



CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas Holtz-Eakin, Director

August 26, 2003

Honorable Don Nickles
Chairman
Committee on the Budget
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

As you requested in your letter of July 14, 2003, the Congressional Budget Office (CBO) has reviewed the Air Force's report on its plan to lease 100 Boeing KC-767A aerial refueling aircraft. In that report, submitted to the Congress on July 11, 2003, the Air Force concluded that its plan to acquire the aircraft using a leasing arrangement would cost about \$150 million more (expressed in net-present-value terms) than an outright purchase. According to the report, the proposed leasing arrangement meets all requirements of the Department of Defense Appropriations Act, 2002, including criteria for an operating lease specified in the Office of Management and Budget's (OMB's) Circular A-11, *Preparation, Submission, and Execution of the Budget* and leasing is the preferred approach because of the "advantage it affords for quickly delivering needed tankers to our warfighters without requiring significant up-front funding."

After analyzing the Air Force's report and receiving additional information about the proposed lease from the Air Force and Boeing, CBO has concluded that the proposed transaction would essentially be a purchase of the tankers by the federal government but at a cost greater than would be incurred under the normal appropriation and procurement process. The special-purpose entity that has been established to buy the aircraft would, in fact, be substantially controlled by and act on behalf of the federal government, and its transactions should be reflected in the federal budget.

Even if, however, one views the arrangement as a lease, CBO's analysis indicates that the proposal does not meet the conditions for an operating lease described in the *Congressional Scorekeeping Guidelines* and in OMB Circular A-11 and thus does not comply with the terms of section 8159 of the Department of Defense Appropriations Act, 2002.

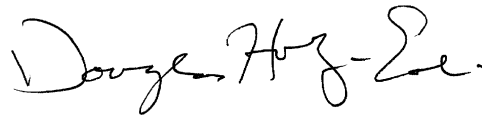
Honorable Don Nickles

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Finally, CBO concludes that implementing the Air Force's proposed arrangement would be more expensive than the service has estimated. While the Air Force estimates that a lease would cost \$150 million more than an outright purchase, CBO's analysis indicates that the proposed arrangement would cost \$1.3 billion to \$2 billion more in present-value terms, or 10 percent to 15 percent more than an outright purchase.

The enclosed report provides CBO's analysis. If you wish further details, CBO will be happy to provide them. The staff contact is David Newman.

Sincerely,

A handwritten signature in black ink that reads "Douglas Holtz-Eakin". The signature is written in a cursive, flowing style.

Douglas Holtz-Eakin
Director

Enclosure

cc: Honorable Kent Conrad
Ranking Member

Honorable John W. Warner
Chairman
Committee on Armed Services

Honorable Carl Levin
Ranking Member

Honorable Duncan Hunter
Chairman
House Committee on Armed Services

Honorable Ike Skelton
Ranking Member

Honorable Ted Stevens
Chairman
Senate Committee on Appropriations

Honorable Don Nickles

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Honorable Daniel K. Inouye
Ranking Member
Subcommittee on Defense
Senate Committee on Appropriations

Honorable Jerry Lewis
Chairman
Subcommittee on Defense
House Committee on Appropriations

Honorable John P. Murtha
Ranking Member

Honorable Jim Nussle
Chairman
House Committee on the Budget

Honorable John M. Spratt Jr.
Ranking Member

Honorable John McCain
Chairman
Senate Committee on Commerce,
Science, and Transportation

Honorable Ernest F. Hollings
Ranking Member

**Assessment of the Air Force's Plan to Acquire
100 Boeing Tanker Aircraft**

Congressional Budget Office

August 2003

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Summary

The Department of Defense Appropriations Act, 2002, (Public Law 107-117) authorized the Air Force to pursue a pilot program for leasing as many as 100 Boeing 767 aircraft for up to 10 years and directed the service to describe its plan to the Congress before entering into such a lease. The Air Force, Boeing, the Office of the Secretary of Defense, and the Office of Management and Budget (OMB) reached an agreement in May 2003 for the service to acquire 100 Boeing KC-767A aerial refueling aircraft through a complex financing arrangement. The Air Force submitted the required report to the Congress on July 11, 2003. In that report, the Air Force concludes that the proposed leasing arrangement meets all requirements of the Department of Defense Appropriations Act, 2002, which specified that the terms had to be consistent with the criteria for an operating lease as defined in OMB Circular A-11, *Preparation, Submission, and Execution of the Budget*. The report further concludes that, while leasing would cost about \$150 million more (expressed in net-present-value terms) than an outright purchase, leasing is the preferred approach because of the “advantage it affords for quickly delivering needed tankers to our warfighters without requiring significant up-front funding.”

After analyzing the Air Force’s report and receiving additional information about the proposed lease from the Air Force and Boeing, the Congressional Budget Office (CBO) has concluded that the transaction would essentially be a purchase of the tankers by the federal government but at a cost greater than would be incurred under the normal appropriation and procurement process. The special-purpose entity that has been established to buy the aircraft would, in fact, be substantially controlled by and act on behalf of the federal government, and its transactions should be reflected in the federal budget.

Even if one were to view the arrangement as a lease, CBO’s analysis indicates that the proposal does not meet the conditions for an operating lease described in the *Congressional Scorekeeping Guidelines* and in OMB Circular A-11 and thus does not comply with the terms of section 8159 of the Department of Defense Appropriations Act, 2002.

Finally, CBO concludes that implementing the Air Force's proposed arrangement would be more expensive than the service has estimated. While the Air Force estimates that its proposal would cost \$150 million more than an outright purchase, CBO's analysis indicates that the proposal would cost \$1.3 billion to \$2 billion more in present-value terms, or 10 percent to 15 percent more than an outright purchase. On average, the Air Force would spend \$161 million per plane in 2002 dollars to lease and then purchase the aircraft, compared to a cost of \$131 million per plane for an outright purchase.

The Air Force’s Plan to Acquire 100 Boeing Tankers

The Air Force plans to sign a single multiyear contract that will include leasing 100 KC-767A aerial refueling aircraft from a special-purpose entity, called the KC-767A

USAF Tanker Statutory Trust 2003-1 (the Trust). The tankers will be delivered to the Air Force in six groups—four aircraft in 2006, 16 aircraft in 2007, and 20 planes annually over the 2008-2011 period. The Air Force will use each aircraft for six years and pay the Trust an average of \$126 million a plane, in 2002 dollars, during that period. At the conclusion of each six-year period, the Air Force can return the aircraft to the Trust or purchase them for a price to be set when the contract is signed. The Air Force currently estimates the purchase price at an average of \$35 million per plane in 2002 dollars. Thus, according to its estimate, the Air Force will pay an average of \$161 million per plane to lease and then purchase the tankers.¹ The Air Force has not negotiated to purchase the planes directly, but on the basis of the leasing arrangement, CBO estimates that given multiyear procurement authority, the service could negotiate a contract for 100 tankers at an average price of \$131 million per plane in 2002 dollars.

The Air Force will be able to terminate the deal prior to the completion of the contract by notifying the Trust one year in advance. However, CBO believes that termination would be costly because the Air Force would have to make an additional payment equal to an annual lease payment on each aircraft and would have to reimburse the Trust for any additional costs that resulted from the decision to terminate.

Financing Arrangements for the Proposal

Boeing and the Air Force have established the special-purpose entity to execute the leasing arrangement and to finance the acquisition of the aircraft. Under the financing plan established by the Air Force and Boeing, the Trust will buy 100 KC-767A tankers from Boeing at an estimated average price of \$131 million per aircraft (in 2002 dollars) and will borrow money to make progress payments to Boeing during the construction period for each group of aircraft.

As Boeing completes construction of each group of tanker aircraft, the Trust will issue bonds in the commercial bond market. Boeing and the Air Force estimate that the proceeds from the bonds will need to equal \$138.4 million per aircraft (in 2002 dollars), enough to pay Boeing for the remainder that it is owed for the aircraft, repay the principal on the construction loans, and pay interest on the construction loans, which the Air Force estimates at an average of \$7.4 million per aircraft.

Press reports indicate that there will be three classes of bonds. The Trust, which will technically own the aircraft, will use the Air Force's annual lease payments to pay principal and interest on two of the three classes of bonds. If the aircraft are sold at

1. Payments under the Air Force's proposal are based on a negotiated purchase price of \$131 million in 2002 dollars. Payments are adjusted for inflation using a combination of the Employment Cost Index and the Industrial Commodities Index.

the end of the lease term, the proceeds will be used to pay off principal and interest on the last class of bonds. The price the Air Force may pay to acquire title to the tankers will be established for all 100 planes at the time the contract is awarded. That amount will be equal to the principal and interest owed on the third class of bonds. Under the terms of the agreement, if the Air Force should choose to forgo purchasing the aircraft and the aircraft are then sold to another purchaser for more than the amount owed on the bonds, any profits from the sale will be returned to the U.S. Treasury.

According to the Air Force and Boeing, the credit rating on the bonds will be based on the strength of the cash flow from the Air Force, rather than on Boeing's credit rating. For that reason, the Air Force expects that the Trust will be able to issue bonds at interest rates that are only slightly greater than Treasury rates. Interest rates on the bonds must compensate investors for the risk that the Air Force might terminate the contract early or might decline to purchase the aircraft at the end of the lease. CBO believes that the small risk premium estimated by the Air Force on borrowing by the special-purpose entity indicates that the Air Force assumes the market will perceive the debt as being backed by the federal government. (See Figure 1 for a graphic display of the management and financing arrangements.)

The Results of CBO's Analysis

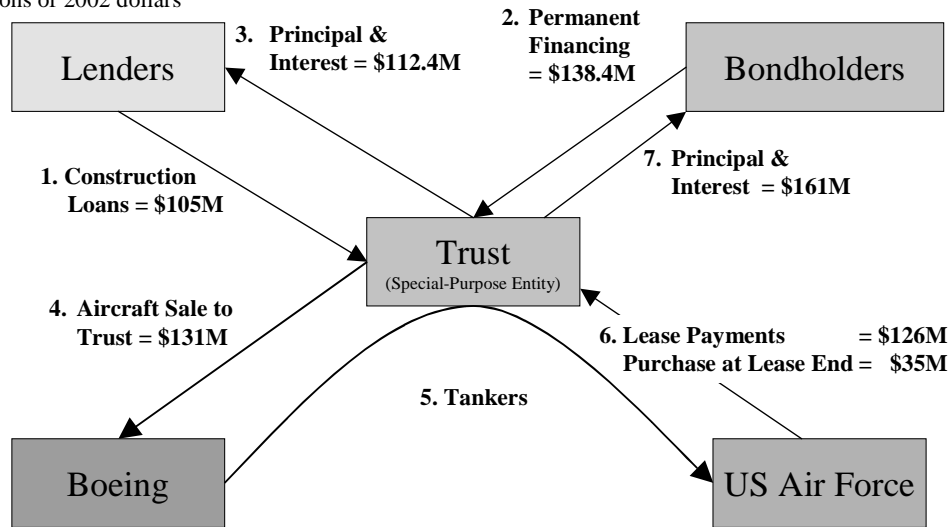
CBO reviewed the information contained in the Air Force report, sections of the proposed contract, and the economic analysis prepared to support the Air Force's decision to lease. CBO found that the financing plan envisioned for acquiring the tankers constitutes federal borrowing and spending under standard government accounting principles.² CBO also concludes that the proposal does not meet the conditions for an operating lease described in OMB Circular A-11 and thus does not comply with the terms of section 8159 of the Department of Defense Appropriations Act, 2002. While the Air Force acknowledges that acquiring the aircraft with this financing method is more expensive than purchasing them outright, its estimate of the extra cost—at \$150 million—is much less than CBO's analysis indicates. CBO concludes that the Air Force would pay approximately \$1.3 billion to \$2 billion (expressed in net-present-value terms) more to lease and then purchase the tankers than it would to purchase them outright.

2. The 1967 *Report of the President's Commission on Budget Concepts* suggests a broad definition of federal budget activities, with a few narrow exclusions. It observes that "providing for national security ... obviously constitutes activities of the federal government which should clearly be in the budget." Consistent with other recommendations by the Commission, CBO believes that when the government owns a significant part of an entity's assets or exercises substantial control over the entity's operations, that entity should be included in the federal budget.

Figure 1

Costs Per Aircraft Under the Tanker Financing Plan

Millions of 2002 dollars



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1. As Boeing builds the tankers, the Trust will borrow money from commercial banks to make progress payments to Boeing. CBO estimates that, on average, the Trust will borrow approximately \$105 million per plane for progress payments.
 2. Shortly before the planes are delivered, the Trust will issue bonds to raise \$138.4 million per plane in permanent financing.
 3. The Trust will use the bond proceeds to pay principal and interest on the construction financing loans, which CBO estimates will average \$112.4 million per plane.
 4. The Trust will use the rest of the bond proceeds to pay Boeing the remainder it is owed on the aircraft. Total payments to Boeing will equal \$131 million per plane.
 5. Boeing will transfer title to the planes to the Trust and deliver the aircraft to the Air Force.
 6. The Air Force will make lease payments totaling \$126 million per plane and a final payment of \$35 million should it choose to purchase the planes at the end of the lease.
 7. The Trust will use the Air Force's lease and purchase payments to remit \$161 million in principal and interest to the bondholders.
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SOURCE: Congressional Budget Office.

The Tanker Financing Plan Constitutes Federal Borrowing and Spending

In its report to the Congress, the Air Force indicates that the Administration will record the tanker contract as an operating lease in the federal budget once the contract is signed. Consequently, obligations and outlays will be recorded on a year-by-year basis, reflecting the lease payments due each year to the Trust. CBO believes that recording the transaction as such would be at odds with standard government accounting principles because the proposed financing constitutes federal borrowing and spending. Therefore, the borrowing, resulting aircraft purchases, and interest payments by the special-purpose entity established specifically for this purpose should be recorded in the budget at the time the Trust makes those transactions.

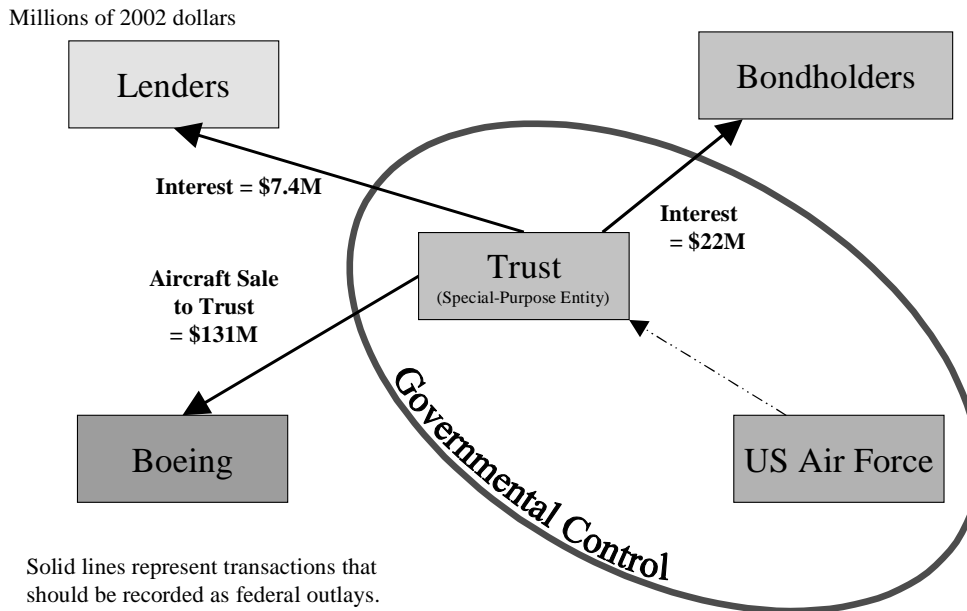
The proposed contract between Boeing and the Air Force, as well as the financing arrangement, clearly indicates that the KC-767A USAF Tanker Statutory Trust 2003-1 exists solely to borrow money on behalf of the federal government to allow the Air Force to acquire an asset that has been built to its unique specifications. The borrowing activities of the special-purpose entity will be directed by a financing committee composed of the Air Force, Boeing, and the lease administrator. (The Air Force has asked Boeing to serve as the lease administrator.) Under the operating guidelines for the financing committee, the Air Force must approve all of the terms and conditions for the financing plan and must review and approve all financing documents.³ CBO concludes that the actions of that committee will be explicitly controlled by the Air Force.

Because the government will both direct and benefit from the Trust's financing activities (see Figure 2), the Trust will be acting on behalf of the government. Therefore, its borrowing and spending should be treated as federal borrowing and spending and recorded appropriately in the budget. The parties to the lease portion of the contract are the Air Force and the Trust. Since the Trust is an instrument of the government, the government will effectively be buying the aircraft (via the Trust) and then leasing them to itself. To accurately reflect the nature of that arrangement, the federal budget should report the transactions between the Trust and Boeing, and between the Trust and its bondholders, not the essentially intragovernmental transfers between the Trust and the Air Force. Thus, when the Trust pays Boeing for the aircraft, those payments should be reflected as federal outlays. Subsequent interest payments on the Trust's borrowing should also be reflected as outlays when those payments are made. (Federal borrowing is not counted as a government receipt, and the repayment of principal is not counted as an outlay.)

3. Boeing provided CBO with a summary of the operating guidelines for the financing committee. It is available upon request.

Figure 2

Federal Outlays Per Aircraft Under the Tanker Financing Plan



SOURCE: Congressional Budget Office.

Table 1 displays how that budget authority and the associated outlays should be recorded in the budget compared with how CBO believes the department might reflect the contract in the budget.⁴ The table also shows CBO's estimate of the cost to purchase the tankers directly using traditional procurement methods. For budget purposes, all amounts are shown in current dollars.

The two budgetary treatments of the financing plan differ substantially. If the proposed transaction is recorded as a purchase, budget authority over the first five years would total \$17.3 billion, and outlays would sum to \$10.1 billion. If the transaction is recorded as an operating lease, only \$1.5 billion in budget authority would be shown over the first five years, and outlays during that period would also total only \$1.5 billion, because most of the aircraft would not be available for leasing until 2009.

4. The Universal Service Fund is another example of a federal program administered by a private agency for the federal government. The Universal Service Access Company (USAC), an independent organization that is regulated by the Federal Communications Commission, collects "contributions" from telecommunications service providers and makes payments to other service providers to ensure universal access to telecommunications services. Even though the collections and disbursements are not handled by the Treasury, USAC's transactions are included in the federal budget. In 2002, the agent recorded revenue collections of \$5.5 billion and expenditures of \$5.1 billion in the federal budget.

TABLE 1. COMPARISON OF POSSIBLE BUDGETARY TREATMENTS OF THE KC-767A TANKER ACQUISITION

	By Fiscal Year, in Billions of Dollars														
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
TREATMENT OF THE TANKER FINANCING PLAN AS A LEASE-PURCHASE^a															
Estimated Budget Authority	3.2	3.3	3.4	3.6	3.7	0.2	0.3	0.4	0.6	0.7	0.7	0.6	0.5	0.3	21.5
Estimated Outlays	0.2	1.0	2.3	3.2	3.5	3.7	2.9	1.3	0.6	0.7	0.7	0.6	0.5	0.3	21.5
TREATMENT OF THE TANKER FINANCING PLAN AS AN OPERATING LEASE															
Estimated Budget Authority	0	0	0.1	0.5	1.0	1.6	2.1	2.7	2.9	3.0	2.7	2.2	1.6	1.1	21.5
Estimated Outlays	0	0	0.1	0.5	1.0	1.6	2.1	2.7	2.9	3.0	2.7	2.2	1.6	1.1	21.5
DIRECT PURCHASE OF TANKERS^b															
Estimated Budget Authority	1.4	2.5	3.0	3.0	3.0	3.0	0	0	0	0	0	0	0	0	15.9
Estimated Outlays	0.5	1.3	2.1	2.8	3.0	2.9	2.2	0.9	0.1	0.1	0	0	0	0	15.9

SOURCE: Congressional Budget Office.

NOTES: In the treatment of the financing plan as a lease-purchase, budget authority reflects the obligation by the Trust to purchase aircraft from Boeing and the obligation to make interest payments to creditors. Outlays reflect payments to Boeing during the time that it takes to construct and deliver the aircraft, as well as interest payments to creditors. In the treatment as a lease, budget authority and outlays equal annual lease payments. In the estimate of a direct purchase, budget authority and outlays reflect estimated costs of a straightforward purchase using the normal appropriation and procurement methods.

The figures do not include funding for operations and support or for military construction projects to house and maintain the new tankers.

- a. If the Trust is not considered an instrument of the federal government, the acquisition should be treated as a lease-purchase. Consistent with *Congressional Scorekeeping Guidelines* and OMB Circular A-11, the budgetary treatment would be similar to that of a purchase.
 - b. The difference in total cost between a direct purchase and either treatment of the financing plan is almost \$5.7 billion in current dollars.
-

In total, by CBO's estimates, acquiring the tankers through a lease would cost \$21.5 billion over the next 14 years. In contrast, CBO estimates, a direct purchase of 100 tankers would cost \$15.9 billion over the same period—but with all of the outlays recorded by the end of 2011.

Budget authority and outlays for the Air Force's proposed lease have two components: the purchase price of the aircraft and the interest costs from the financing arrangement. (Those costs include the additional expense of borrowing money at rates that exceed Treasury's normal borrowing rates.) If the Air Force's proposal is recorded in the budget as a purchase, the purchase price of the aircraft would appear in the first few years when the planes were being constructed, and interest would be recorded annually as the lease payments were made. Of the \$21.5 billion shown in Table 1, \$17.1 billion is for the purchase price of the aircraft, while budget authority for the imputed interest would total \$4 billion over the 2006-2017 period. The remaining \$0.4 billion would pay for insurance and other lease costs. Outlays for the purchase price, which would occur over the 2004-2011 period, would reflect progress payments during the construction period and final payments when the planes were delivered. Outlays for imputed interest charges would coincide with lease payments and would equal the annual budget authority for those charges.

Alternatively, if one chooses not to view the special-purpose entity as an instrument of the government, CBO concludes the arrangement should be reflected in the budget as a lease-purchase, not an operating lease as suggested by the Air Force and Boeing. In that case, the budgetary treatment would be similar to that of the financing plan treated as a purchase (shown in Table 1).⁵

The Proposal Does Not Meet the Criteria for an Operating Lease

After reviewing the details of the proposal, CBO concludes that it does not meet the conditions for an operating lease described in OMB Circular A-11 and thus does not comply with the terms of section 8159 of the Department of Defense Appropriations Act, 2002.

To comply with section 8159 and to be treated as an operating lease in the budget, the lease must meet the following six criteria:

- The asset must be a general-purpose asset, not built to unique government specifications.
- There must be a private-sector market for the asset.

5. For a more in-depth discussion, see Congressional Budget Office, *The Budgetary Treatment of Leases and Public/Private Ventures* (February 2003).

- The present value of the lease payments cannot exceed 90 percent of the asset's fair market value at the start of the lease.
- The lease cannot contain a bargain-price purchase option.
- Ownership of the asset must remain with the lessor.
- The lease term cannot exceed 75 percent of the asset's useful life.

CBO has concluded that the arrangement between Boeing and the Air Force fails to meet the first four of these criteria and complies with the letter but not the spirit of the fifth.

The Lease Must Be For a General-Purpose Asset. Operating leases must be for a general-purpose asset, not one that is built to the unique specifications of the government. An aerial refueling tanker is not a general-purpose asset. Although the tanker is based on Boeing's commercial 767-200 model, the Air Force has specified several significant modifications such as auxiliary fuel tanks, a refueling boom, a refueling receptacle, more powerful generators, and heavier wiring to accommodate unique military requirements. The tanker's aerial refueling capability serves a uniquely governmental purpose.

There Must Be a Private-Sector Market. A private-sector market must exist for any asset obtained through an operating lease. The Air Force and Boeing assert that the lease meets this criterion because Boeing has offered the tanker, called the Global Tanking and Transport Aircraft (GTTA), for public sale. However, the only customers for the GTTA so far are the U.S. Air Force, the government of Japan, and the government of Italy, all of which plan to use the aircraft to refuel their military aircraft. Boeing states that there are a number of private companies that might purchase GTTA aircraft—Omega Air and the Tanker and Transport Service Company Ltd., in particular. CBO does not believe that those companies would buy more than a few of the tankers.

Boeing also points out that some long-haul commercial air carriers may be interested in acquiring the capability for aerial refueling, but none currently employs the technique. CBO believes it unlikely that aerial refueling would make economic sense for commercial transportation companies because they already have access to ground-based refueling services at airfields worldwide. Finally, while Boeing cites many potential customers for the freighter capability inherent in the tanker, how many of the 100 tankers reconfigured as freighters the private market would be able to absorb is unclear.

There are only about two dozen outstanding orders for all Boeing 767 variants. The KC-767A is derived from the Boeing 767-200C variant, for which Boeing has no

commercial orders. In fact, according to Boeing, the last delivery of any commercial version of 767-200 aircraft occurred in 2002, and Boeing has no future orders because it now produces 767 models that are superior to the 767-200. Thus, while there may be a private-sector market for a few of the aircraft that the government is acquiring, there is no evidence of such a market for 100 tanker aircraft.

Lease Payments May Not Exceed 90 Percent of the Fair Market Value. To qualify as an operating lease, the net present value of the lease payments may not exceed 90 percent of the fair market value of the aircraft. The Air Force report indicates that the lease payments under the proposed financing arrangement will account for 89.9 percent of the fair market value of the aircraft, which the Air Force calculates at \$138.4 million (in 2002 dollars) when the cost of the construction loan financing (\$7.4 million per aircraft) is included. CBO believes that including the cost of that financing as part of the aircraft's fair market value is inappropriate because that cost is additional to any interest that would be capitalized in the price of the aircraft in the purchase option. When the financing cost is excluded from the calculation, the net present value of the lease payments accounts for 93 percent of the fair market value.

CBO also notes that, even using the Air Force's methodology, there is a significant possibility that the threshold of 90 percent of the fair market value could be exceeded for at least some of the groups of leased tankers. The lease payments are based on the Air Force's estimate of bond interest rates. If the rates for Treasury bonds are higher than the predicted value used by the Air Force, or if the spread on the interest rates for the bonds issued by the Trust is greater than predicted, lease payments will increase accordingly. Since the Air Force already estimates that the present value of the lease payments will be 89.9 percent of the fair market value, it has no margin for error on its estimate of interest rates.

The Lease Cannot Contain a Bargain-Price Purchase Option. The lease cannot contain an option to purchase the aircraft at a bargain price. The agreement gives the Air Force the option to purchase the aircraft at any time during or at the end of the lease. The Air Force estimates that it could purchase the aircraft at the end of the lease for an average \$35 million apiece (in 2002 dollars), or 28 percent of the cost to purchase new tankers. Since the aircraft should last at least 30 years, the aircraft should have 80 percent or more of their life expectancy remaining after six years. While it is difficult to establish the fair market value of used tanker aircraft, CBO believes that paying 28 percent of the cost of a new tanker for a used aircraft with 80 percent of its life left constitutes a bargain purchase price.

Ownership Must Remain With the Lessor. Under the operating lease, ownership must remain with the lessor, and title may not transfer to the government at or shortly after the end of the lease term. CBO believes the Trust is an instrument of the

government, given the level of control the government exercises over its operations. Thus, the Trust is effectively purchasing the tankers for the government.

However, if one chooses not to view the Trust as an instrument of the government, the financing arrangement technically complies with this criterion since the purchase option is contingent upon subsequent authorization and appropriation by the Congress. It seems clear for several reasons, however, that the Air Force fully intends to acquire the tankers during or at the end of the lease term.

First, the Air Force and Boeing plan to negotiate a purchase price for each group of planes when the contract is awarded. The Air Force has the right of first refusal on the disposal of the aircraft at the end of the six-year term. The Air Force has also stated its intention to earmark funds to purchase the aircraft.

Second, senior Department of Defense officials have stated on several occasions that the department has a long-term requirement for tankers and that the department plans to replace the entire fleet of KC-135 aircraft over the next 30 years. It seems implausible that the Air Force would return the 100 leased tankers to the Trust since the Air Force plans to retire 68 KC-135E tanker aircraft over the 2004-2006 period regardless of whether the lease is approved and will retire all 131 KC-135E aircraft by 2008 if the lease is approved. Moreover, it would have to accept a significant reduction in its aerial refueling capability if it chose not to purchase (or continue to lease) the KC-767 tankers at the end of the six-year term.

Finally, the Air Force's basing plan for the tankers includes more than \$600 million in construction projects to support the permanent basing of the aircraft. Spending those funds would be uneconomical if the Air Force was seriously considering returning the aircraft at the end of the lease term.

The Proposed Financing Approach Is More Costly Than an Outright Purchase

The proposed financing arrangement to acquire the tanker aircraft is significantly more expensive than an outright purchase by the government because of the anticipated interest rates (which are higher than U.S. Treasury rates) and other costs that are unique to the leasing option. By CBO's estimates, total costs for a direct purchase, including the estimated costs for self-insurance, would be about \$16 billion (see Table 2). The Air Force reports that it will pay \$17 billion to lease the aircraft for six years and more than \$4 billion to purchase them at the end of the lease term. Those payments include the interest expense on borrowing by the special-purpose entity. The Air Force will also pay about \$400 million for insurance and other expenses related to the lease transactions. Thus, the Air Force estimates that the costs of acquiring the aircraft under the financing arrangement will total almost \$22 billion in current dollars. On a present-value basis, the leasing approach would cost \$1.3 billion more than an outright purchase, CBO estimates. (The Administration

uses a discounting methodology specified in OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, which, CBO estimates, would result in a greater cost difference of \$2 billion relative to a purchase.)

TABLE 2. COMPARISON OF COSTS BETWEEN A DIRECT PURCHASE AND THE AIR FORCE’S PROPOSAL (Billions of Dollars)

<u>DIRECT PURCHASE</u>		<u>AIR FORCE’S PROPOSAL</u>	
Procurement Costs	14.9	Lease Payments	16.6
Nonrecurring Engineering Costs	0.6	Purchase at End of Lease	4.4
Insurance ^a	<u>0.4</u>	Insurance	0.4
		Other Lease Costs	*
Total	15.9	Total	<u>21.5</u>
Present Value	13.6	Present Value	14.9

SOURCE: Congressional Budget Office.

NOTE: * = Less than \$500 million.

a. If the Air Force were to purchase tankers directly, it would “self-insure.” The value of insurance is shown here to make the total cost of the “direct purchase” option comparable to the Air Force’s proposal.

The Air Force’s Economic Analysis Understates the Cost Difference

In its report to the Congress, the Air Force indicates that leasing 100 air-refueling aircraft will cost \$150 million more than an outright purchase in net-present-value terms (see Table 3). CBO’s analysis indicates that the estimate significantly understates the additional cost associated with the Air Force’s plan. The Air Force, in fact, does not rule out that possibility, stating that “had the Congress chosen instead to provide multiyear procurement authority and had the Department of Defense been able to accommodate that execution while preserving program stability, the [net present value] could favor purchase by up to \$1.9 billion.”⁶ The Air Force’s report notes that this type of analysis is “highly sensitive to the underlying assumptions” but that “in no case approved by OMB did the financial analysis indicate that the net present value of the lease option as being less than that of a traditional purchase.”

6. The Air Force appears to attribute the large difference to the effects of multiyear procurement alone. In fact, CBO’s analysis indicates that the assumption of multiyear procurement accounts for only \$970 million of the \$1.9 billion difference.

TABLE 3. MAJOR DIFFERENCES BETWEEN CBO’S ESTIMATE AND THE AIR FORCE’S ESTIMATE OF THE ADDED COST FOR LEASING VERSUS PURCHASING KC-767A TANKERS
(In millions of dollars)

	Additional Cost of Leasing (Net Present Value)
Air Force’s Estimate	150
Impact of Changing Assumptions:	
Multiyear Procurement Savings in Purchase Price	+970
Proper Inflation of Progress Payments	+640
Compression of Progress Payments	+210
Discount Rate and Interactions Among the Above Factors	<u>-650</u>
CBO’s Estimate	1,320

SOURCE: Congressional Budget Office.

Multiyear Procurement. For the lease, the Air Force and Boeing negotiated a price for the aircraft as delivered to the Trust on the basis of the assumption that the Air Force would ultimately lease and acquire 100 airplanes. That assumption allows Boeing to make investments in facilities and equipment that will reduce the total costs of production. It also allows Boeing to purchase parts and components in large quantities to get price breaks from suppliers. For its analysis of the purchase option, however, the Air Force assumed that each lot of aircraft would be bought on an annual basis (that is, with no assurances of subsequent purchases). Thus, no price breaks or production efficiencies were included in the estimated purchase prices.

For the purchase option, the Air Force increased the price of each aircraft by 7.4 percent relative to the price that it used for the lease. CBO believes that estimating the purchase cost under the assumption that a multiyear contract would be granted is warranted because, under section 8159, the Congress has already granted authority for the lease and would likely grant such authority for an acquisition program of that size. The Air Force’s statement that it did not assume a multiyear procurement in its analysis of a purchase because it did not currently have that authority is inconsistent with its budgetary practices for other major acquisition programs. The department does not currently have multiyear procurement authority for either the F-22 fighter or the Joint Strike Fighter programs but assumes multiyear procurement in estimating the future purchase costs of those aircraft.

CBO estimates that the cost to acquire 100 KC-767A tankers under the proposed financing arrangement would exceed the cost of purchasing the aircraft under a multiyear contract by \$1.1 billion (expressed in net-present-value terms), an increase of \$970 million relative to the Air Force's results. Although the Congress has already granted multiyear authority for the lease, in traditional procurement programs, that authority is frequently provided after several years of production prove that the program is stable. If the Congress waited until the third lot to grant the authority, then, by CBO's estimates, the lease would cost \$920 million more than the purchase, an increase of \$765 million relative to the Air Force's estimate.

Inflation of Progress Payments. The Air Force's method for applying inflation to progress payments is another factor that affects the purchase price in its analysis. During the construction period, a contractor is continually paying for materials and labor. If the government paid the contractor for the full price of the asset at the time of delivery, the contractor would have to borrow money to cover those expenses and include the full costs of that borrowing in the purchase price. Progress payments reimburse the contractor for the costs the company incurs during the construction period and reduce the requirement for the contractor to borrow the money to cover expenses—resulting in a lower purchase price for the government. The government usually limits progress payments to a percentage of the actual costs incurred at the time the request for payment is made.

In its analysis of the cost of a straightforward purchase, the Air Force estimated progress payments as a percentage of the tanker's price, which it inflated to the year of delivery. CBO believes that that method overstates both the amount of the progress payments and the total cost of the aircraft since inflation would affect the cost of material and labor only up to the time those costs were paid. The method also conflicts with the DoD Comptroller's guidance on inflation, which calls for inflating costs to the year the order is made, using an inflation index that takes into account the fact that outlays will occur incrementally between the date the order is placed and the date the asset is delivered. CBO estimates that if the cost of progress payments were inflated only to the time those costs were paid, then the cost of the leasing arrangement would exceed the cost of a straightforward purchase by an additional \$640 million (in net-present-value terms).

Schedule for Progress Payments. The schedule for making those progress payments is also a factor that affects the purchase price in the Air Force's analysis. For the option of purchasing the aircraft, the Air Force assumed that progress payments would begin approximately four years before the aircraft were delivered. The assumed payment schedule seems protracted for several reasons. First, the schedule is longer than that of other major aircraft procurement programs. For example, the budget for the C-17 transport program provides advance procurement funding just

two years before the delivery date. Other procurement programs, like that for the F-22 fighter, assume that the majority of the progress payments are made over three years.

Second, the Air Force's aircraft procurement programs spend, on average, about 90 percent of budget authority within three years after appropriation. In contrast, the progress-payment schedule that the Air Force used in calculating the costs of purchasing tankers would expend only 75 percent of budget authority in three years, with the last 25 percent of the payments in the fourth year. That progress-payment schedule does not appear to reflect the Air Force and Boeing's plan to deliver the first KC-767A tanker approximately 34 months after lease approval and to deliver subsequent aircraft on an even faster schedule.

Using a four-year progress payment schedule increases the cost of the purchase option in net-present-value terms because it brings forward a large portion of the payments into a period in which the discount factors have less impact. The method appears to conflict with the Department of Defense's Financial Management Regulation, which limits progress payments to a percentage of incurred costs, because it would make payments before work commences. Using a three-year schedule for progress payments (one more in line with historical outlay rates for procuring aircraft) would defer some payments for one year relative to the schedule used in the Air Force analysis and would reduce the cost of the purchase by about \$210 million in net-present-value terms.

Discount Rates and Interaction Among The Factors. The results of any economic analysis are sensitive to changes in the discount rate selected. Changes in the discount rate also affect the costs associated with assumptions made about multiyear procurement and progress payments. CBO has calculated the present value of cash flows associated with the planned acquisition of tanker aircraft by discounting the estimated cash flow for each year using the interest rate on a marketable zero-coupon Treasury security with the same maturity from the date of disbursement as that cash flow. That method—often referred to as the “basket of zeros” discounting approach—is used by both CBO and OMB for calculating estimates of loan subsidies under the Federal Credit Reform Act. Although the tanker acquisition plan does not explicitly involve a direct loan or federal loan guarantee, the financing of tankers would result in a series of annual cash flows that have to be matched by the Trust's borrowing (on behalf of the government). Using the basket of zeros to discount that stream of cash flows most accurately reflects the time value of money. Under CBO's approach, the acquisition plan would cost about \$1.3 billion more—in present-value terms—than an outright purchase would.

In contrast, the Air Force's analysis relied on the simplified discounting method provided in OMB Circular A-94, which advises using a single discount rate (as

opposed to the “basket of zeros”). In implementing the guidelines, the Air Force used a nine-year Treasury rate, based on a three-year construction period and a six-year lease term, to discount the lease payments. CBO estimates that this assumption would result in an additional cost to leasing of \$1.7 billion.

However, CBO believes that if a single discount rate is used, the relevant period of analysis should be six years, since the Trust will issue bonds that mature in no more than six years. CBO estimates that using the Administration’s method with a single six-year discount rate would yield an even larger present-value difference—a greater cost of about \$2 billion for the Air Force’s plan.

Other Considerations

Termination Liability

Under the terms of the agreement, the Air Force can terminate the lease prior to the completion of the lease term for its convenience. However, exercising that option would be expensive for the Air Force because of the requirement to pay penalty payments, unamortized costs of the development of the tankers, and additional costs that would arise from its decision to terminate. If it terminates the lease, the Air Force might take delivery of the tankers under construction, make one year’s lease payment, and within a year, return them to the Trust along with the penalty payment. Alternatively, it might choose to pay Boeing for the costs of work performed before the decision to terminate. CBO estimates that termination liability could be as high as \$5 billion to \$7 billion in some years. The Air Force does not intend to set aside budget authority to cover this contingency by using the authority in section 8117 of the Department of Defense Appropriations Act, 2003, and therefore would need an appropriation from the Congress to do so. Given the potential size of the liability and the fact that the Air Force does not intend to budget for it, CBO believes it is extremely unlikely that the Air Force will terminate the lease.

The Long-Term Affordability of Leasing and Then Purchasing Tankers

The Air Force states that its primary reason for choosing this financing arrangement is the favorable budgetary treatment that it will receive. This treatment would allow the service to get the tankers today without displacing other programs from its budget. However, the budget will eventually have to reflect the Air Force’s decision to acquire the tankers. When those obligations are eventually recorded, mostly over the 2008-2017 period, they will create additional budgetary pressure in those years.

The Air Force report acknowledges that the lease is a more costly method to acquire the tankers, but the Air Force believes that its decision to pursue the method is justified by lower up-front costs. Total costs to the government are higher under the lease (almost \$5.7 billion in current dollars, according to CBO’s estimate), however,

so rather than eliminating difficult budgetary decisions, the lease merely postpones them.

There is no reason to believe that the Air Force itself will have more budgetary flexibility 10 years from now than it has today. In 2012, for example, the Air Force will be making lease payments on the tankers that were delivered over the 2007-2011 period—about \$2.9 billion (in current dollars) a year in payments. It will also have to begin purchasing the leased tankers at an estimated cost of \$4.4 billion over the 2012-2017 period. Finally, the Air Force will have to decide how to replace the rest of its KC-135 fleet. Should the Air Force choose to buy more than 100 KC-767s, it would need to start purchasing those additional tankers in 2011 to keep the Boeing 767-200 production line in operation. Procuring 20 tankers annually would cost about \$3 billion each year in current dollars, CBO estimates. Designing and building a new tanker would probably cost more and take longer.

But the Air Force will not just be buying tankers with its aircraft procurement funds over this period. Other Air Force programs will require significant sums also. According to the Administration's published plans and cost estimates, by 2012 the Air Force will be buying 110 Joint Strike Fighters annually at a cost of almost \$7 billion per year. Together, those two programs would consume about 70 percent of estimated funding for procuring aircraft. Thus, CBO concludes that the Air Force will likely be faced with making difficult budgetary decisions over the longer term also.