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United States General Accounting Office

Report to the Secretary of Defense

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NONRECURRING COSTS

Improvements Needed in DOD Cost Recovery Efforts



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National Security and
International Affairs Division
B-222214

April 18, 1986

The Honorable Caspar W. Weinberger
The Secretary of Defense

Dear Mr. Secretary:

On March 6, 1986, we testified before the Subcommittee on Legislation and National Security, Committee on Government Operations, on Department of Defense (DOD) efforts to recover nonrecurring costs of major defense equipment sold abroad (see app. I). The hearing focused on problems with the current pro rata system of cost recovery and an alternative approach for improving cost recovery—a flat rate method. Our testimony was based on our review of DOD's methodology for calculating the pro rata charge on six major systems.¹

The Arms Export Control Act requires DOD to charge buyers of major defense equipment a proportionate share of nonrecurring research, development, and production costs. In an attempt to comply with the law, DOD has adopted a pro rata system to calculate a charge by estimating total nonrecurring costs and dividing the combined costs by an estimate of the total production quantity of a weapon system. This system does not achieve the objective of the law. All of the pro rata charges we examined were inaccurate in that they were either understated or overstated.

The inaccuracy of the pro rata system can be attributed to several factors, including

- DOD's inability to accurately predict future costs, such as product improvements and cancelled project costs;
- DOD's inability to accurately predict future U.S. and foreign quantity requirements;
- errors in calculating and applying common costs to old and new generation weapon systems;
- inconsistencies in establishing a pro rata charge for weapon systems components; and
- DOD's policy not to revise charges unless the charges increase or decrease by at least 30 percent.

¹The six systems included in our review were the Navy's Sidewinder and Harpoon missile systems; the Army's Tube-Launched Optically-Tracked Wire Guided missile system, the Bradley infantry fighting vehicle, and the M1 tank; and the Air Force's Maverick missile system.

DOD recognizes that its estimates will change over time and that initial pro rata charges often prove inaccurate. However, DOD rarely changes an established charge—even when cost and quantity changes become known—because it is concerned that numerous revisions to charges would reduce the credibility of the pro rata system and increase the administrative burden on the military services.

Given the inaccuracies of the current system we believe that some actions are required. It appears to us that DOD has two options available—improve the current pro rata system or adopt a new system, i.e. flat rate approach.

To improve the accuracy of the pro rata system, military services should revise the cost and quantity estimates as actual data become available; delete cancelled project costs from weapon system cost pools, and recoup a proportionate share of nonrecurring costs for weapon system components. In addition, DOD instructions should be clarified to provide adequate guidelines for calculating and applying commonality between earlier and new model weapon systems.

These improvements would add to the complexity of an already complicated system. In an attempt to achieve true proportionality, DOD would have to constantly accumulate, review, and update cost and quantity information to make the necessary adjustments to the charges.

An alternative to the pro rata system is a flat rate approach. Under this approach DOD could establish a percentage recoupment rate to apply to the acquisition price of all equipment sold abroad. Flat rate charges are currently used and accepted by DOD in other areas; e.g., a 5-percent rate is charged to recover nonrecurring costs on non-major defense end items. In addition, other countries such as France, Germany, and the United Kingdom use flat rates to recover research and development costs of military equipment.

A flat rate approach offers some advantages. For example, it would simplify the existing complex administrative and review process for nonrecurring cost charges and it could be applied to sales of all defense equipment (major and non-major equipment, component items, and spares). Also, because the rate is tied to a unit price, it would not be subject to adjustments due to changing quantity projections, fluctuating cost data, or other uncertainties inherent in pro rata calculations which rely heavily on estimates. Because a flat rate does not attempt to recover a proportionate share of investment on individual items, DOD

believes this approach is not permissible under the Arms Export Control Act and would require an amendment to that act.

We believe that DOD must either improve the current system or develop a new approach to recovering these costs. We recommend that you decide which course of action DOD will take.

If you continue with the current pro rata system, we recommend that you direct the DOD Assistant Secretary of Defense (Comptroller) to revise DOD's current guidance relative to recouping nonrecurring research, development, and production costs on defense equipment sold abroad. The revisions should

- rescind the current policy of not revising charges unless they increase or decrease by at least 30 percent so that all pro rata charges are based on the most current cost and quantity estimates, and
- include guidance for calculating a commonality factor between weapon system models and applying that factor when determining charges.

We further recommend that you direct the Defense Security Assistance Agency to ensure that the military services calculate and recoup pro rata charges on the sale of components of major weapon systems as required by DOD Directive 2140.2.

Our work was conducted in accordance with generally accepted government auditing standards.

As you know, 31 U.S.C. 720 requires the head of a federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of this report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Director, Office of Management and Budget; the Secretary of State; the House Committee on Government Operations; the cognizant congressional appropriations and authorizations committees; and others upon request.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Frank C. Conahan". The signature is written in a cursive, flowing style.

Frank C. Conahan
Director

Testimony on Foreign Military Sales and Nonrecurring Cost Recoupments

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

FOR RELEASE ON DELIVERY
Expected at 10:00 a.m.
March 6, 1986

STATEMENT OF
FRANK C. CONAHAN
U.S. GENERAL ACCOUNTING OFFICE
BEFORE THE
COMMITTEE ON GOVERNMENT OPERATIONS
SUBCOMMITTEE ON LEGISLATION AND NATIONAL SECURITY
HOUSE OF REPRESENTATIVES
ON
FOREIGN MILITARY SALES AND
NONRECURRING COST RECOUPMENTS

Mr. Chairman, Members of the Subcommittee:

I am pleased to be here today to discuss Department of Defense (DOD) efforts to recover the nonrecurring costs of major defense equipment¹ sold abroad. Under the Arms Export Control Act, the DOD is required to charge buyers of major defense equipment a proportionate share of the nonrecurring research, development, and production costs. Under current policy, DOD also assesses a nonrecurring cost charge on the sale of non-major defense items.

At the subcommittee's request, we have completed a review of the Defense Department's nonrecurring cost recovery program. I would like to focus my remarks on two major areas.

¹As defined in the Arms Export Control Act, major defense equipment is equipment with nonrecurring research and development costs of \$50 million or total production costs of more than \$200 million. Non-major defense equipment is equipment or components that are not identified as major defense equipment.

First, I will discuss the problems we have identified with the current pro rata system of cost recovery as it relates to major defense items. This system requires DOD to calculate a charge by estimating total nonrecurring research, development, and production costs and dividing the combined costs by an estimate of the total production quantity of a weapon system. Actual development costs and total production quantities often vary dramatically from early estimates. But DOD rarely changes an established charge to adjust for such variations--even when changes are known. As a result all of the pro rata charges we examined were inaccurate in that they were either under or overstated.

Secondly, I would like to discuss an alternative approach for improving cost recovery--a flat rate method. Although this approach does not attempt to recover a proportionate share of investment on individual defense items, it would provide DOD with a simplified, stable, and widely accepted method of cost recovery for all defense items.

INACCURACY OF THE PRO RATA METHOD

Although the Arms Export Control Act requires DOD to collect a proportionate share of U.S. investment from foreign customers, the current pro rata method does not achieve this objective. The inaccuracy of the pro rata system can be attributed to several factors, including:

- DOD's inability to accurately predict future costs, such as product improvements and cancelled project costs;

- DOD's inability to accurately predict future U.S. and foreign quantity requirements;
- errors in calculating and applying common costs to old and new generation weapon systems;
- inconsistencies in establishing a pro rata charge for weapon systems components; and
- DOD's policy not to revise charges unless the changes increase or decrease by at least 30 percent.

For the systems in our sample, we found millions of dollars of product improvement costs that were not included in the cost pools used to determine the pro rata charge. After a pro rata charge is calculated, it is not uncommon for improvements to be made on a weapon system. The pro rata method requires DOD to estimate the costs of all improvements over the life of a weapon system, as well as to predict whether these improvements will be offered to foreign customers. These goals are not always practical. We identified \$94 million expended on improvements to the Harpoon, Maverick D, and TOW2 missiles that were not considered in the calculation. In addition, the Air Force is estimating about \$175 million for product improvements to the Maverick D after fiscal year 1985. However, the Air Force has chosen not to include this projected cost in the Maverick D cost pool because it is uncertain whether the improvements will be offered to foreign customers.

We also identified millions of dollars of cancelled project costs that were included in the cost pools and, according to DOD guidelines, should not have been. Under the pro rata method,

DOD has the difficult task of predicting which, if any, project improvements will be cancelled. In our sample cases DOD did not always consider cancelled projects when developing the pro rata charges for selected weapon systems. For example, the M-1 tank charge included \$100 million for improvements that are no longer planned.

Another contributor to the inaccuracies in the charges is the uncertainty involved in estimating quantities. In order to determine an accurate pro rata charge, DOD must predict U.S. and foreign quantity requirements over the life of the weapon systems. However, estimates of foreign sales as well as projections of U.S. requirements may not materialize for economic or political reasons.

In the systems we examined, all currently estimated quantities vary substantially from their original estimates. However, there is no reason to believe the latest projections are any more reliable. For example:

- The Army originally estimated the production level for the Bradley fighting vehicle to be 8,900 units, with the Army requirement at 7,917 and the Foreign Military Sales (FMS) requirement at 983. Currently, the Army is expected to acquire 6,982. The FMS requirement has been increased to 1,918, keeping the total production level at 8,900 even though no foreign sales have been made to date.
- For the M1 tank, the Army estimated that 1,000 tanks would be offered through the FMS program. The Defense Security Assistance Agency increased this projection to 2,231 even

though the Army maintained that the original estimate was more accurate. To date, no sales of the M1 tank have been made.

Another reason for the inaccuracy of the charges is the erroneous application of nonrecurring costs that are applicable to more than one model of a weapon system. Under the pro rata method, a commonality factor must be determined which defines the percentage of nonrecurring costs of an earlier model that is applicable to a newer model of the same system. Correctly applying this commonality factor generally results in higher charges for the newer model(s) because its share of the nonrecurring costs is increased.

Because military services are not provided adequate guidelines, two problems have occurred in applying commonality. First, the percentage of commonality between the earlier model and the newer model has been over and understated. Secondly, older model quantities have not been adjusted to reflect all of the units benefiting from the earlier model's investment.

We also found inconsistencies between DOD requirements and the services' practices regarding pro rata charges for components of weapon systems. When a determination is made to sell components of major defense equipment, DOD requires military services to calculate pro rata charges for individual components. However, charges are not always calculated for components. For example, the Navy has not calculated a charge for the Harpoon missile's submarine capsule even though it has been sold to foreign customers. This means that DOD is not

recovering a proportionate share of the \$45.4 million spent to develop this component.

Like the DOD Inspector General (IG), we found other errors in the pro rata calculations. For example, the best available information was not always used. In the case of the Maverick D, the Air Force used estimates in the initial calculation, instead of available actual expenditures, resulting in a \$47 million overstatement of costs. Also, appropriate nonrecurring systems management costs were not always included in the cost pool. For the Harpoon, the Navy excluded \$13 million of such costs which should have been included in the cost pool.

DOD recognizes that its estimates will change over time and that initial pro rata charges often prove inaccurate. However, DOD resists revising its charges, even when cost pool and quantity information is updated. It is DOD policy that once a charge is approved, it will not be revised unless the charge is increased or decreased by 30 percent. We found that since 1982, DOD revised the charges on only 5 of 248 items of major defense equipment. This policy stems from DOD's concerns that numerous revisions to charges will reduce the credibility of the pro rata system and increase the administrative burden on the military services. According to DOD, if the charges were constantly adjusted, buyers might challenge the validity of all charges and DOD would be in a difficult position of justifying overstated past charges and increases in new charges.

In its report, the IG recommended several revisions to the DOD directive for improving the pro rata systems. Likewise, we recognize that some steps could be taken to improve the accuracy of the pro rata system. For example, military services should construct cost pools with actual data when available, instead of estimates. We also recognize that actions could be taken to delete cancelled project costs from weapon system cost pools and to recoup a proportionate share of nonrecurring costs for weapon system components. In addition, DOD instructions could be clarified to provide more adequate guidelines for applying commonality between earlier and new models.

These improvements, however, would add to the complexity of an already complicated recoupment system. Even if these improvements were made, we doubt that the pro rata method would produce accurate recoupment charges at the time of the first foreign sale. In an attempt to achieve true proportionality, DOD would have to constantly accumulate, review, and update cost and quantity information to make the necessary adjustments to the charges.

ALTERNATIVE: USING A FLAT RATE METHOD

An alternative to the present method of recovering nonrecurring costs is a flat rate approach. Under this approach DOD could establish a percentage recoupment rate to apply to the acquisition price of all equipment sold abroad.

DOD believes that this approach is not permissible under the Arms Export Control Act because it does not attempt to recover a proportionate share of investment on individual

items. On the other hand, using a flat rate method of cost recovery is also not a totally new approach. Flat rate charges are currently used and accepted by DOD in other areas. For example, flat rates are used to reimburse the government for FMS administrative and other services, and DOD currently uses a 5 percent rate to establish a charge to recover nonrecurring costs on non-major defense end items. DOD also uses a rate of 4 percent to establish a charge for recouping nonrecurring costs of older major defense items for which data is not available. In addition, a recent NATO document reveals that other countries use flat rates to recover research and development costs of military equipment. For example, France, Germany, and the United Kingdom generally use flat rate percentages of 2 percent, 5 percent, and 7.5 percent, respectively.

Setting the percentage rate will not be easy. DOD will have to consider several factors, including aggregate nonrecurring costs, and current charges as a percent of unit price, before it could establish the applicable rate. We examined data from fiscal years 1983 to 1985 and found that a rate of about 5 percent applied to deliveries would have yielded as much revenue as the current system yielded.

Notwithstanding the difficulty in arriving at an applicable percentage rate, we believe a flat rate approach offers some advantages. First, the use of flat rate charges would simplify the existing complex administrative and review process for nonrecurring cost charges. For example, DOD would no longer

need to construct detailed cost pools, estimate total production quantities, determine commonality between weapons, or compute separate charges for components and spares. Finally, the rate could be applied to sales of all defense equipment--including major defense and non-major defense equipment, component items, and spares.

Secondly, under a flat rate approach the percentage rate would not change; however, the charges could increase or decrease as unit prices change. Because the rate is firmly tied to a unit price, it would not be subject to adjustments due to changing quantity projections, fluctuating cost data, or other uncertainties inherent in pro rata calculations which rely heavily on estimates.

Although the flat rate may not recover a proportionate share of investment on individual items, a flat rate method could provide DOD with a simplified, stable, and widely accepted method of cost recovery for all defense items. The adoption of the flat rate method may require amending the Arms Export Control Act.

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