008 adjustment and the FY 2009 estimated adjustment. Using the revised clause, which included the materials costs the Navy had paid for FY 2005 through FY 2007, and the Global Insight forecasted material costs for FY 2008 and FY 2009, the materials portion of the EPA would be [REDACTED].

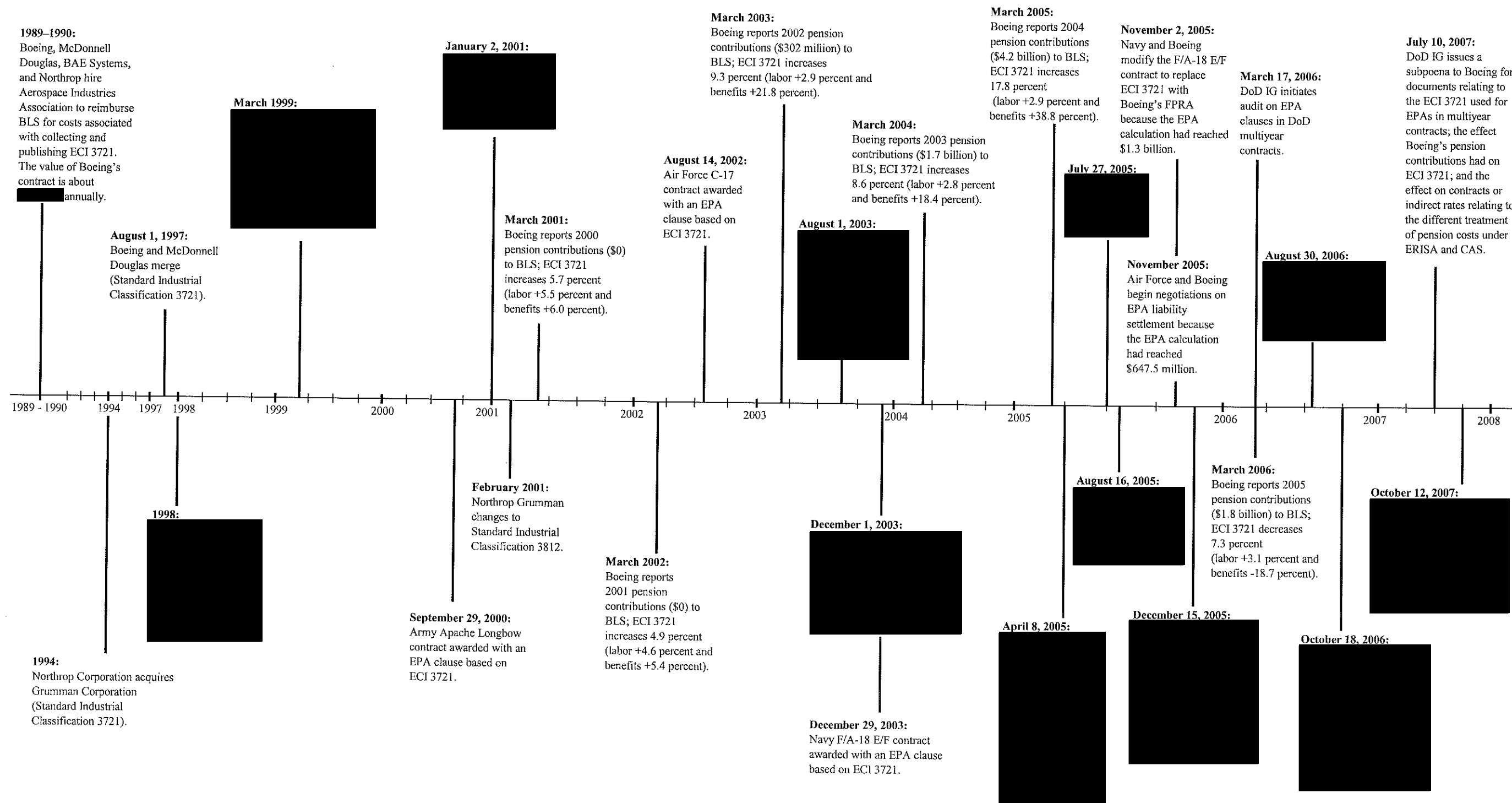
**Titanium Costs.** The majority of the materials price adjustment under both the original and revised EPA clauses was related to price increases for titanium. The titanium index was relatively stable from 1976 to 2003; however, by 2006, the index had increased by 171 percent. Global Insight forecasted the market to continue increasing and then slightly level off in 2008. The F/A-18 E/F contract baseline included a cumulative escalation of about 20 percent for titanium costs. However, using the first quarter 2007 Global Insight forecast, the cumulative titanium escalation will be 182 percent.

**Follow-On Audit.** Because the materials portion of the Navy EPA clause increased so much due to the significant increase in titanium values, we have announced a follow-on audit, “Cost Increases Related to the Producer Price Index for Titanium Mill Shapes on DoD Multiyear Contracts With Economic Price Adjustment Clauses.” We plan to determine whether the contract cost increases related to the producer price index for titanium mill shapes on DoD multiyear contracts with EPA clauses correspond with increased costs incurred by the contractor for titanium products.

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<sup>2</sup> The [REDACTED] EPA liability for materials under the original EPA clause does not include the [REDACTED] cost of Northrop Grumman labor. The Northrop Grumman labor was included as a material cost in the original EPA clause, but was part of the Navy “buy out” of the EPA clause, and therefore removed from the revised EPA clause. We included the cost of Northrop Grumman labor in our calculations for the EPA liability for labor on the F/A-18 E/F contract. See Tables 9, 10, and 11 in the Finding section.

# Appendix C. ECI 3721 Timeline of Events







## Appendix D. DoD IG Calculated ECEC 3721

According to BLS, the same information is used to calculate the ECI and ECEC cost data for the aircraft manufacturing industry. Because the ECI does not delineate the specific elements of benefits, we used ECEC data to identify the effect of Boeing retirement contributions on the total compensation aircraft manufacturing industry index. Using the ECEC allowed us to adjust the retirement and savings amount for CAS pension costs while leaving the remaining components of benefits unchanged.

**DoD IG Quantitative Methods Directorate Analysis.** Using the BLS ECEC for retirement and savings in the aircraft manufacturing industry, Boeing’s pension contributions, and pension costs, shown in Table D-1, the DoD IG Quantitative Methods Directorate identified a “strong positive correlation” (0.9997) between the Boeing retirement contributions and the retirement and savings portion of the BLS ECEC for the aircraft manufacturing industry. Specifically, the DoD IG Quantitative Methods Directorate found that the Boeing retirement contributions explained more than 99 percent of the change in the ECEC for retirement and savings.

**Table D-1. BLS ECEC for Retirement and Savings and Boeing Pension Contributions and Allowable CAS Pension Costs From March 2001 Through March 2006**

	<u>March 2001</u>	<u>March 2002</u>	<u>March 2003</u>	<u>March 2004</u>	<u>March 2005</u>	<u>March 2006</u>
BLS retirement and savings	\$1.36	\$1.41	\$2.40	\$6.43	\$13.84	\$6.96
Boeing retirement contributions (millions)	0.0	0.0	302.0	1,692.5	4,236.7	1,800.0
Boeing retirement costs (millions)	■	■	■	■	■	■

The DoD IG Quantitative Methods Directorate analysts provided the following explanation for the quantitative analysis:

We received six periods of data (March 2001 to March 2006) from the audit team. From the data we calculated a Pearson correlation coefficient,  $r$ , ( $r = .9997$ ,  $p < 0.0001$ ) and found that there was a strong positive correlation between BLS Retirement & Savings and Boeing Retirement Contributions. Because there was a strong correlation, we modeled the mathematical relationship using a simple linear regression equation by regressing the Boeing Retirement Contributions (explanatory variable) against BLS Retirement & Savings (response variable). The fitted regression model was  $\hat{y} = 1.46 +$

.00000003x. To determine how well the regression model fit the data we calculated the coefficient of determination variable,  $R^2$ , ( $R^2 = 0.9994$ ,  $F < 0.0001$ ) and found the Boeing Retirement Contributions explained over 99 percent of the change in the BLS Retirement and Savings.

Additionally, the DoD IG Quantitative Methods Directorate analysts stated:

QMD [Quantitative Methods Directorate] analysts performed the calculations based on the data provided by the auditors. The linear model developed by QMD using Boeing Retirement contributions as a predictor variable explained 99.94% of the variation in the BLS Retirement and Savings values. There exists a significant positive relationship between Boeing Retirement contributions and BLS Retirement Savings. The p-value for the linear model is less than 0.0001. It is our position that the linear model we developed explains virtually all of the variations in total compensation cost.

The DoD IG Quantitative Methods Directorate analysts calculated a range of total compensation using CAS pension costs instead of the entire Boeing pension contribution, which included prepayment credits. As shown in Table D-2, the range for the DoD IG calculated ECEC 3721 is lower than the BLS ECEC in 2003 through 2006. This is because the DoD IG calculated ECEC 3721 does not include the large prepayment credit amounts in those years.

	<u>March 2001</u>	<u>March 2002</u>	<u>March 2003</u>	<u>March 2004</u>	<u>March 2005</u>	<u>March 2006</u>
BLS actual ECEC	\$40.09	\$41.75	\$45.85	\$50.70	\$59.79	\$55.36
DoD IG calculated	39.80	41.40	44.68	46.34	47.92	50.64
ECEC (range)	40.59	42.19	45.47	47.11	48.69	51.42

The DoD IG Quantitative Methods Directorate analysts provided the following explanation for the range:

Using the fitted regression model with the Boeing Retirement Costs as the explanatory variable, we calculated the 95 percent prediction interval for the BLS Retirement & Savings for each of the six periods. The lower and upper prediction bounds of the total compensation intervals were established by simply replacing the original BLS Retirement & Savings by the calculated lower and upper prediction bounds of the Retirement & Savings.

**Global Insight Forecast.** Using the DoD IG-revised ECEC 3721 calculations, the Global Insight Senior Economist, Industry Practices forecasted the value of the ECEC 3721 for 2007 and 2008, as shown in Table D-3.

**Table D-3. Global Insight Forecast ECEC 3721 for 2007 and 2008**

	<u>March 2007</u>	<u>March 2008</u>
Forecast based on actual ECEC	\$57.32	\$59.31
Forecast based on DoD IG calculated ECEC (range)	52.43 53.24	54.26 55.09

The Global Insight Senior Economist stated that Global Insight must forecast from the index values published by BLS and the numbers forecasted from the DoD IG recalculated ECEC 3721 would be provided for DoD IG purposes only and would not be published by Global Insight. The Senior Economist provided the following explanation of the forecast:

Global Insight has provided a quarterly forecast for the historic series provided by the Department of Defense. A great deal of smoothing was involved in distributing these figures from first quarter figures, rather than annual averages, to quarterly figures.

Regarding the top line ECEC forecast: Unfortunately, the volatility introduced to this series in the years 2002 to 2006 prevented us from using previous quarter-to-quarter fluctuations to predict quarter-to-quarter fluctuations in 2007 and 2008 with great precision. Applying historic seasonal changes created huge spikes in the first quarter and huge drops later in the year. Because we believe that the volatility caused by the pension contributions in 2002 through 2005 will not continue, we do not believe these figures will remain as volatile as they have been. For that reason, a linear method was used to distribute these series from quarterly to annual figures.

Regarding the upper bound and lower bound forecasts: Global Insight used the Bassie method to distribute annual values for this series to a quarterly frequency (developed by V. Lewis Bassie). The indicator series used was the ECEC Upper Bound historic series. This method assumes that the series will [sic] its historic quarter-to-quarter fluctuations will remain constant in 2006-2008. In addition, this series was smoothed slightly because the annual figures were not annual averages, but actual values for the first quarter.

**Boeing Comments on DoD IG Use of ECEC.** In July 2007, Boeing provided its response to the audit team's tentative audit results. Boeing disputed the audit results because the DoD IG based its conclusions on the ECEC information, not the ECI used in the contracts. Boeing stated that the ECEC is not a time series, comparable over time, to measure cost changes attributable to economic conditions. Therefore, Boeing concluded that the DoD IG's financial analysis was flawed.

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The BLS article, “Explaining the Differential Growth Rates of the ECI and the ECEC,” published in the summer of 1997, states:

It is important to realize that the ECI and ECEC have different interpretations. The ECI is a Laspeyres index that is intended to indicate the average percentage change in compensation, controlling for shifts in employment across cells. ... The ECEC, on the other hand, does not control for shifts in the distribution of employment across cells. ... The foregoing does not mean that it is inappropriate to use the ECEC to measure changes in compensation over time. Rather it means that a change in the ECEC conveys different information than does a change in the ECI. The change in the ECEC from one year to the next indicates the change in workers’ average compensation.

The BLS article suggests that, although the ECEC provides information about average compensation in the economy at a point in time, the ECI should be used for examining changes in compensation over time. However, by comparing the ECEC at different points in time, one can obtain a measure of change in average compensation in the labor market.

Boeing stated that the ECEC is not a time series, comparable over time, to measure cost changes attributable to economic conditions. In contrast, the article states that the ECEC does not control for shifts in the distribution of employment across jobs within a cell; however, this does not mean that it is inappropriate to use the ECEC to measure changes in compensation over time. A change in the ECEC from one year to the next indicates the change in workers’ average compensation. In addition, even though BLS has suggested that the ECI should be used for examining changes in compensation over time, one can obtain a measure of change in average compensation in the labor market by comparing the ECEC at different points in time.

Boeing also stated that the ECI and ECEC values vary inconsistently from 2004 through 2006. We compared the ECI and ECEC values and found that the ECEC was 1.98 percent higher than the ECI in 2004, 0.16 percent higher than the ECI in 2005, and 0.7 percent lower than the ECI in 2006. While ECI and ECEC annual percentage changes vary, the cumulative change in the ECEC for the same years was consistently about 2.3 percent to 2.9 percent higher than the ECI. Although there are differences in the two measures of compensation, the variances are in the favor of Boeing when used in the DoD IG calculations. This is because the ECEC is growing at a higher cumulative rate than the ECI, therefore resulting in a higher EPA for Boeing compared with what actually would have occurred if the ECI values less pension prepayment credit amounts were used.

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## Appendix E. DCAA and DCMA Reviews

On April 13, 2006, the Vice Commander, Air Force Aeronautical Systems Center requested that DCAA review Boeing's request for the FY 2006 EPA in the amount of \$279 million. On the same date the Vice Commander also requested that DCMA review how Boeing treated its costs for employee pension plans and whether Boeing's treatment of those costs was in compliance with CAS. Both DCAA and DCMA provided responses to the Vice Commander, Air Force Aeronautical Systems Center in June 2006.

**DCAA Review of Boeing's FY 2006 C-17 EPA Request.** DCAA responded to the Vice Commander, Air Force Aeronautical Systems Center in Audit Report No. 4411-2006F1790002, "Audit of C-17A Fiscal Year 2006 Economic Price Adjustment Contract No. F33657-02-C-2001 H-033, Economic Price Adjustment Clause," June 30, 2006. The objective of the audit was to review Boeing's request for a \$279 million upward adjustment in price for FY 2006 under the C-17 contract and determine whether the request was allowable, allocable, and reasonable based on FAR, CAS, and contract terms. DCAA stated that its responsibility was to express an opinion on the proposal based on its examination. DCAA made the following overall conclusion:

In our opinion, Boeing's March 16, 2006 request for a \$279 million upward adjustment in price for FY 2006 under Contract No. F33657-02-C-2001, Contract Clause H-033, Economic Price Adjustment (EPA), is allowable, allocable, and reasonable based on FAR, CAS, and contract terms.

DCAA stated that for FYs 2003 through 2005, there were substantial differences between the allowable pension cost according to CAS and the voluntary contributions by Boeing to its pension plans; however, Boeing complied with both CAS and ERISA requirements. DCAA stated that the ECI 3721 may include pension costs other than CAS allowable pension cost, such as contributions beyond CAS allowable amounts (that is, prepaid pension cost) and nondefined benefit pension contributions (such as 401K amounts). DCAA stated that because BLS does not publish the contents of the indexes, DCAA cannot determine the composition of the indexes and cannot comment on any potential duplication of pension costs included in forward pricing rates and the pension cost included in the BLS index upon which the EPA adjustment is based. However, DCAA noted that the pension cost included in forward pricing rates is based on CAS-compliant accounting practices while the BLS index may not be subject to CAS pension limitations.

**DCMA Review of Boeing's Treatment of Pension Costs.** DCMA responded to the Vice Commander, Air Force Aeronautical Systems Center in a June 29, 2006, letter. According to the DCMA corporate administrative contracting officer, there is negligible, if any, relationship between Boeing's pension contributions and the recognition of pension costs under CAS. The corporate administrative contracting officer stated that whether Boeing contributes the Internal Revenue Code minimum or maximum to its pension plans, Boeing will calculate the exact same pension costs under CAS. BLS, on the other hand, apparently recognizes

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voluntary pension contributions as expense. Consequently, Boeing's contributions in excess of the Internal Revenue Code minimum (the credit balance) pushed up the ECI 3721. The corporate administrative contracting officer argued that Boeing's voluntary pension contributions met the FAR definition of reasonableness. He stated that the prepaid pension expense is not a cost, but the excess contributions are prudent. In answering the question, "what is the advantage of making a voluntary contribution," the corporate administrative contracting officer stated:

**Prudent Business Person.** I would argue that Boeing's voluntary pension contributions meet the Federal Acquisition Regulation (FAR) definition of reasonableness. FAR 31.201-3(a) says: "A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person [sic] the conduct of competitive business." The Prepaid Pension Expense is not a cost, of course, but the excess contributions are prudent.

**Tax Advantage.** Prepaid Pension Expenses have the same tax advantages as the catch up contributions we might make to the Thrift Savings Plan. The contribution is tax deductible and the earnings are not taxed until the money is withdrawn. In the case of Boeing's pension funds, the annuitant—not Boeing—will pay the income tax.

**Employee Relations.** It is almost impossible for money put into a pension trust to be used for any purpose other than to benefit employees. The employees and retirees have assurance that the fund will not run out of money before their pensions are paid. This is a source of employee goodwill when other companies are reducing pensions, stopping new employees from participating in pension plans, and in the case of some airlines, defaulting on pensions promised. In the absence of a defined benefit plan, direct salary would almost certainly be greater. In the absence of the pre-funded contribution, while not quantifiable, there would be a slight increase in direct compensation to employees.

**Significant Cash Flows.** Boeing generates huge cash flows. Both commercial and governmental customers fund purchases. As a result, Boeing generates cash before it delivers its products. Even in 2002 and 2003 when the company felt the effects of 9/11, Boeing still generated \$4.2 billion and \$2.8 billion, respectively, from operating activities. Boeing has a challenge finding places to put its cash.

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## **Appendix F. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense for Acquisition, Technology, and Logistics  
Director, Acquisition Resources and Analysis  
Director, Defense Procurement and Acquisition Policy  
Under Secretary of Defense (Comptroller)/Chief Financial Officer  
Deputy Chief Financial Officer  
Deputy Comptroller (Program/Budget)  
Director, Program Analysis and Evaluation

### **Department of the Army**

Auditor General, Department of the Army  
Commander, U.S. Army Aviation and Missile Command

### **Department of the Navy**

Assistant Secretary of the Navy (Manpower and Reserve Affairs)  
Naval Inspector General  
Auditor General, Department of the Navy  
Commander, Naval Air Systems Command

### **Department of the Air Force**

Assistant Secretary of the Air Force (Financial Management and Comptroller)  
Auditor General, Department of the Air Force  
Commander, U.S. Air Force, Aeronautical Systems Center

### **Combatant Command**

Inspector General, U.S. Joint Forces Command

### **Other Defense Organizations**

Director, Defense Contract Audit Agency  
Director, Defense Contract Management Agency

### **Non-Defense Federal Organization**

Office of Management and Budget

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## **Congressional Committees and Subcommittees, Chairman and Ranking Minority Member**

Senate Committee on Appropriations  
Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Homeland Security and Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Oversight and Government Reform  
House Subcommittee on Government Management, Organization, and Procurement,  
Committee on Oversight and Government Reform  
House Subcommittee on National Security and Foreign Affairs,  
Committee on Oversight and Government Reform



# Defense Procurement and Acquisition Policy Comments



ACQUISITION,  
TECHNOLOGY  
AND LOGISTICS

OFFICE OF THE UNDER SECRETARY OF DEFENSE  
3000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3000

MAY 09 2008

MEMORANDUM FOR DEPUTY INSPECTOR GENERAL FOR AUDITING,  
ACQUISITION, AND CONTRACT MANAGEMENT,  
DoDIG

THROUGH: DIRECTOR, ACQUISITION RESOURCES AND ANALYSIS *708 5/12/08*

SUBJECT: Response to OIG Draft Report Notification (DPAP Recs): "Effect of  
Payments Into Boeing Pension Funds on Economic Price Adjustment  
Clauses in DoD Contracts" (Project No. D2006-D000CH-0226.000)

As requested, I am providing responses to the general content and  
recommendations contained in the subject report.

**Recommendation 1:** Revise the Defense Federal Acquisition Regulation Supplement  
Procedures, Guidance, and Information 216.203-4, "Contract Clauses," to also prohibit  
the use of the employment cost index for aircraft manufacturing industry wages and  
salaries in economic price adjustment clauses in DoD contracts.

**Response: Concur:** On January 10, 2008 we revised the Defense Federal Acquisition  
Regulation Supplement Procedures, Guidance, and Information 216.203-4, "Contract  
Clauses," to prohibit the use of total compensation, aircraft manufacturing industry index  
in economic price adjustment clauses in DoD multiyear contracts. We intend to modify  
the PGI to require that any contract that includes an EPA provision will submit that  
provision to DPAP for concurrence prior to inclusion of such a provision in any resultant  
contract.

**Recommendation 2:** In conjunction with the Service Acquisition Executives, evaluate  
whether economic price adjustment clauses are necessary in multiyear contracts and  
closely monitor abnormal costs increases in multiyear contracts with economic price  
adjustment clauses to ensure that the contract adjustments are a result of economic  
behavior as intended for the clauses.

**Response: Concur:** DPAP will issue a general policy memorandum on Economic Price  
Adjustment provisions to the Service Acquisition Executives alerting them to closely



monitor EPA contract provisions and will include reporting requirement thresholds concerning such provisions.

**General Comments:**

We have consolidated the comments of all three Services with our comments as follows:

1. Prior to the conduct of the Tri Service negotiation with Boeing there were discussions conducted by Boeing with the Military Departments in varying degrees and at different times. With regard to Table 13 on page 30 the term "Initial Boeing offer" should be changed to read: "Boeing position/contractual liability with the Military Departments prior to Tri-Service Negotiations". We also believe that an accurate depiction of Table 13 is as follows:

	C-17	F/A-18 E/F	Apache	Total
EPA Liability	647.5M	1211.7M	45.8M	1,905M
*Boeing Position/liability	531.7M	215.4M	45.8M	792.9M
Settlement	136.9M	113.9M	21.5M	272.3M

2. Page 20, Original Navy Settlement, fourth paragraph states, "The contracting officer stated that the [REDACTED] for the FY 2008 EPA liability for labor. He also calculated that the FY 2009 EPA liability would be [REDACTED]. The contracting officer stated that he had not yet paid the FY 2008 liability to Boeing. The contracting officer stated that as of December 21, 2007, [REDACTED] and he anticipated that there would be no amount due for the FY 2009 EPA liability; however, the contractual adjustment for FY 2009 will be made from Boeing's FPRA in place as of April 30, 2008."

We request the paragraph read as follows: "Upon an initial review of the FY07 FPRA, it was estimated that a [REDACTED] EPA adjustment for FY08 and [REDACTED] for FY09 liability existed. The contract included a special provision that required that any abnormal changes that occurred resulting from such matters as reorganization etc. would require that the FPRA be normalized to ensure that those abnormal events did not affect the purpose of the FPRA. The normalization of the FY07 FPRA had not taken place in accordance with the contract. In the spring of 2007, Boeing offered to "delay" the calculation of the FY08 impact and to use the January 2008 FPRA to calculate the impact for FY08 and FY09. Boeing believed that the [REDACTED] and the PCO verbally accepted this offer. The [REDACTED]"

██████████ and the PCO believed that there would not be an adjustment for either FY08 or FY09.

During the negotiations with the Tri-service team, Boeing stated that if the January 2008 FPRA rates were normalized, there would be a ██████████ in both FY08 and FY09 for a total of ██████████. The NAVAIR PCO performed an analysis of Boeing's normalization and discovered that the ██████████ was due to a CAS non-compliance accounting change. The PCO and the Tri-service team did not agree with Boeing's position."

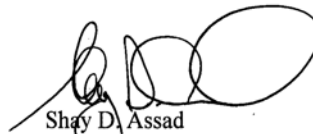
3. Page 23, Table 7, Cost Effect and Abnormal Boeing Earnings states, note "<sup>2</sup> Includes ██████████ for FY 2008".

We recommend that we change the note to read, "<sup>2</sup> Includes estimated ██████████ for FY 2008."

4. Page 24, Navy EPA Using DoDIG and Hybrid Option, first paragraph states, "Using the second quarter 2005 Global Insight forecast, the Navy estimated that the labor EPA liability would be \$1.2 billion. Under the revised EPA clause, the Navy settled with Boeing for a minimum bill of ██████████ for labor, but because the ██████████ in 2007, the Navy had an additional contractual obligation of ██████████ for the FY 2008 EPA liability for labor, for a total of ██████████"

We recommend that the phrase "...the Navy had an additional contractual obligation..." be changed to read "...the Navy potentially had an additional contractual obligation..."

We wish to commend the DoD IG for the outstanding work done regarding this matter. There is no doubt that the efforts of the DoDIG were fundamentally critical to the successful Tri-service negotiations with Boeing which resulted in saving the taxpayers hundreds of millions of dollars.



Shay D. Assad  
Director, Defense Procurement,  
Acquisition Policy, and  
Strategic Sourcing

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Revised  
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Inspector General  
Department of Defense

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