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REPORT TO THE CONGRESS



Defense Industry Profit Study

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**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

This is our report on our defense industry profit study, made pursuant to the provisions of the Armed Forces Appropriation Authorization Act for fiscal year 1970, approved November 19, 1969 (Pub. L. 91-121).

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of Defense; the Administrator, National Aeronautics and Space Administration; the Chairman, Atomic Energy Commission; the Secretary of Transportation; and the Commandant, United States Coast Guard.

A handwritten signature in cursive script that reads "Thomas P. Staats".

Comptroller General
of the United States

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ABBREVIATIONS

AEC	Atomic Energy Commission
ASPR	Armed Services Procurement Regulation
CPFF	cost plus fixed fee
CPIF	cost plus incentive fee
DOD	Department of Defense
DOT	Department of Transportation
ECI	equity capital investment
FFP	firm fixed price
FPI	fixed price incentive
GAO	General Accounting Office
GOCO	Government-owned contractor-operated
NASA	National Aeronautics and Space Administration
TCI	total capital investment

D I G E S T

WHY THE REVIEW WAS MADE

The Armed Forces Appropriation Authorization Act for fiscal year 1970, approved November 19, 1969 (Pub. L. 91-121), directed the General Accounting Office (GAO) to study profits earned on negotiated contracts and subcontracts entered into by the Department of Defense (DOD), National Aeronautics and Space Administration (NASA), and the Coast Guard. Contracts of the Atomic Energy Commission (AEC) awarded to meet requirements of DOD were included. (See p. 7.)

FINDINGS AND CONCLUSIONS

Profit before Federal income taxes, on defense work, measured as a percentage of sales, was significantly lower than on comparable commercial work for 74 large DOD contractors included in the GAO study. For example, profits on DOD contracts averaged 4.3 percent of sales over the 4 years, 1966 through 1969, but profits on comparable commercial work of the 74 contractors averaged 9.9 percent of sales for the same period. When profit was considered as a percent of the total capital investment (total liabilities and equity but exclusive of Government capital) used in generating the sales, the difference narrowed--11.2 percent for DOD sales and 14 percent for commercial sales. Further, when profit was considered as a percent of equity capital investment of stockholders, there was little difference between the rate of return for defense work and that for commercial work. The 74 large DOD contractors realized average returns before Federal income taxes of 21.1 percent on equity capital allocation to defense sales and 22.9 percent on equity capital allocated to commercial sales. (See p. 15.)

The major factor causing the rates of return on contractor capital investment for defense and commercial work to be similar was the substantial amount of capital provided by the Government in the form of progress payments, cost reimbursements, equipment, and facilities. This reduced the capital investment required from the contractors for defense work. (See pp. 15 and 16.)

In reviewing congressional hearings which led to this study, GAO noted some concern that contractor capital requirements had not been considered in negotiating defense contract prices. Although such a review was not called for specifically in the legislation, GAO reviewed 146 negotiated contracts to see whether it was practicable to develop

investment data by contract and whether any wide range in profits on defense contracts existed. The work showed that cost, profit, and invested capital data could be developed by contract and that there was a wide range of profit rates on defense contracts. (See pp. 34 to 38.)

The average rates of return for individual contracts were substantially higher than the average annual profit rates developed from GAO's questionnaires to 74 large defense contractors. The 146 contracts examined cannot be considered as a representative sample, and it would have been mere coincidence if similar rates had resulted in both phases of the study. The differences between the two were:

- The large number of DOD procurement actions, over 180,000 a year of \$10,000 or more, covering a large number of different items and industries involved and the work required to develop data for each made it impracticable to attempt to develop a representative sample.
- The data furnished by contractors in response to the questionnaire were on overall defense business, not on an individual-contract basis.
- GAO considered only completed contracts where profits or losses were ascertainable and, as a result, probably avoided many, loss contracts having large unsettled claims. (See p. 38.)

Under current defense contract negotiation procedures, little consideration is given to the amount of capital investment required from the contractor for contract performance. Instead, profit objectives are developed as a percentage of the anticipated costs of material, labor, and overhead. As a result inequities can and do arise between contractors' providing differing proportions of capital required for contract performance. (See pp. 41 to 43.)

Further, by relating profits to costs, contractors in noncompetitive situations are not provided with positive incentives to make investments in equipment that would increase efficiency and result in reduced costs, especially where follow-on contracts are involved. Under the current system of negotiating contract prices, such investments tend to lower, rather than increase, profits in the long run. Other factors, however, such as whether the program will be continued, could be overriding considerations affecting contractors' decisions concerning investments in equipment. (See pp. 44 and 45.)

GAO believes that, in determining profit objectives for negotiated Government contracts where effective price competition is lacking, consideration should be given to capital requirements as well as to such other factors as risk, complexity of the work, and other management and performance factors. (See p. 54.)

Where contractor capital requirements are insignificant, such as in many service-type contracts or contracts for the operation of

Government-owned plants, profit objectives would continue to be developed primarily through consideration of the other factors. (See p. 54.)

The system adopted should be used, where applicable, by all Government agencies to simplify industry participation. (See p. 55.)

CONTRACTOR COMMENTS

GAO requested comments from five contractor associations on a draft of this report that was based on incomplete data. Two of the associations agreed with the conclusion that investment should be considered in determining profits; however, they and two other associations felt that the report grossly overemphasized the rate of return on investment and reflected a preoccupation with the need to consider contractors' capital requirements in negotiating profit factors. The fifth association did not furnish any comments on this point.

GAO agrees that there are other factors that must be considered in negotiating contract profit rates. Such factors as the contractors' assumption of cost risk, difficulty of the task, and other management and performance factors must be evaluated and considered. In some cases, such as for a Government-owned contractor-operated plant, little or no contractor investment is involved; in other cases the entire investment required for contract performance is provided by the contractor. Where the investment required from the contractor is insignificant, the other factors naturally would be the determining items in establishing profit objectives. In still other cases, however, GAO believes that, to the degree that contractor capital is required, it should be considered. (See p. 50.)

Two of the contractor associations questioned GAO statements that contractors have little incentive to invest in more modern equipment to reduce costs relating to many negotiated procurements. The associations stated that GAO had failed to consider and recognize the "real world" competitive environment of today's defense business.

For competitive and other reasons, contractors make some investments in facilities and equipment for performance of negotiated defense contracts. Actually, however, little price competition is involved in much of the DOD procurement. For example, of the total dollar value of DOD procurement for fiscal year 1970, only 11 percent was formally advertised and an additional 27 percent was negotiated on the basis of price competition. A total of 57 percent was placed on a sole-source basis, and the remaining 5 percent involved design or technical competition.

There is, of course, some incentive to reduce costs on negotiated firm fixed-price and fixed-price incentive contracts even if they are sole-source contracts. Such reductions in cost, however, could reduce profits on subsequent defense contracts. Such contracts would be priced

on the basis of prior cost experience to a large extent, and the profits would be determined as a percentage of estimated costs.

The contractor associations almost unanimously questioned GAO data for the 146 individual contracts and stated that they felt that either an unfortunate selection of contracts was involved or there were flaws in the method of ascertaining capital invested in such contracts. (See p. 51.)

For reasons stated previously, GAO agrees that no attempt was made to obtain a sample representative of all defense contracts. GAO was interested in determining whether it was feasible to develop cost, profit, and invested capital data by contract and, if so, the range of the rate of return on invested capital realized for individual contracts. GAO found that it was feasible to develop the desired data for most contracts and that there was a great range in rates of return on investment for individual contracts. (See p. 51.)

In each case GAO, in developing data for individual contracts, presented its data to the contractors involved and gave them an opportunity to review the data and comment on it. GAO has carefully considered the comments received and believes that the final data are reasonably accurate. The number of cases involving factual disagreements was relatively small. (See p. 51.)

AGENCY COMMENTS

GAO provided a draft of this report, based on incomplete data, to AEC, DOD, the Department of Transportation (DOT), and NASA for review and comment.

All the agencies agreed that due consideration should be given to the total capital investment of contractors in negotiating Government contracts which do not involve price competition. DOD pointed out, however, that the solution of highly complex administrative problems was required before the policy could be put into effect. Also AEC believes that there is no need for a uniform Government-wide fee policy stressing consideration of invested capital and feels that the development of detailed uniform guidelines could have a serious, disruptive effect on the existing overall fee policies of the various executive agencies.

GAO agrees that there are serious administrative problems in providing for consideration of contractor total invested capital related to a particular contract in negotiating contract profit rates. DOD had been considering this matter since 1962, and GAO believes that it is time to move ahead.

GAO agrees also that there are many advantages to permitting agencies to tailor their policies to their individual needs. Many companies, however, deal with numerous Government agencies, and GAO believes that, where feasible, uniform policies should be established governing the relations between Government and industry. GAO believes further that

it seems feasible and desirable to establish uniform Government-wide guidelines for establishing profit objectives for negotiating Government contracts where effective price competition is lacking. (See p. 52.)

RECOMMENDATION

Action required to establish uniform guidelines does not require legislation. The Office of Management and Budget should take the lead in interagency development of uniform Government-wide guidelines for determining profit objectives for negotiating Government contracts that will emphasize consideration of the total amount of contractor capital required when appropriate, where effective price competition is lacking. (See p. 55.)

CHAPTER 1

INTRODUCTION

The Armed Forces Appropriation Authorization Act for fiscal year 1970, approved November 19, 1969 (Pub. L. 91-121), directed the General Accounting Office to study profits earned on negotiated contracts and subcontracts entered into by the Department of Defense, National Aeronautics and Space Administration and the Coast Guard. Contracts of the Atomic Energy Commission awarded to meet requirements of DOD were included. (See app. I.)

Unless otherwise stated, the profits presented in this report are before Federal income taxes to prevent any distortion due to special tax considerations. We also felt that it would be preferable to obtain data on profits prior to reductions for Renegotiation Act determinations of excessive profits. Such actions would not have been completed for much of our data on 1969 profits and there were some outstanding actions pertaining to prior years. Further, the dollar amounts of excessive profits determinations have not been substantial in recent years in relation to the profits involved.

For example, our average rate of return on total capital investment for DOD sales of 74 large DOD contractors was 11.2 percent. Even if all excessive profit determinations of the Renegotiation Board during the period covered by our study had been considered as applying solely to the 74 large contractors, the effect would have been to reduce this amount by only 0.2 percent, to 11 percent. Voluntary refunds and price reductions reported by contractors to the Renegotiation Board would normally have been deducted by the contractors in arriving at net income reported to us. In any event, these amounts would have had an insignificant effect on the profit data presented in this report.

The costs of defense business include all costs allocable, including costs unallowable under section 15 (contract cost principles and procedures) of the Armed Services Procurement Regulation. This made computations of profit rates for defense and commercial work comparable.

DEVELOPMENT OF ANNUAL PROFIT RATES
FOR PERIOD 1966 THROUGH 1969

We developed a questionnaire to obtain information from selected contractors for the years 1966 through 1969 on sales, profits, total capital investment, and contractor equity investment for defense business and comparable commercial sales. We asked that noncomparable commercial sales and related investment data be reported under the category "Other." This category included such items as sales by overseas activities and sales of transportation and communication services where the rates were set pursuant to law or regulation. The profits on such noncomparable items and related data are not discussed in this report. Provision was made for separate reporting of the operating results for Government-owned contractor-operated (GOCO) facilities and similar activities requiring little or no contractor investment, to prevent distortion of data on return on capital.

A further breakdown of defense sales and profits by type of contract was requested, although the legislation called for a study of only negotiated defense contracts, we asked for and received information on all work of the contractors in order to (1) reconcile cost allocations to the various categories of sales, (2) reconcile capital allocations to the various sales categories, and (3) permit comparisons of contractors' rates of profit on total defense business and on commercial work.

Questionnaires were sent to 154 contractors which, as a group, had received (1) about 60 percent of recent DOD prime contract awards of \$10,000 or more, (2) about 80 percent of similar NASA contract awards, and (3) a significant part of AEC and Coast Guard contract awards. The 154 contractors included the 81 largest DOD contractors, excluding oil companies and nonprofit companies, taken from a list of the 100 contractors and their subsidiaries receiving the largest dollar volume of military prime contracts of \$10,000 or more in fiscal year 1969. Oil companies were excluded because a major part of the procurement involved had been advertised or awarded through price competition and would not have been affected by DOD's policies in negotiating profit. We received excellent cooperation from the contractors in completing the questionnaire and in all phases of the study.

In summarizing data for large DOD contractors, General Motors Corporation was excluded because its great volume of commercial sales would have substantially altered our commercial data and the result would not have been representative of most of the companies included in the study. The data excluded would have had no appreciable effect on the defense profits reported.

We selected 63 contractors by taking (1) every 72d contractor from an alphabetical list of DOD contractors receiving awards of \$10,000 or more and totaling \$500,000 or more in fiscal year 1968, exclusive of the 81 top contractors and their subsidiary companies already selected, and (2) some AEC contractors. Two of these contractors had gone out of business at the time of our study, so that our results for the smaller contractors are based on replies for 61 contractors.

We also obtained data from 10 contractors who received a major part of their defense business in the form of subcontract awards.

A random selection of 40 of the 154 questionnaires was made for verification at the contractors' plants. Each of the above groups was represented in the 40 questionnaires selected. In addition, each remaining questionnaire was carefully reviewed and verified through calls, letters, and follow-up visits to the contractors' offices.

We checked to see whether the data provided agreed with similar data on the contractors' audited financial statements and appeared reasonable. Although we think that the breakdown of profit data by sales category is reasonable, there are several factors which make it impossible to certify to its absolute correctness.

Profit data by customer not disclosed
by contractors' records

Contractors' records are designed for the needs of management and generally do not provide breakdowns of sales, profits, and related capital for defense work. Since the information we needed on defense sales was not separately maintained, it was developed on an after-the-fact basis from

the available records. Accumulating data involved numerous individual judgments as to the degree of accuracy necessary in relation to the costs involved. For example, one contractor indicated that its summary records did not segregate subcontract sales of commercial-type items to higher tier defense contractors from regular commercial sales. Individual sales documents, however, frequently did contain such information. This problem was resolved in one case on the basis of a detailed analysis of a representative sales sample and a projection of the result to the total sales.

Similarly, allocations were necessary to determine capital investment for the sales categories in which we were interested. Contractors were requested to submit allocations representative of the extent to which contractor-owned assets were used in generating the sales. We were particularly interested in ensuring that allocations to defense sales reflected adequate consideration of (1) Government cost reimbursements and progress payments and (2) Government-furnished facilities and equipment. The importance of the latter is indicated by data showing that as of June 1969 Government land, buildings, and equipment costing about \$7 billion were under the control of all DOD contractors. These assets were of various ages. Data about their depreciated net book value generally were not maintained.

Although some capital allocations were made through identification of assets with sales categories, this was not possible in all cases. In some cases a less desirable cost-of-sales basis was used.

Complexity of participating companies

Many of the companies in our study are complex and include numerous diversified subsidiaries which, in turn, are made up of a number of operating segments. We requested that data submitted be consolidated and that it include data on all majority-owned domestic subsidiaries, so that we could obtain as much data as practicable on total defense profits of the selected companies. Although in some cases operating segments were almost entirely engaged in defense work and thus had data on defense sales readily available, this was the exception. In most cases it was necessary for the participating companies to do substantial work to break

out data on defense sales and the other categories of sales that we requested and to allocate related costs and invested capital.

Accounting alternatives available

There are acceptable alternatives available for determining costs under generally accepted accounting principles. We did not attempt to draw up a uniform set of accounting rules for the purpose of recasting the results of operations for the companies participating in the study. The work and cost involved prohibited such an approach. We did, however, insist that the profit data furnished agree with the data reported in the audited financial statements of the companies, and we attempted to see that the accounting methods used were appropriate to the circumstances.

FINANCIAL TERMS DEFINED

This report contains financial terms which are defined below.

1. DOD sales--Net sales to DOD under both prime contracts and subcontracts, exclusive of sales, profits, fees or costs for operation of DOD GOCO plants, and performance of operation and maintenance contracts and service contracts. These latter contracts were excluded from sales and identified separately, since they have the common characteristic of requiring little or no contractor capital investment.
2. Other defense agency sales--Net sales to NASA, AEC, and the Coast Guard under both prime contracts and subcontracts, exclusive of sales, profits, fees or costs for operation of GOCO plants, and performance of operation and maintenance contracts and service contracts.
3. Commercial sales--Net sales to commercial customers and to State, local, and foreign governments of products or services which are reasonably comparable to those sold to the defense agencies or which involve comparable manufacturing operations.
4. Total capital investment (TCI)--The total investment in all assets used in the business, exclusive of any Government-owned items or leased items. In other words, the total capital provided by creditors (debt capital) and the owners of the business (equity capital). We assumed that total capital allocated to each sales category was composed of equity and debt capital in proportion to those of the business as a whole.
5. DOD TCI, other defense agency TCI, and commercial TCI--The parts of TCI which are allocable to sales to DOD, other defense agencies, and commercial customers, respectively.

6. Turnover of TCI--Sales divided by TCI equals the number of times TCI of the business, or segment thereof, turned over during a year. Another definition of turnover is the amount of sales dollars brought about by, or resulting from, each dollar of TCI.
7. Equity capital investment (ECI)--The total dollars assigned to capital shares, retained earnings, retained-earning reserves, minority interests, and such other equity-type items as deferred-investment tax credits.
8. DOD ECI, other defense agency ECI, and commercial ECI--The parts of total ECI which are allocable to sales to DOD and other defense agencies and comparable sales to commercial customers, respectively.
9. Turnover of ECI--Sales divided by ECI equals the number of times the ECI of the business, or a segment thereof, turned over during a year. Another definition of turnover is the amount of sales dollars brought about by, or resulting from, each dollar of equity investment.
10. DOD and other defense agency profits before Federal income taxes--The net income or loss on prime contracts and subcontracts of DOD and other defense agencies, respectively, after deducting all allocable costs, whether or not allowable or recoverable.
11. Commercial profits before Federal income taxes--The net income or loss from sales to commercial customers and to State, local, and foreign governments of products or services which are reasonably comparable to those sold to the defense agencies or which involve comparable production processes.

We believe that of the various ratios available for evaluating profits earned by contractors under negotiated defense contracts, the percentage of profit earned on TCI is the most meaningful for evaluating defense profits. The rate of return on TCI relates earning to total capital

employed, regardless of whether it was provided by the owners of a business, its creditors, or its suppliers, and the Government should not be particularly concerned with whether contractors obtain capital from creditors or from stockholders. Further, since interest is not an allowable cost under Government contracts and must be paid out of profits, it seems only equitable to consider total capital in determining profits.

The rate of return on ECI is primarily of interest to the owners or prospective owners of a business, since it represents the return on the owners' capital interest in the business. Ratios of profit to costs or sales are important to management to determine how profit margins compare with those of similar companies. Cost and sales ratios, however, are less meaningful than capital ratios in that cost and sales ratios do not consider the amount of capital used in producing the profit or the period of time the capital was committed.

CHAPTER 2

ANNUAL PROFIT RATES OF LARGE DOD CONTRACTORS

The data submitted by 74 large DOD contractors on annual profit showed that profit, as a percent of sales, was much lower on defense sales than on commercial sales. When profit was considered as return on contractor TCI and ECI, however, the profit rates for commercial and DOD sales were closer to each other. One explanation for this is Government-furnished capital in the form of progress payments, cost reimbursements, and industrial facilities and equipment. Further details on this and other points are set out in the schedules and analyses which follow. To give an indication of the effect of Federal income taxes on profits, we have provided summary data on profits both before and after Federal income taxes for the 74 large DOD contractors included in our study. The after-tax data is presented in schedule 2. All the other profits presented are before Federal income taxes, unless otherwise stated.

Data are presented separately, in schedule 15, relating to (1) the operation of GOCO plants for fees and (2) the performance of service contracts requiring little or no contractor capital. Six of our large DOD contractors reported that their DOD work was almost entirely under service contracts. Therefore much of the defense procurement data that follow pertains to 74 of the 80 large DOD contractors from which we obtained data. Some of the 74 contractors are operating with substantial quantities of Government facilities. They also have major investments in facilities of their own, however, and they are paid for the items produced, rather than for the operation of the facilities.

SUMMARY OF DATA FOR LARGE DOD CONTRACTORS

Defense and comparable commercial sales over the 4 years we covered averaged \$94 billion a year for 74 large DOD contractors included in our study. The \$94 billion in sales were 25 percent to DOD, 71 percent to commercial customers, and 4 percent to the other defense agencies. The

average profit rate on sales for commercial business, 9.9 percent, was significantly higher than the DOD sales rate of 4.3 percent or the other defense agency sales rate of 4.9 percent.

Profits measured as a percentage of TCI and as a percentage of ECI were more nearly the same for defense and commercial sales. The commercial rates of return, however, remained higher than the rates for DOD sales. The rates of return for the less significant sales to the other defense agencies were actually higher than the rates for the commercial sales, as shown below.

<u>Category</u>	<u>Four-year average</u>		
	<u>Profit sales</u>	<u>Return on</u>	
		<u>TCI</u>	<u>ECI</u>
	————(percent)————		
DOD	4.3	11.2	21.1
Other defense agencies	4.9	15.0	27.5
Commercial	9.9	14.0	22.9

The narrow range of the rates of return on capital investment for the three sales categories, compared with the wider range in profit rates on sales, is due largely to the effect of Government-furnished capital, as mentioned previously. The relatively smaller amount of capital required of the contractor for defense work also shows up in the higher capital turnover rates (sales divided by related TCI and ECI, respectively) for these sales compared with commercial sales, as shown below.

<u>Category</u>	<u>Four-year average turnover rates</u>	
	<u>TCI</u>	<u>ECI</u>
DOD business	2.3	4.9
Business with other defense agencies	2.8	5.6
Commercial business	1.3	2.3

(For further details see sch. 1.)

Return of large DOD contractors on
TCI for DOD and commercial sales

As shown in the following table, the range in rates of return on total capital investment was fairly wide for both DOD and comparable commercial sales of the 74 large DOD contractors. A larger percentage of DOD sales dollars was in the loss category in 3 of the 4 years, but the losses on commercial sales extended to a significantly lower range in 3 of the 4 years. The rate of return on profitable DOD sales extended to a significantly higher range than profitable commercial sales in 3 of the 4 years. In general, the average return on total capital investment was higher on commercial sales in each of the 4 years.

<u>Year</u>	<u>Return on TCI</u>			
	<u>DOD</u>		<u>Commercial</u>	
	<u>Average</u>	<u>Range</u>	<u>Average</u>	<u>Range</u>
	(percent)			
1966	11.3	-27 to +60	16.2	-16 to +61
1967	12.1	- 6 to +85	12.2	-27 to +44
1968	11.9	-22 to +81	15.6	-50 to +46
1969	9.5	-12 to +96	12.4	-33 to +39

(For further details see schs. 3 and 4.)

Profit data for various categories of large DOD contractors

We were interested in seeing whether profit rates varied for contractors of various sizes and types. For this purpose the 74 large DOD contractors were divided into the following three categories.

1. High-volume defense contractors--Contractors having:
 - (a) At least 10 percent of total company business in defense sales.
 - (b) Over \$200 million in average annual defense sales.

2. Medium-volume defense contractors--Contractors having:
 - (a) At least 10 percent of total company business in defense sales.
 - (b) Average annual defense sales of less than \$200 million.

3. Commercially oriented defense contractors--Contractors having:
 - (a) Less than 10 percent of total company business in defense sales.
 - (b) Substantial defense business.

The data shown in schedules 5 through 10 represent the same data shown in schedule 1 but segregated into the three categories of contractors. Some of the more significant points follow.

Sales

The major part of defense work is concentrated in 32 high-volume defense contractors, as shown in the following breakdown of sales data for 74 large DOD contractors

for the 4-year period 1966 through 1969. The 13 commercially oriented contractors account for about the same amount of commercial sales as do the 61 defense-oriented contractors.

<u>Sales category</u>	<u>Annual average sales 1966-69</u>			
	<u>Defense-oriented contractors</u>			<u>13 commercially oriented contractors</u>
	<u>32 high volume</u>	<u>29 medium volume</u>	<u>All 61</u>	
	(billions)			
DOD	\$19.0	\$2.6	\$21.6	\$ 2.0
Other defense agencies	2.8	0.1	2.9	0.4
Commercial	<u>27.5</u>	<u>6.5</u>	<u>34.0</u>	<u>32.9</u>
Total	<u>\$49.3</u>	<u>\$9.2</u>	<u>\$58.5</u>	<u>\$35.3</u>

(For further details see sch. 5.)

Profit on sales

Profit as a percent of sales is lowest on DOD sales; slightly higher on other defense agency sales, except for the medium-volume contractors; and significantly higher on commercial sales. The operations of the large commercially oriented defense contractors, as a group, appear to be more profitable than those of the defense-oriented contractors, as shown below.

<u>Sales category</u>	<u>Profit/sales average 1966-69</u>			
	<u>Defense-oriented contractors</u>			<u>13 commercially oriented contractors</u>
	<u>32 high volume</u>	<u>29 medium volume</u>	<u>All 61</u>	
	(percent)			
DOD	3.8	6.1	4.1	6.5
Other defense agencies	4.4	3.7	4.4	8.1
Commercial	8.2	8.6	8.3	11.6
Overall	6.3	7.8	6.5	11.2

(For further details see sch. 6.)

Return on TCI

The commercially oriented contractors had an average 15.2 percent rate of return on TCI compared with an average 12.3 percent rate of return for the defense-oriented contractors. It is interesting to note that the average rate of return on DOD work was almost the same for commercially oriented and defense-oriented contractors, (11.1 and 11.2 percent, respectively). Thus, as shown below, a major part of the overall difference in rates of return is attributable to commercial work on which the defense-oriented contractors averaged 12.6 percent return on TCI and the commercially oriented companies averaged 15.4 percent. In addition, the commercially oriented companies had a much greater proportion of their sales from their more profitable commercial customers.

<u>Sales category</u>	<u>Return on TCI</u>			
	<u>Defense-oriented contractors</u>			<u>13 commercially oriented contractors</u>
	<u>32 high volume</u>	<u>29 medium volume</u>	<u>All 61</u>	
	(percent)			
DOD	11.0	12.2	11.2	11.1
Other defense agencies	16.3	6.4	15.3	14.1
Commercial	12.6	12.3	12.6	15.4
Overall	12.3	12.2	12.3	15.2

(For further details see sch. 7.)

Return on ECI

As shown below, the three classes of contractors compare very closely on return on ECI the averages for the 4-year period being 22.7 percent for 32 high-volume defense contractors, 21.4 percent for 29 medium-volume defense contractors, and 23.1 percent for the commercially oriented contractors.

The defense-oriented contractors were able to approach the commercially oriented contractors in return on ECI

because a smaller part of TCI of the defense contractors was ECI. In other words, the defense contractors in our study relied on borrowed capital for a greater proportion of their capital needs.

<u>Sales category</u>	<u>Return on ECI</u>			
	<u>Defense-oriented contractors</u>			<u>13 commercially oriented contractors</u>
	<u>32 high volume</u>	<u>29 medium volume</u>	<u>All 61</u>	
	<u>(percent)</u>			
DOD	21.4	21.9	21.5	18.4
Other defense agencies	31.6	10.3	29.6	21.8
Commercial	22.8	21.4	22.5	23.3
Overall	22.7	21.4	22.5	23.1

(For further details see sch. 8.)

Turnover rates of TCI and ECI

The average annual capital turnover rates, determined by dividing sales by capital, were higher for the defense-oriented contractors than for the commercially oriented contractors. Also the rates were higher for the high-volume defense contractors than for the medium-volume contractors. As mentioned before, this reflects the effect of Government-furnished capital in the form of progress payments, cost reimbursements, facilities, and equipment. A summary of the turnover rates for the various categories of contractors follows.

<u>Sales category</u>	<u>Defense-oriented contractors</u>			<u>13 commercially oriented contractors</u>
	<u>32 high volume</u>	<u>29 medium volume</u>	<u>All 61</u>	
Turnover of TCI:				
DOD	2.5	1.8	2.4	1.6
Other defense agencies	3.4	1.3	3.2	1.7
Commercial	1.4	1.3	1.4	1.3
Overall	1.7	1.4	1.7	1.3
Turnover of ECI:				
DOD	5.6	3.6	5.3	2.8
Other defense agencies	7.1	2.8	6.7	2.7
Commercial	2.8	2.5	2.7	2.0
Overall	3.6	2.7	3.4	2.1

(For further details see schs. 9 and 10.)

Summary of profits by type of contract

The types of negotiated contracts covered are those most commonly used in recent years by the Department of Defense: cost-plus-fixed-fee (CPFF), cost-plus-incentive-fee (CPIF), fixed-price incentive (FPI), and firm fixed-price (FFP) contracts. Formally advertised contracts are also covered.

Profit rates were about the same for prime contract and subcontract sales.

The bulk of the DOD sales fell in the FPI and FFP contract categories, while the sales to other defense agencies were concentrated in the CPFF and CPIF contract categories.

Advertised prime contracts appeared to be the least profitable in that contractors reported losses for 3 of the 4 years on DOD work and for 2 of the 4 years on other defense agency work. The dollar volume of such contracts is relatively small. It amounts to about 6 percent of total sales reported. It is probable that our data on formally advertised contracts are not representative, since certain industries that perform the bulk of their defense contracts under advertised contracts, such as petroleum companies and construction companies, were not included in our review.

Following is a summary of average profit data, by type of contracts, for the 74 large DOD contractors. Profit data for DOD work and work of the other defense agencies are shown separately.

<u>Type of contract</u>	<u>DOD</u>		<u>Other defense agencies</u>	
	<u>Prime contractor</u>	<u>Subcontractor</u>	<u>Prime contractor</u>	<u>Subcontractor</u>
CPFF:				
Sales	\$ 1,849	\$ 186	\$1,044	\$ 70
Profit	4.4	4.7	3.6	3.6
CPIF:				
Sales	2,738	299	1,182	236
Profit	5.3	5.5	5.2	3.8
FPI:				
Sales	6,564	533	71	12
Profit	3.9	0.7	8.7	6.5
FFP:				
Negotiated sales	7,234	2,132	241	145
Profit	5.3	5.0	10.1	6.0
Advertised:				
Sales	1,151	-	6	-
Profit	<u>-3.4</u>	<u>-</u>	<u>0.7</u>	<u>-</u>
Total sales	<u>\$19,536</u>	<u>\$3,150</u>	<u>\$2,544</u>	<u>\$463</u>
Profit	4.2	4.2	5.0	4.5

Notes:

1. Sales in millions of dollars.
2. Profit as percent of sales.

(For further details see schs. 11 and 12.)

Comparison of actual profit rates with
going-in profit rates for DOD contracts
for 74 large DOD contractors

The actual rates of profit reported by the DOD contractors for FPI contracts and for FFP negotiated contracts were substantially below the average going-in profit rates DOD has reported in recent years for these types of contracts. "Going in" rates are rates anticipated at the time of contract award and are based on estimated costs.

Following are the actual profit rates reported by contractors as a percent of sales compared with the average going-in profit rates DOD reported for the years 1966 through 1969 for the major types of negotiated DOD contracts. Since the actual profit rates are after deduction of all costs, we have added to the actual rates a percentage estimated to cover costs unallowable under DOD negotiated contracts as provided in section 15 of the Armed Services Procurement Regulations. Until June 30, 1970, it was not mandatory to apply section 15 in negotiating FPI and FFP negotiated contracts. For the purpose of this comparison, however, we assumed the provisions were applied to all negotiated contracts. The 1.4 percent adjustment that we added was developed during our review of individual contracts discussed in chapter 5 of this report.

Profit as a percent of sales					
Negotiated contract type	Average actual profit	Estimated adjustment for unallowable cost	Adjusted actual profit	Average DOD going-in rate	Actual rate under going-in rate
CPFF	4.4	1.4	5.8	6.3	-0.5
CPIF	5.3	1.4	6.7	7.0	-0.3
FPI	3.9	1.4	5.3	9.2	-3.9
FFP	5.3	1.4	6.7	9.8	-3.1

The small differences in the cost-type contracts are not significant and are probably due, in large part, to unallowable cost exceeding our estimated figure of 1.4 percent or to cost incurred above that on which the fee was based. The reductions in actual profit rates compared with going-in profit rates for the FFP and FPI types of contracts are significant.

We also recomputed the overall profits and rates of return, reported by the 74 large DOD contractors, on the basis of what they would have been if the contractors had realized the going-in profit rates on the prime contracts shown above. Following is a comparison of the results. The average actual commercial rates of profit of the 74 contractors are also included for comparison.

	<u>Profits</u>		
	<u>DOD</u>		<u>Commercial</u>
	<u>Actual</u>	<u>Revised</u>	
Profit as a percent of sales	4.3	6.3	9.9
Profit as a percent of total capital investment	11.2	15.8	14.0
Profit as a percent of equity capital investment	21.1	31.1	22.9

Profit data by product category

Most of the 74 large DOD contractors sell more than one product line to the Government, and many diversified companies sell a great variety of products. The sales and profit data we obtained from contractors were not broken down by product category. In analyzing contract awards to the 74 large DOD contractors, however, we noted that some had received a preponderance of their awards in one of two product categories: (1) ammunition and (2) aircraft, missile, and space work. Profit data for these contractors are discussed below.

Ammunition contractors

We identified nine major DOD contractors whose contract awards for ammunition averaged more than 80 percent of their total annual DOD contract awards for the period 1966 through 1969. These contractors accounted for about 24 percent of the total DOD contract awards for this commodity. Their total annual DOD sales averaged \$700 million a year for all products. The award and sales figures are not comparable, however, since there is a production time lag and since the sales figures, although primarily for ammunition, include some sales of other products. These contractors produce ammunition components, and the sales data presented here do not include any data relating to operation of GOCO ammunition load, assembly, and pack plants or other GOCO plants where the contractors were paid fees for operating the plants.

Average profit, as a percent of sales, for these nine contractors was about the same for their defense business and for their commercial business (10.3 percent and 10.1 percent, respectively). Profit as a percent of TCI and as a percent of ECI was considerably higher on defense business than on comparable commercial business. As shown on page 28, these nine contractors also had profits on their defense business that were substantially higher than the average profit for the balance of our total group of 74 large DOD contractors after the nine ammunition contractors and 12 aircraft missile and space contractors were excluded.

Aircraft, missile and space contractors

We identified 12 other major DOD contractors whose contract awards for aircraft, missile or space work averaged more than 80 percent of their total annual DOD contract awards for the period 1966 through 1969. Contract awards to these companies accounted for more than 55 percent of the total DOD contract awards for this product grouping during the years covered by our study. Their total annual average DOD sales amounted to over \$9 billion per year for all products.

The average profit on sales to DOD for these 12 contractors was the same as the average profit for the major DOD contractors--4.3 percent. However, the average 12.9 percent rate of return on TCI related to sales to DOD by these 12 contractors was about 34 percent higher than the average 9.6 percent for the 53 other major DOD contractors. This indicated that these 12 contractors had more Government financing than the average contractor in the total group. These 12 contractors had a rate of return on their defense business considerably better than on their commercial business. The following table presents comparative profit data for the nine ammunition contractors; the 12 aircraft, missile, and space contractors; and the 53 other large defense contractors. The data presented represents weighted average data for the 4 years, 1966 through 1969.

	Contractor groups		
	Ammunition	Aircraft, missile, and space	53 other large DOD contractors
Sales (in billions)			
DOD	\$.7	\$ 9.1	\$13.9
Other defense agencies	-	1.8	1.5
Commercial	1.9	9.0	55.9
Profit as percent of sales:			
DOD	10.3	4.3	4.0
Other defense agencies	-	5.0	4.8
Commercial	10.1	6.6	10.4
Profit as percent of TCI:			
DOD	28.3	12.9	9.6
Other defense agencies	-	20.8	11.5
Commercial	11.5	10.0	14.8
Profit as percent of ECI:			
DOD	54.4	28.0	16.9
Other defense agencies	-	43.2	19.3
Commercial	19.2	17.8	23.8
Total TCI turnover rate:			
DOD	2.6	2.7	2.0
Other defense agencies	-	4.0	2.1
Commercial	1.0	1.3	1.3
ECI turnover rate:			
DOD	5.3	6.5	4.2
Other defense agencies	-	8.7	4.0
Commercial	1.9	2.7	2.3

(For further details see schs. 13 and 14.)

Profit data for GOCO plants and
service contracts of 80 large DOD contractors

We obtained separate data pertaining to the operation of GOCO plants, contracts for operation and/or maintenance of Government facilities, and service contracts for DOD and the other defense agencies (NASA and AEC). The characteristic common to these contracts is that they require little or no investment of contractor capital. If we included data on these contracts, our overall profit data would be distorted.

Of the 80 large DOD contractors, six reported all, or practically all, their defense business in GOCO-type sales, and 38 others reported some sales of this type to DOD or other defense agencies. The volume of GOCO business reported was about 2-1/2 times greater for DOD than for the other defense agencies (\$2.1 billion and \$0.8 billion, respectively). The profit on sales for the other defense agency business was about 32 percent higher than for DOD business (4.1 percent and 3.1 percent, respectively).

The difference in profit between DOD and the other defense agencies on GOCO sales may be explained, in part, by the nature of the work performed. The bulk of GOCO sales to DOD were for the operation of Government-owned ammunition plants and to NASA were largely for technical services. GOCO sales to AEC were divided between support services and GOCO plant operations. Cost-type contracts were the contracts most widely used by both DOD and other defense agencies for this work.

(For further details see sch. 15.)

CHAPTER 3

ANNUAL PROFIT DATA OF SELECTED

DEFENSE SUBCONTRACTORS

Data were obtained from 10 companies that perform about 80 percent of their defense work under subcontracts and only about 20 percent under prime contracts. Generally speaking, defense sales of these companies were for raw or semifinished materials rather than completed end products. Defense work accounted for about 9 percent of their sales; commercial work accounted for 91 percent. Their sales to other defense agencies were relatively insignificant.

The 10 companies, which we will refer to as subcontractors, earned a higher profit on sales (7.1 percent) on defense business than the 74 large DOD contractors earned (4.3 percent). The subcontractors, however, had a lower rate of return on total capital and equity capital assigned to both defense and commercial production than the major defense contractors. This was caused by the fact that the majority of these contractors provided raw materials to prime contractors and were reimbursed upon delivery of their products. Thus, their progress payments were relatively minor and they had very little in the way of Government-owned facilities. The relatively small amount of Government capital they had, however, resulted in a higher rate of return on their investment for defense work as compared with their commercial work. Their capital turnover rates were lower than those of the 74 large defense contractors but were higher for defense work than for commercial work.

<u>Average 4 years 1966-69</u>	<u>10 major defense subcontractors</u>	<u>74 large defense contractors</u>
Profit as percent of sales:		
DOD	7.1	4.3
Commercial	7.5	9.9
Profit as percent of TCI:		
DOD	9.4	11.2
Commercial	7.8	14.0
Profit as percent of ECI:		
DOD	15.4	21.1
Commercial	12.2	22.9
Turnover of TCI (Sales/TCI):		
DOD	1.1	2.3
Commercial	0.9	1.3
Turnover of ECI (Sales/ECI):		
DOD	2.2	4.9
Commercial	1.6	2.3

(For further details, see schs. 1 and 16.)

CHAPTER 4

ANNUAL PROFIT DATA OF SMALLER

DEFENSE CONTRACTORS

As discussed earlier in this report, our sample of smaller defense contractors represents a random selection of 61 defense contractors, exclusive of the 74 large DOD contractors, 10 subcontractors, and six GOCO contractors separately covered. The data presented should not be considered representative of all such contractors because over 180,000 procurement actions of \$10,000 or more were negotiated by DOD in each year covered by our study for hundreds of thousands of different items. The large sampling necessary to get representative profit data for the great number of industries involved precluded our attempting it in this study. Further, we felt that the cost was not justified since we had accounted for almost 60 percent of the DOD procurement dollars through our coverage of 80 of the largest DOD contractors.

The 61 smaller contractors were considered commercially oriented because only about 5 percent of their sales were to DOD. Their average profit rate on sales to DOD of 4 percent was 40 percent of the average profit rate they earned on commercial sales. It was, however, only slightly below the 4.3-percent profit rate on sales earned by the 74 major DOD contractors.

The rates of return on TCI and ECI on DOD sales for these contractors were less than rates they earned on commercial sales and the rates earned by 74 large DOD contractors on DOD sales. The fact that the capital turnover rates of these contractors for their DOD business were not much more than their rates for commercial sales indicates that they received little Government capital.

Following is a summary of profit data, before Federal income taxes, for the 61 smaller contractors compared with similar data for the larger contractors.

	<u>4-year averages</u>	
	<u>61 smaller</u>	<u>74 large</u>
	<u>contractors</u>	<u>contractors</u>
Sales (in billions of dollars):		
DOD	\$ 0.7	\$23.7
Other defense agencies	.2	3.3
Commercial	<u>11.8</u>	<u>66.8</u>
Total	<u>\$12.7</u>	<u>\$93.8</u>
Profit as percent of sales:		
DOD	4.0	4.3
Other defense agencies	2.7	4.9
Commercial	10.0	9.9
Profit as percent of TCI:		
DOD	7.3	11.2
Other defense agencies	5.8	15.0
Commercial	13.0	14.0
Profit as percent of ECI:		
DOD	10.6	21.1
Other defense agencies	8.0	27.5
Commercial	20.9	22.9
TCI turnover (Sales/TCI):		
DOD	1.4	2.3
Other defense agencies	1.6	2.8
Commercial	1.2	1.3
ECI turnover (Sales/ECI):		
DOD	2.7	4.9
Other defense agencies	3.0	5.6
Commercial	2.1	2.3

(For further details, see schs. 17 and 1.)

CHAPTER 5

NEED TO CONSIDER CONTRACTORS' CAPITAL REQUIREMENTS

IN NEGOTIATING PROFIT FACTORS

Although not called for specifically in the legislation, we reviewed 146 negotiated Government contracts. We found that contractors' rates of return on capital employed in contract performance varied greatly. These contract rates varied from a loss of 78 percent to a profit of 240 percent of total capital investment. This wide range is due, to some degree, to the fact that, under present policies, Government procurement personnel give little consideration to contractors' capital requirements in developing profit rate objectives for negotiated contracts. Profit objectives are usually developed as percentages of various cost elements. Further, by relating profits to costs in noncompetitive situations, the higher the costs the higher the profits. Thus, in many cases, contractors are not provided with a positive incentive to invest in more efficient facilities because an investment in facilities that would lower unit costs would also result in lower profits.

In reviewing congressional hearings which led to this study, we noted some concern that contractor capital requirements were not considered in negotiating defense contract prices. To determine whether it was practical to develop investment data by contract and to see if there was a wide range in profits as a percent of invested capital, we selected 146 negotiated contracts for review at 37 contractor locations. The contracts totaled about \$4.3 billion in expenditures for such items as aircraft, missiles, space equipment, ship repairs, weapons, ammunition, electronics, and communications equipment. Contract types involved were those commonly used by DOD: CPFF, CPIF, FPI, and FFP contracts. Our selection was limited to recently completed negotiated contracts and was made without regard to profitability.

The selection of locations for contract reviews was made primarily from the top 80 defense contractors after considering such factors as significance of dollar value of awards and types of products being furnished. Consideration

was also given to obtaining coverage of some awards of each of the defense agencies. Certain contractors were excluded whose work was predominantly of a maintenance or service nature rather than manufacturing. Also, we excluded GOCO plant activities.

We computed profit as a percentage of sales and of costs for each contract. We also computed profit as a percentage of the contractor's capital employed in contract performance. We excluded consideration of Government-furnished capital and leased assets as we were interested in the rate of return on resources provided by the contractor. Our computation of total capital employed included provision for the following asset elements.

1. Cost of work in process, finished goods, and accounts receivable--On a monthly basis, we totaled costs incurred under the contract, deducting progress payments and cost or other reimbursements received from the Government. From these data, we computed the average amount the contractor had invested in work in process, finished goods, and accounts receivable.
2. Investment in fixed assets (including land)--In developing the contractor's average investment in fixed assets for the contract, we generally determined (1) depreciation charged to the contract and (2) the ratio between depreciation charged to the contract and total depreciation charges during the contract period. Using this ratio, we computed the approximate fixed-asset investment. We based the investment allocation on the contractor's net book value of assets.
3. Other assets--We used several methods to allocate assets such as cash, raw materials inventories, and prepaid expenses. For example, in some cases, investment in raw materials inventories was allocated by using the ratio of the value of material issued to the contract to total material issued during the period involved. Prepaid expenses were allocated in the same proportion as other more directly allocable items.

The assets discussed above were financed on an overall basis by current liabilities, long-term debt, and equity capital. We refer to this overall investment in assets as total capital invested (TCI). In computing rate of return on TCI, we added interest expense to net profit, since interest represents the return to the providers of debt capital.

After determining average contract TCI and computing the rate of annual profit, we computed the approximate contract ECI. This was done on the basis of the overall corporate relationship of equity capital to the total liabilities and capital. The rate of return on equity capital was based on net contract income before Federal income taxes but after deducting all contractor expenses allocable to the contract, including interest expense.

RATES OF PROFIT ON 146 CONTRACTS

Overall rates of return, before Federal income taxes, and other data on the 146 contracts follow.

Total value of contracts	\$ 4.3 billion
Profit as a percent of costs	6.9 ^a
Annual rate of return on total capital	28.3% ^a
" " " " " equity "	56.1% ^a

^aPercentages weighted by costs, TCI, or ECI, as appropriate.

The great range in return on TCI is shown in the following schedule of the average rates we developed for the 146 contracts.

<u>Return on TCI</u>	<u>Number of contracts</u>	<u>Percent of total</u>	
		<u>Contracts</u>	<u>Sales</u>
Loss contracts:			
78% to 0%	17	12	8.2
Return of:			
0.1% to 20%	46	32	17.7
20.1 to 40	43	29	23.1
40.1 to 60	19	13	16.2
60.1 to 80	9	6	27.2
80.1 to 100	4	3	1.9
100.1 to 240	<u>8</u>	<u>5</u>	<u>5.7</u>
Total	<u>146</u>	<u>100</u>	<u>100.0</u>

The range in profits is also indicated by the fact that the contractor who made 240 percent on his TCI on one contract suffered losses of about 14 percent and 25 percent of TCI on two other contracts we reviewed. This contractor had an overall loss on TCI of 4 percent on all contracts that we reviewed.

The average rates of return for individual contracts were substantially higher than the average annual profit rates developed from our questionnaires to 74 large DOD contractors. The 146 contracts examined cannot be considered as a representative sample, and it would have been pure

coincidence if similar rates had resulted in both phases of our study. The differences between the two were:

- The large number of DOD procurement actions, over 180,000 a year of \$10,000 or more, covering a large number of different items and industries involved and the work required to develop data for each made it impracticable to attempt to develop a representative sample.
- The data furnished by contractors in response to our questionnaire were on overall defense business not on an individual-contract basis.
- We considered only completed contracts where profits or losses were ascertainable and, as a result, probably avoided many loss contracts having large unsettled claims.

This phase of the study was not for the purpose of validating the profits as reported by the contractors in replying to the questionnaire. This was done, to the extent possible, by site verification of 40 questionnaires selected at random, as discussed earlier in this report. Our purpose was to determine (1) whether it was practicable to develop cost, profit, and invested capital data by contract and (2) whether any wide range in profits on DOD work existed. The work showed that cost, profit, and invested capital data could be developed by contract and that there was a wide range of profit rates on DOD contracts.

EFFECT OF GOVERNMENT PROGRESS PAYMENTS
ON INVESTMENT RETURN

Government progress payments significantly reduce the need for contractor capital.

Under defense contracts, there are usually provisions for reimbursing contractors periodically in whole or in part as costs are incurred. This reduces the working capital required for contract performance. Cost contracts generally provide for reimbursement of costs on a monthly or more frequent basis. Other types of defense contracts, involving predelivery or unbillable partial performance expenditures that will have material impact on the contractors' working capital, provide for periodic progress payments of 85 percent of total costs incurred for small business concerns and 80 percent for larger companies.

For 12 contracts involving eight different contractors, we computed the rates of return on TCI with progress payments and without progress payments. In all cases, the rates of return were substantially higher when progress payments were received. The overall average increase, weighted for TCI required for each contract, is shown below.

Annual rate of return on TCI with progress payments	45.3%
Annual rate of return on TCI if progress payments had not been received	<u>25.1%</u>
Increase in rate of return due to progress payments	<u>20.2%</u>

The increase in rate of return ($20.2\% \div 25.1\%$) because of the progress payments was 80 percent.

In one case, we noted that a contractor was selling the same item under a Government prime contract and under a subcontract. The Government, however, provided progress payments under the prime contract whereas the contractor did not receive progress payments from the prime contractor under the subcontract. Also, the Government paid for deliveries within an average of 29 days whereas the

subcontractor did not receive payments for deliveries under the subcontract until an average of 131 days after delivery.

Although this case is probably not representative, it does demonstrate the effect of progress payments and the time difference in payment for deliveries.

	<u>Prime contract</u>	<u>Subcontract</u>	<u>Difference</u>
	—————(percent)—————		
Profit rate on costs, over or short (-)	10.9	14.2	-3.3
Annual return on TCI	29.7	16.6	13.1
" " " ECI	49.4	27.5	21.9

Return on TCI on the prime contract was substantially more than on the subcontract because of progress payments and more timely payments after delivery of the items ordered, even though profit as a percent of cost was 3.3 percent higher under the subcontract.

Government-furnished facilities, of course, have a similar effect in reducing the capital investment required of contractors.

GUIDELINES FOR DEVELOPMENT OF NEGOTIATED
CONTRACT PROFIT OBJECTIVES

Guidelines used by DOD procurement officials to develop profit objectives are set forth in section 3-808 of the Armed Services Procurement Regulation (ASPR). In the absence of price competition and where analysis of the contractor's proposed costs is required, a procedure known as the weighted guidelines method is used. Using this method, procurement officials prepare a systematic analysis of profit objectives before they begin negotiations. The factors and weights considered in developing the profit objective are:

<u>Factors</u>	Profit range (note a)	x	Estimate <u>cost</u>	=	Profit
Contractor's Input to Total Performance:					
Direct materials:					
Purchased parts	1% to 4%	x		=	
Subcontracted items	1 to 5	x		=	
Other materials	1 to 4	x		=	
Engineering labor	9 to 15	x		=	
" overhead	6 to 9	x		=	
Manufacturing labor	5 to 9	x		=	
" overhead	4 to 7	x		=	
General and administrative expense	6 to 8	x		=	
				=	
Total				=	

Composite Rate on Cost Input (profit computed above divided by total estimated cost shown above)

<u>Factors</u>	Profit range (note a)	<u>Profit</u>
		(percent)
ADD: Specific percentages assigned below:		
Contractor's Assumption of Contract Cost Risk:		0 to +7
By type of contract:		
CPFF	0 to 1	
CPIF (cost incentive)	1 to 2	
CPIF (cost-performance-delivery)	1-1/2 to 3	
FPI (cost incentive)	2 to 4	
FPI (cost-performance-delivery)	3 to 5	
Prospective price redetermination	4 to 5	
FFP	5 to 7	
Reasonableness of cost estimates	(a)	
Difficulty of task	(a)	
Record of Contractor's Performance;		-2 to +2
Considerations:		
1. Management	(a)	
2. Cost efficiency	(a)	
3. Reliability of cost estimates	(a)	
4. Cost reduction program accomplish- ments	(a)	
5. Value engineering accomplishments	(a)	
6. Timely deliveries	(a)	
7. Quality of product	(a)	
8. Inventive and development contri- butions	(a)	
9. Small business and labor surplus area participation	(a)	
Selected Factors:		-2 to +2
Source of resources	-2 to 0	
Special achievement	0 to +2	
Other	(a)	
Special Profit Consideration		<u>+1 to +4</u>
Total profit rate		=====
Profit Objective (total profit rate x total recognized costs)		\$=====

^aNS--No specific weight range designated.

As shown above, there is no provision to consider the amount of contractor capital investment required during contract performance. Further, only minor consideration is given to the use of Government-owned facilities under the source of resources factor. This could amount to a penalty of as much as minus 2 percent for a contractor with Government facilities. We have found, however, that the penalty assessed usually has not exceeded 1 percent, even where all

facilities were Government owned. In the case of a contractor having no Government facilities, there is no provision for increasing his profit percentage to compensate him for adding privately owned facilities. In fact, since the acquisition of improved facilities should result in reduced costs, his profits on negotiated follow-on contracts would probably be reduced if such facilities were added.

ASPR states that normal progress payments shall not be weighted in developing profit objectives.

The other agencies included in our profit study generally follow profit negotiation policies similar to those of the Department of Defense. In fact, the Coast Guard uses the Department of Defense weighted guidelines to negotiate some contracts. Although NASA has not adopted the weighted guidelines method, NASA's procurement regulation calls for consideration of essentially the same profit factors covered in the guidelines. AEC provides in its procurement guidelines that contractor investment will be considered in determining profit objectives and has developed maximum fee curves which are based, in part, upon invested capital. There are, however, no formalized procedures for development and consideration of invested capital in negotiating individual contracts.

STUDIES AND REPORTS CONCERNING CONSIDERATION
OF CONTRACTOR-INVESTED CAPITAL REQUIRED
TO FULFILL GOVERNMENT CONTRACTS

Several studies have been made which conclude that some consideration should be given to contractor-invested capital requirements when negotiating the profit factor of noncompetitive Government contracts. These studies are summarized below.

Contractor incentives for acquiring private facilities

A study was completed by the Logistics Management Institute in September 1967 at the request of the Assistant Secretary of Defense (Installations and Logistics). Its objective was to develop and propose ways of improving the incentives for contractors to acquire and maintain efficient facilities. Some significant parts of the study are quoted below.

"Facility investments, soundly made, generally reduce total contract costs. Under the present ASPR, however, facilities investment tends to lower rather than increase profit dollars on negotiated contracts. Lower profits result from lower estimated costs for labor, materials, and overhead. This is the most significant deficiency in the incentives for defense contractors to acquire facilities."

"The acquisition of facilities that increase efficiency may affect the ability to obtain a contract. Under the present rules, however, if a contractor can get the business without additional facilities investment, he can expect more dollars, and a higher percentage of profit on invested capital by refraining from investment as much as possible and allowing or causing expected costs to be as high as will be acceptable."

"Other things being equal, a modern efficient plant can be expected to have lower labor and material costs than one with less up-to-date facilities. Therefore, the present Guidelines applied on individual contract negotiation tend to

establish a lower dollar profit objective for an efficient plant with a large investment in facilities than it would for a less efficient plant producing the same output."

"Most of the contractors stated frankly that they invest as little capital as possible in facilities for production on negotiated contracts in order to avoid reducing their return on invested capital. Since more than half of the defense procurement dollars are spent on contracts negotiated on the basis of cost analysis, it would appear that a change in profit policy giving greater consideration to invested capital would be equitable for defense industry and beneficial to the Department of Defense."

One of several recommendations made in the report was as follows:

"Percentages of profit on net book value of plant and operating capital (equity plus debt less facilities and outside investments) should be included in the Weighted Guidelines for determining profit objectives. The present percentages on labor, material and overhead costs and the percentages to be applied to the capital elements should be adjusted as necessary to accomplish overall DOD profit objective policies."

Prior GAO report on increased costs due to lease rather than purchase of fixed assets by contractors

In November 1967, GAO issued a draft report entitled "Effect on Cost to the Government of the Leasing of Land and Buildings by Contractors, Department of Defense" (B-156818).

The report concluded that contractors' decisions to lease land and buildings result in greater cost to the Government than if facilities were purchased. Defense policies do not offer an inducement to contractors to purchase facilities as opposed to leasing them. Defense and industry representatives should study possible methods of acquisition which would be most advantageous to industry and most economical to the Government.

We recommended that (1) DOD consider modifying the weighted guidelines profit factors to distinguish between contractors who purchase facilities and contractors who lease them and (2) Defense policies provide contractors with a financial incentive to acquire facilities in a manner which would be least costly to the Government.

Subsequently, the Department of Defense revised ASPR to provide that rental costs under long-term leases would be allowable only up to the amount that the contractor would be allowed had he purchased the building, unless the contractor could demonstrate that the leasing costs would result in less cost to the Government over the anticipated life of the property.

ASPR Special Subcommittee Report

A special subcommittee was established in December 1967 by the ASPR Committee to consider the Logistics Management Institute recommendation. The ASPR Committee is part of the Office of the Assistant Secretary of Defense (Installations and Logistics) and is responsible for developing any needed amendments to ASPR. The Special Subcommittee was given a specific task to (1) develop and test procedures for giving greater weight in prenegotiation profit objectives to capital employed, (2) evaluate the results of the test, and (3) if appropriate, recommend any needed changes to ASPR.

The Subcommittee issued a report, in March 1968, presenting a test plan and procedures for developing information on contractor capital employed in contract performance. After further study, in October 1968, the proposal was presented to a panel of the Defense Industry Advisory Council which was chartered to explore ways and means for fostering a healthy defense industrial base. (The Defense Industry Advisory Council was established in 1962 to provide a means for direct and regular contact between the Secretary of Defense and his assistants and industry representatives.)

Subsequently, in June 1969, the Defense Industry Advisory Council recommended to the Secretary of Defense that, in addition to costs, DOD profit policy should recognize and provide for adequate return on company capital employed. Since then progress has been slow. However, a new ASPR Subcommittee has been established and in October 1970 the subcommittee distributed for comment draft forms for gathering preliminary data.

In regard to DOD progress in this area, Dr. Robert N. Anthony, a former DOD comptroller, appearing before the Subcommittee on Economy in Government of the Joint Economic Committee on May 21, 1970, stated:

"Fees are based on capital employed in public utilities and in public rate negotiations generally. Defense procurement is one of the few important areas where cost-based pricing still prevails. In Great Britain, Defense contract pricing recently was shifted to a return-on-capital basis. The possibility has been discussed in the Department of Defense at least since 1962. It is time to act."

NASA report on an investment-oriented
profit analysis technique

NASA has developed a contract negotiation procedure that includes consideration of contractor investment required during contract performance. The procedure was developed in 1968 by George Washington University and presented to NASA procurement personnel during a 3-day course in profit and fee analysis. NASA then decided to conduct a test of the new procedure. Each NASA procurement office was asked to furnish data on new procurements over \$100,000, outlining the profit negotiated. In addition, the negotiators were asked to furnish an estimated profit objective using the return on investment analysis technique. The latter was not to be used, however, in actual contract negotiations.

NASA awarded a contract to George Washington University to monitor the test and to evaluate data. On June 29, 1970, we received a copy of an interim report on the test which concluded that (1) it was feasible to develop the requisite investment data from contractors and (2) NASA personnel were able to employ the new technique under operational conditions for research and development and hardware contracts. NASA cautioned, however, that the wisdom and practicableness of using a return on investment approach to determine profit compensation was still being explored and that NASA was not prepared, at the time, to endorse any particular return on investment technique.

The NASA and DOD proposed procedures for developing invested capital data differ. For example, to compute operating capital used, DOD uses accounting data from the most recent fiscal year in computing the estimated operating capital required for a new contract. In contrast, NASA uses a monthly forecast of the estimated costs to be incurred, less progress payments, during performance of the new contract.

BRITISH CONSIDER CAPITAL USED IN NEGOTIATING PROFIT ON NONCOMPETITIVE GOVERNMENT CONTRACTS

The relationships between Government and industry are not the same in the United Kingdom as in the United States. It is of interest to note, however, that capital used has been considered for some time in negotiating profit rates for noncompetitive Government contracts. Their objective is to provide a rate of return on noncompetitive Government work that approximates the overall average return earned by British industry in the years 1960 to 1966.

Recently the British system was revised to provide that contracts involving an excessive realized profit or loss may be referred to a review board. The findings of the board are binding to both parties. It is still too early to determine how well the system will operate.

USE OF RETURN ON INVESTED CAPITAL IN RENEGOTIATION

Capital employed is one of the factors specified in the Renegotiation Act to be taken into consideration in determining excessive profits. In view of the differences we found in proportionate amounts of contractor capital allocated to defense and commercial business, we met with Renegotiation Board representative to discuss this matter. Board representatives told us that capital allocations were made, for the most part, on a cost-of-sales basis. In a few instances, the Board had requested allocations from contractors on the basis of the extent that assets were used on defense work but had not been very successful in obtaining them.

In view of our findings, Board representatives said that further consideration would be given to obtaining better contractor capital allocations for defense work when Government resources were furnished.

CHAPTER 6

CONTRACTOR ASSOCIATION COMMENTS

Comments were requested from five contractor associations on a draft of this report that was based on incomplete data. Two of the associations agreed with the conclusion that investment should be considered in determining profits; however, they and two other associations stated that the report grossly overemphasized the rate of return on investment and reflected a preoccupation with the need to consider contractors' capital requirements in negotiating profit factors. The fifth association did not furnish any comments on this point.

We agree that there are other factors that must be considered in negotiating contract profit rates. Such factors as the contractors' assumption of cost risk, difficulty of the task, and other management and performance factors must be evaluated and considered. In some cases, such as a GOCO plant, little or no contractor investment is involved, whereas in others the entire investment required for contract performance is provided by the contractor. Where the investment required from the contractor is insignificant, the other factors naturally would be the determining items in establishing profit objectives. In still other cases, however, to the degree that contractor capital is required, it should be considered.

Two of the contractor associations questioned GAO statements that contractors have little incentive to invest in more modern equipment to reduce costs relating to many negotiated procurements. The associations stated that GAO had failed to consider and recognize the "real world" competitive environment of today's defense business.

For competitive and other reasons, contractors make some investments in facilities and equipment for performance of negotiated defense contracts. Actually, however, little price competition is involved in much of the DOD procurement. For example, of the total dollar value of DOD procurement for fiscal year 1970, only 11 percent was formally advertised and an additional 27 percent was negotiated on the

basis of price competition. A total of 57 percent was placed on a sole-source basis, and the remaining 5 percent involved design or technical competition.

There is, of course, some incentive to reduce costs on negotiated firm fixed-price and fixed-price incentive contracts even if they are sole-source contracts. Such reductions in cost, however, could reduce profits on subsequent defense contracts. Such contracts would be priced on the basis of prior cost experience to a large extent, and the profits would be determined as a percentage of estimated costs.

The contractor associations almost unanimously questioned our data for the 146 individual contracts and stated that they felt that either there was an unfortunate selection of contracts involved or there were flaws in the method of ascertaining capital invested in such contracts.

For reasons stated earlier in this report, GAO agrees that no attempt was made to obtain a sample representative of all defense contracts. GAO was interested in determining (1) whether it was feasible to develop cost, profit, and invested capital data by contract and (2) if so, the range of the rate of return on invested capital realized for individual contracts. We believe that it is feasible to develop the desired data for most contracts, and we found that there was a great range in rates of return on investment for individual contracts.

In each case of developing data for individual contracts, we presented our data to the contractors involved and gave them an opportunity for review and comment. We carefully considered the comments received and believe that the final data are reasonably accurate. The number of cases involving factual disagreements was relatively small.

CHAPTER 7

AGENCY COMMENTS

We provided a preliminary draft of this report to AEC, DOD, DOT, and NASA for review and comment.

All the agencies agreed that due consideration should be given to the TCI of contractors in negotiating Government contracts which do not involve price competition. DOD pointed out, however, that the solution of highly complex administrative problems was required before the policy could be put into effect. Also, AEC believes that there is no need for a uniform Government-wide fee policy stressing consideration of invested capital and feels that the development of detailed uniform guidelines could have a serious, disruptive effect on the existing overall fee policies of the various executive agencies.

We agree that there are serious administrative problems in providing for consideration of contractor TCI related to a particular contract in negotiating contract profit rates. DOD has been considering this matter since 1962 and we believe that it is time to move ahead.

We agree also that there are many advantages to permitting agencies to tailor their policies to their individual needs. Many companies, however, deal with numerous Government agencies. We believe that, where feasible, uniform policies should be established governing the relations between Government and industry. We believe further that it seems feasible and desirable to establish uniform Government-wide guidelines for establishing profit objectives for negotiating Government contracts where effective price competition is lacking.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATION

CONCLUSIONS

Profit measured as a percent of sales was significantly lower on defense work than on comparable commercial work for the 74 large DOD contractors included in our study. However, when we measured profit as a percent of the contractors' TCI used in generating the sales, the difference narrowed. Further, when we measured profit as a percent of ECI of the stockholders, we found very little difference in the rate of return for defense and commercial work.

The major factor involved in making the rates of return on contractor capital investment for defense and commercial work similar was the substantial amount of capital provided by the Government in the form of progress payments, cost reimbursements, equipment, and facilities. Government resources, of course, reduce the capital investment required of the contractor for defense work.

The 10 large companies that do the bulk of their defense business in the form of subcontracts earned a considerably higher rate of profit on defense sales than the 74 large DOD contractors. When profit was measured as a percent of TCI and of ECI, however, the subcontractors had a lower average rate of return than the 74 large DOD contractors. The subcontractors did realize a higher rate of return on capital for defense work than on their comparable commercial work. In our opinion, this was due to the effect of Government-furnished capital, even though the subcontractors have use of relatively fewer Government resources than the 74 large DOD contractors.

Under current defense contract negotiation procedures, little consideration is given to the amount of capital investment required from the contractor for contract performance. Instead, profit objectives are developed as a percentage of the anticipated costs of material, labor, and overhead. As a result, inequities can and do arise among contractors providing differing proportions of the capital

required for contract performance. Also, by relating profits to costs, contractors have little incentive to make investments in equipment which would increase efficiency and reduce costs. Such investments tend to lower rather than increase profits in the long run. Of course, other factors, such as whether or not the program will be continued, could be an overriding consideration in bringing about contractor investments to reduce costs.

We believe that it is essential to change the present system in order to motivate contractors to reduce costs under Government noncompetitive negotiated contracts. Where the acquisition of more efficient facilities by contractors will result in savings to the Government in the form of lower contract costs, contractors should be encouraged to make such investments. Proper consideration of contractor provided capital can cause a greater reliance on private capital to support defense production. To accomplish this, it is essential that capital investment be substituted for estimated costs as a basis for negotiating profit rates. We realize that other factors are also important, such as the specificity and life expectancy of a Government program. Most important, the present strong incentive for contractors to minimize their investments for Government work should be eliminated.

We believe that, in determining profit objectives for negotiated Government contracts where (1) effective price competition is lacking and (2) the amount of contractor capital required is a significant factor, consideration should be given to total contractor capital requirements. Consideration should, of course, continue to be given to such other factors as risk, complexity of the work, and other management and performance factors. Where contractor capital requirements are insignificant, such as in many service-type contracts or contracts to operate Government-owned plants, profit objectives would continue to be developed primarily through consideration of the other factors.

In our opinion, a system providing for consideration of capital requirements in negotiating profit rates would be fairer than the present system to both contractors and the Government.

We believe also that the system adopted should be used where applicable by all Government agencies to simplify industry participation.

RECOMMENDATION

Action required to establish uniform guidelines does not require legislation. Accordingly, we recommend that the Office of Management and Budget take the lead in interagency development of uniform Government-wide guidelines for determining profit objectives for negotiating Government contracts that will emphasize consideration of the total amount of contractor capital required when appropriate where effective price competition is lacking.

SCHEDULES

SUMMARY OF FINANCIAL DATA BEFORE FEDERAL INCOME TAXES
FOR 74 LARGE DOD CONTRACTORS

Line No.	1966	1967	1968	1969	Weighted Average
<u>SALES</u> (in billions of dollars)					
1. DOD	19.1	24.1	25.8	25.8	23.7
2. Other defense agencies	4.3	3.2	3.1	2.6	3.3
3. Commercial	59.1	60.6	72.3	75.0	66.8
4. Totals	82.5	87.9	101.2	103.4	93.8
<u>PROFIT AS PERCENT OF SALES</u>					
5. DOD	4.7	4.7	4.5	3.4	4.3
6. Other defense agencies	4.6	5.0	5.1	5.0	4.9
7. Commercial	11.2	8.7	10.8	8.9	9.9
<u>PROFIT AS PERCENT OF TCI</u>					
8. DOD	11.3	12.1	11.9	9.5	11.2
9. Other defense agencies	15.8	14.7	15.5	14.0	15.0
10. Commercial	16.2	12.2	15.6	12.4	14.0
<u>PROFIT AS PERCENT OF ECI</u>					
11. DOD	21.4	22.9	22.6	17.4	21.1
12. Other defense agencies	28.7	27.1	28.9	24.8	27.5
13. Commercial	26.4	19.6	25.8	20.4	22.9
<u>TCI TURNOVER (sales/TCI)</u>					
14. DOD	2.2	2.3	2.4	2.3	2.3
15. Other defense agencies	3.2	2.7	2.8	2.5	2.8
16. Commercial	1.4	1.3	1.3	1.3	1.3
<u>ECI TURNOVER (sales/ECI)</u>					
17. DOD	4.6	4.8	5.1	5.1	4.9
18. Other defense agencies	6.3	5.5	5.7	4.9	5.6
19. Commercial	2.4	2.2	2.4	2.3	2.3

SUMMARY OF FINANCIAL DATA AFTER FEDERAL INCOME TAXES
FOR 74 LARGE DOD CONTRACTORS

Line No.	1966	1967	1968	1969	Weighted average
<u>SALES</u> (in billions of dollars)					
1. DOD	19.1	24.1	25.8	25.8	23.7
2. Other defense agencies	4.3	3.2	3.1	2.6	3.3
3. Commercial	59.1	60.6	72.3	75.0	66.8
<u>PROFIT AS PERCENT OF SALES</u>					
4. DOD	2.5	2.5	2.3	1.8	2.3
5. Other defense agencies	2.4	2.6	2.5	2.5	2.5
6. Commercial	6.0	4.9	5.6	4.6	5.3
<u>PROFIT AS PERCENT OF TCI</u>					
7. DOD	6.5	7.0	6.8	5.8	6.5
8. Other defense agencies	8.8	8.3	8.4	7.7	8.3
9. Commercial	9.1	7.3	8.5	7.0	7.9
<u>PROFIT AS PERCENT OF ECI</u>					
10. DOD	11.4	12.0	11.6	9.2	11.0
11. Other defense agencies	15.3	14.3	14.4	12.5	14.2
12. Commercial	14.3	11.1	13.4	10.5	12.2
<u>TCI TURNOVER (sales/TCI)</u>					
13. DOD	2.2	2.3	2.4	2.3	2.3
14. Other defense agencies	3.2	2.7	2.8	2.5	2.8
15. Commercial	1.4	1.3	1.3	1.3	1.3
<u>ECI TURNOVER (sales/ECI)</u>					
16. DOD	4.6	4.8	5.1	5.1	4.9
17. Other defense agencies	6.3	5.5	5.7	4.9	5.6
18. Commercial	2.4	2.2	2.4	2.3	2.3

DISTRIBUTION OF RETURN ON TCI BEFORE FEDERAL INCOME TAXES
FOR DOD SALES OF 74 LARGE DOD CONTRACTORS

Return on TCI	1966		1967		1968		1969	
	Percent of total		Percent of total		Percent of total		Percent of total	
	Con-tractors	Sales	Con-tractors	Sales	Con-tractors	Sales	Con-tractors	Sales
LOSS (%)	5.4	0.5	5.4	2.4	6.8	3.0	13.5	19.5
<u>PROFIT (%)</u>								
0.1 to 5	17.6	11.1	10.8	8.0	8.1	15.3	10.8	10.4
5.1 to 10	13.5	13.5	16.2	26.1	17.5	22.2	17.6	14.1
10.1 to 15	39.2	46.2	27.0	26.5	25.7	17.9	25.7	25.7
15.1 to 20	9.5	6.7	25.7	20.8	23.0	20.5	13.5	12.1
20.1 to 25	13.5	21.8	5.4	6.8	8.1	16.9	9.5	13.9
25.1 to 30	-	-	1.4	0.4	2.7	0.5	4.0	2.8
30.1 to 50	-	-	2.7	7.8	5.4	2.8	2.7	0.8
50.1 to 100	1.3	0.2	5.4	1.2	2.7	0.9	2.7	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total sales (billions)	\$19.1		\$24.1		\$25.8		\$25.8	
Return on TCI spread by year	-27% to +60%		-6% to +85%		-22% to +81%		-12% to +96%	
Average return on TCI	11.3%		12.1%		11.9%		9.5%	

DISTRIBUTION OF RETURN ON TCI BEFORE FEDERAL INCOME TAXES
FOR COMMERCIAL SALES OF 74 LARGE DOD CONTRACTORS

SCHEDULE 4

Return on TCI	1966		1967		1968		1969	
	Percent of total		Percent of total		Percent of total		Percent of total	
	Con-tractors	Sales	Con-tractors	Sales	Con-tractors	Sales	Con-tractors	Sales
LOSS (%)	4.0	1.0	8.1	1.8	8.1	0.8	10.8	3.0
<u>PROFIT (%)</u>								
0.1 to 5	4.0	0.2	9.5	20.4	5.4	6.2	12.2	16.5
5.1 to 10	9.5	14.6	12.2	5.9	13.5	7.3	16.2	8.4
10.1 to 15	35.1	33.7	36.5	40.0	37.8	26.3	31.1	42.2
15.1 to 20	16.2	21.1	18.9	6.9	17.6	42.8	14.9	14.8
20.1 to 25	16.2	20.1	6.8	16.6	6.8	2.9	5.4	6.2
25.1 to 30	6.8	5.6	4.0	5.3	5.4	5.0	5.4	6.0
30.1 to 50	6.8	3.7	4.0	3.1	5.4	8.7	4.0	2.9
50.1 to 100	1.4	-	-	-	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total sales (billions)	\$59.0		\$60.6		\$72.3		\$75.0	
Return on TCI spread by year	-16% to +61%		-27% to +44%		-50% to +46%		-33% to +39%	
Average return on TCI	16.2%		12.2%		15.6%		12.4%	

SALES BY CATEGORY FOR 74 LARGE DOD CONTRACTORS

Line No.	Description	1966	1967	1968	1969	Weighted average
		(billions)				
<u>32 HIGH-VOLUME DEFENSE CONTRACTORS</u>						
1.	DOD	\$15.5	\$19.4	\$20.5	\$20.5	\$19.0
2.	Other defense agencies	3.6	2.7	2.6	2.2	2.8
3.	Commercial	23.4	25.7	29.7	31.1	27.5
4.	Total	\$42.5	\$47.8	\$52.8	\$53.8	\$49.3
<u>29 MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
5.	DOD	\$ 1.9	\$ 2.6	\$ 3.0	\$ 3.2	\$ 2.6
6.	Other defense agencies	0.2	0.1	0.1	0.1	0.1
7.	Commercial	5.8	5.9	6.7	7.5	6.5
8.	Total	\$ 7.9	\$ 8.6	\$ 9.8	\$10.8	\$ 9.2
<u>TOTALS FOR 61 HIGH- AND MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
9.	DOD	\$17.4	\$22.0	\$23.5	\$23.7	\$21.6
10.	Other defense agencies	3.8	2.8	2.7	2.3	2.9
11.	Commercial	29.1	31.7	36.4	38.6	34.0
12.	Total	\$50.3	\$56.5	\$62.6	\$64.6	\$58.5
<u>13 COMMERCIALLY ORIENTED DEFENSE CONTRACTORS</u>						
13.	DOD	\$ 1.7	\$ 2.0	\$ 2.2	\$ 2.1	\$ 2.0
14.	Other defense agencies	0.5	0.4	0.4	0.3	0.4
15.	Commercial	30.0	29.0	35.9	36.5	32.9
16.	Total	\$32.2	\$31.4	\$38.5	\$38.9	\$35.3
<u>TOTALS FOR ALL 74 CONTRACTORS</u>						
17.	DOD	\$19.1	\$24.1	\$25.8	\$25.8	\$23.7
18.	Other defense agencies	4.3	3.2	3.1	2.6	3.3
19.	Commercial	59.1	60.6	72.3	75.0	66.8
20.	Total	\$82.5	\$87.9	\$101.2	\$103.4	\$93.8

Some columns do not add due to rounding.

PROFIT ON SALES BEFORE FEDERAL INCOME TAXES
FOR VARIOUS CATEGORIES OF LARGE DEFENSE CONTRACTORS

Line No.	Description	1966	1967	1968	1969	Weighted average
<u>32 HIGH-VOLUME DEFENSE CONTRACTORS</u>						
1.	DOD	4.6%	4.4%	3.8%	2.6%	3.8%
2.	Other defense agencies	4.5	4.6	4.6	3.9	4.4
3.	Commercial	9.2	7.8	8.4	7.5	8.2
4.	Total	7.1	6.2	6.5	5.5	6.3
<u>29 MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
5.	DOD	2.7	6.0	7.6	6.9	6.1
6.	Other defense agencies	0.3	2.7	8.0	6.7	3.7
7.	Commercial	10.5	8.6	8.3	7.5	8.6
8.	Total	8.4	7.7	8.1	7.3	7.8
<u>TOTALS FOR 61 HIGH- AND MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
9.	DOD	4.4	4.6	4.3	3.2	4.1
10.	Other defense agencies	4.3	4.5	4.8	4.1	4.4
11.	Commercial	9.5	7.9	8.4	7.5	8.3
12.	Total	7.3	6.4	6.7	5.8	6.5
<u>13 COMMERCIALLY ORIENTED DEFENSE CONTRACTORS</u>						
13.	DOD	7.5	6.3	6.2	6.0	6.5
14.	Other defense agencies	6.5	8.1	7.2	11.4	8.1
15.	Commercial	12.9	9.6	13.2	10.4	11.6
16.	Total	12.5	9.4	12.7	10.2	11.2
<u>TOTALS FOR ALL 74 CONTRACTORS</u>						
17.	DOD	4.7	4.7	4.5	3.4	4.3
18.	Other defense agencies	4.6	5.0	5.1	5.0	4.9
19.	Commercial	11.2	8.7	10.8	8.9	9.9
20.	Total	9.4	7.5	9.0	7.5	8.3

RETURN ON TCI BEFORE FEDERAL INCOME TAXES
FOR VARIOUS CATEGORIES OF LARGE DEFENSE CONTRACTORS

Line No.	Description	1966	1967	1968	1969	Weighted average
<u>32 HIGH-VOLUME DEFENSE CONTRACTORS</u>						
1.	DOD	12.1%	12.3%	11.3%	8.4%	11.0%
2.	Other defense agencies	18.1	16.1	16.6	13.7	16.3
3.	Commercial	14.1	12.2	13.5	11.3	12.6
4.	Total	13.7	12.3	13.0	10.6	12.3
<u>29 MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
5.	DOD	5.6	11.9	15.0	14.2	12.2
6.	Other defense agencies	2.1	5.5	11.7	7.5	6.4
7.	Commercial	15.5	12.3	11.7	10.7	12.3
8.	Total	13.1	12.1	12.4	11.4	12.2
<u>TOTALS FOR 61 HIGH- AND MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
9.	DOD	11.1	12.3	12.0	9.4	11.2
10.	Other defense agencies	16.5	15.1	16.2	12.9	15.3
11.	Commercial	14.4	12.2	13.1	11.2	12.6
12.	Total	13.6	12.3	12.9	10.8	12.3
<u>13 COMMERCIALY ORIENTED DEFENSE CONTRACTORS</u>						
13.	DOD	12.3	10.8	11.4	10.0	11.1
14.	Other defense agencies	12.9	13.3	13.3	17.5	14.1
15.	Commercial	17.8	12.3	17.9	13.7	15.4
16.	Total	17.5	12.2	17.6	13.6	15.2
<u>TOTALS FOR ALL 74 CONTRACTORS</u>						
17.	DOD	11.3	12.1	11.9	9.5	11.2
18.	Other defense agencies	15.8	14.7	15.5	14.0	15.0
19.	Commercial	16.2	12.2	15.6	12.4	14.0
20.	Total	15.3	12.2	15.0	12.0	13.5

RETURN ON ECI BEFORE FEDERAL INCOME TAXES
FOR VARIOUS CATEGORIES OF LARGE DEFENSE CONTRACTORS

Line No.	Description	1966	1967	1968	1969	Weighted average
<u>32 HIGH-VOLUME DEFENSE CONTRACTORS</u>						
1.	DOD	24.0%	24.4%	22.0%	15.7%	21.4%
2.	Other defense agencies	34.9	31.7	32.6	26.0	31.6
3.	Commercial	25.7	21.9	23.9	20.4	22.8
4.	Total	25.7	22.8	23.6	19.5	22.7
<u>29 MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
5.	DOD	9.1	20.9	27.9	25.6	21.9
6.	Other defense agencies	1.1	8.5	23.5	11.1	10.3
7.	Commercial	29.0	20.9	20.2	18.0	21.4
8.	Total	24.3	20.7	22.0	19.5	21.4
<u>TOTALS FOR 61 HIGH- AND MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
9.	DOD	21.6	23.8	23.1	17.7	21.5
10.	Other defense agencies	31.9	29.7	31.8	23.9	29.6
11.	Commercial	26.4	21.7	23.1	19.9	22.5
12.	Total	25.4	22.4	23.3	19.5	22.5
<u>13 COMMERCIALLY ORIENTED DEFENSE CONTRACTORS</u>						
13.	DOD	20.1	18.0	19.6	16.2	18.4
14.	Other defense agencies	19.4	20.6	20.9	27.0	21.8
15.	Commercial	26.5	18.1	27.9	20.8	23.3
16.	Total	26.1	18.1	27.5	20.7	23.1
<u>TOTALS FOR ALL 74 CONTRACTORS</u>						
17.	DOD	21.4	22.9	22.6	17.4	21.1
18.	Other defense agencies	28.7	27.1	28.9	24.8	27.5
19.	Commercial	26.4	19.6	25.8	20.4	22.9
20.	Total	25.8	20.3	25.4	20.1	22.8

TURNOVER OF TCI FOR VARIOUS CATEGORIES
OF LARGE DEFENSE CONTRACTORS

Line No.	Description	1966	1967	1968	1969	Weighted average
<u>32 HIGH-VOLUME DEFENSE CONTRACTORS</u>						
1.	DOD	2.4	2.5	2.6	2.5	2.5
2.	Other defense agencies	3.8	3.3	3.3	3.1	3.4
3.	Commercial	1.4	1.4	1.4	1.3	1.4
4.	Total	1.8	1.8	1.8	1.6	1.7
<u>29 MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
5.	DOD	1.6	1.8	1.8	1.8	1.8
6.	Other defense agencies	1.7	1.3	1.2	0.9	1.3
7.	Commercial	1.4	1.3	1.2	1.2	1.3
8.	Total	1.4	1.4	1.4	1.3	1.4
<u>TOTALS FOR 61 HIGH- AND MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
9.	DOD	2.3	2.4	2.4	2.4	2.4
10.	Other defense agencies	3.6	3.1	3.1	2.8	3.2
11.	Commercial	1.4	1.4	1.4	1.3	1.4
12.	Total	1.7	1.7	1.7	1.6	1.7
<u>13 COMMERCIALLY ORIENTED DEFENSE CONTRACTORS</u>						
13.	DOD	1.5	1.6	1.7	1.5	1.6
14.	Other defense agencies	1.9	1.5	1.7	1.5	1.7
15.	Commercial	1.3	1.2	1.3	1.2	1.3
16.	Total	1.4	1.2	1.3	1.3	1.3
<u>TOTALS FOR ALL 74 CONTRACTORS</u>						
17.	DOD	2.2	2.3	2.4	2.3	2.3
18.	Other defense agencies	3.2	2.7	2.8	2.5	2.8
19.	Commercial	1.4	1.3	1.3	1.3	1.3
20.	Total	1.6	1.5	1.5	1.4	1.5

TURNOVER OF ECI FOR VARIOUS CATEGORIES
OF LARGE DEFENSE CONTRACTORS

Line No.	Description	1966	1967	1968	1969	Weighted average
<u>32 HIGH-VOLUME DEFENSE CONTRACTORS</u>						
1.	DOD	5.2	5.5	5.8	5.9	5.6
2.	Other defense agencies	7.8	7.0	7.0	6.6	7.1
3.	Commercial	2.8	2.8	2.8	2.7	2.8
4.	Total	3.6	3.7	3.7	3.5	3.6
<u>29 MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
5.	DOD	3.3	3.5	3.7	3.7	3.6
6.	Other defense agencies	3.9	3.1	2.9	1.7	2.8
7.	Commercial	2.8	2.4	2.4	2.4	2.5
8.	Total	2.9	2.7	2.7	2.7	2.7
<u>TOTALS FOR 61 HIGH- AND MEDIUM-VOLUME DEFENSE CONTRACTORS</u>						
9.	DOD	4.9	5.2	5.4	5.5	5.3
10.	Other defense agencies	7.4	6.6	6.7	5.9	6.7
11.	Commercial	2.8	2.7	2.7	2.6	2.7
12.	Total	3.5	3.5	3.5	3.3	3.4
<u>13 COMMERCIALLY ORIENTED DEFENSE CONTRACTORS</u>						
13.	DOD	2.7	2.8	3.2	2.7	2.8
14.	Other defense agencies	3.0	2.5	2.9	2.4	2.7
15.	Commercial	2.1	1.9	2.1	2.0	2.0
16.	Total	2.1	1.9	2.2	2.0	2.1
<u>TOTALS FOR ALL 74 CONTRACTORS</u>						
17.	DOD	4.6	4.8	5.1	5.1	4.9
18.	Other defense agencies	6.3	5.5	5.7	4.9	5.6
19.	Commercial	2.4	2.2	2.4	2.3	2.3
20.	Total	2.8	2.7	2.8	2.7	2.7

SUMMARY OF PROFITS BEFORE FEDERAL INCOME TAXES
ON DOD SALES BY TYPE OF CONTRACT FOR 74 LARGE DOD CONTRACTORS

(sales in millions of dollars)

	1966		1967		1968		1969		Average	
	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor
<u>CPFF</u>										
Sales	\$ 1,443.7	\$ 123.8	\$ 1,716.4	\$ 142.0	\$ 1,909.4	\$ 197.0	\$ 2,327.0	\$ 282.9	\$ 1,849	\$ 186
Profit (%)	5.2	4.1	4.4	5.0	4.2	4.8	4.1	4.9	4.4	4.7
<u>CPIF</u>										
Sales	2,295.9	258.1	2,835.9	351.8	3,055.2	302.0	2,763.0	283.7	2,738	299
Profit (%)	4.9	4.6	5.0	6.4	5.2	5.9	6.0	4.5	5.3	5.5
<u>FPI</u>										
Sales	5,072.0	333.9	6,923.7	449.0	6,845.4	659.3	7,413.8	687.9	6,564	533
Profit (%)	5.4	6.1	4.4	2.2	3.9	2.3	2.4	-4.3	3.9	0.7
<u>FFP-NEG.</u>										
Sales	6,094.6	1,778.4	7,040.5	2,123.8	8,229.9	2,274.6	7,572.9	2,350.2	7,234	2,132
Profit (%)	4.0	7.0	5.6	4.9	5.9	4.6	5.3	4.0	5.3	5.0
<u>ADVERTISED</u>										
Sales	938.1		1,367.0		1,252.0		1,047.6		1,151	
Profit (%)	-0.1		0.9		-5.8		-9.0		-3.4	
<u>TOTAL</u>										
Sales	15,844.3	2,494.2	19,883.5	3,066.6	21,291.9	3,432.9	21,124.3	3,604.7	19,536	3,150
Profit (%)	4.4	6.1	4.7	4.3	4.4	4.6	3.6	2.5	4.2	4.2

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SCHEDULE 11

SUMMARY OF PROFITS BEFORE FEDERAL INCOME TAXES
ON OTHER DEFENSE AGENCIES SALES
BY TYPE OF CONTRACT FOR 74 LARGE DOD CONTRACTORS

(sales in millions of dollars)

	1966		1967		1968		1969		Average	
	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor	Prime contractor	Sub-contractor
<u>CPFF</u>										
Sales	\$ 880.0	\$ 89.6	\$1,034.2	\$ 64.6	\$1,175.0	\$ 64.9	\$1,084.6	\$ 59.4	\$1,043.4	\$ 69.6
Profit (%)	2.9	4.0	3.3	3.9	4.0	3.6	3.9	3.0	3.6	3.6
<u>CPIF</u>										
Sales	2,149.6	434.9	1,161.6	222.7	893.0	178.8	524.6	109.0	1,182.2	236.4
Profit (%)	5.6	2.3	5.6	4.6	4.9	5.4	3.1	5.9	5.2	3.8
<u>FPI</u>										
Sales	77.6	16.5	73.7	7.7	72.1	12.9	59.5	12.1	70.7	12.3
Profit (%)	7.1	10.7	12.4	7.2	7.9	4.0	7.2	3.0	8.7	6.5
<u>FFP-NEG.</u>										
Sales	248.7	130.5	258.7	140.7	244.6	129.1	211.9	179.1	241.0	144.8
Profit (%)	6.6	4.4	9.4	5.6	11.0	7.3	14.1	6.4	10.1	6.0
<u>ADVERTISED</u>										
Sales	7.8	-	5.2	-	4.2	-	8.3	-	6.4	-
Profit (%)	-1.4	-	7.7	-	-6.8	-	2.2	-	0.7	-
<u>TOTAL</u>										
Sales	3,363.7	671.5	2,533.4	435.7	2,388.9	385.7	1,888.9	359.6	2,543.7	463.1
Profit (%)	4.9	3.4	5.2	4.6	5.1	5.4	4.8	5.5	5.0	4.5

SUMMARY OF FINANCIAL DATA BEFORE FEDERAL INCOME TAXES
FOR NINE DOD AMMUNITION CONTRACTORS

Line No.	1966	1967	1968	1969	Weighted average
<u>SALES</u> (in billions of dollars)					
1. DOD	0.4	0.7	0.8	0.8	0.7
2. Commercial	1.8	1.8	2.0	2.2	1.9
<u>PROFIT AS PERCENT OF SALES</u>					
3. DOD	5.5	12.2	11.6	9.7	10.3
4. Commercial	13.0	10.7	7.9	9.2	10.1
<u>PROFIT AS PERCENT OF TCI</u>					
5. DOD	11.8	36.3	33.5	28.7	28.3
6. Commercial	14.8	11.4	9.1	11.1	11.5
<u>PROFIT AS PERCENT OF ECI</u>					
7. DOD	21.6	71.3	66.7	51.9	54.4
8. Commercial	27.1	18.5	14.5	18.1	19.2
<u>TURNOVER OF TCI</u>					
9. DOD	1.9	2.8	2.8	2.8	2.6
10. Commercial	1.0	.9	1.0	1.0	1.0
<u>TURNOVER OF ECI</u>					
11. DOD	3.9	5.8	5.8	5.4	5.3
12. Commercial	2.1	1.7	1.8	2.0	1.9

SUMMARY OF FINANCIAL DATA BEFORE FEDERAL INCOME TAXES
FOR 12 AIRCRAFT, MISSILE, AND SPACE CONTRACTORS

SCHEDULE 14

Line No.	1966	1967	1968	1969	Weighted average
<u>SALES</u> (in billions of dollars)					
1. DOD	7.8	9.6	9.5	9.5	9.1
2. Other defense agencies	2.4	1.7	1.7	1.3	1.8
3. Commercial	6.9	8.2	10.4	10.4	9.0
<u>PROFIT AS PERCENT OF SALES</u>					
4. DOD	4.9	5.2	4.6	2.6	4.3
5. Other defense agencies	5.2	5.2	5.1	4.0	5.0
6. Commercial	7.6	4.4	7.3	7.2	6.6
<u>PROFIT AS PERCENT OF TCI</u>					
7. DOD	13.8	15.9	13.8	8.5	12.9
8. Other defense agencies	24.7	20.0	20.5	16.4	20.8
9. Commercial	11.0	7.0	11.9	9.9	10.0
<u>PROFIT AS PERCENT OF ECI</u>					
10. DOD	28.7	34.6	29.8	18.4	28.0
11. Other defense agencies	48.8	42.0	44.3	34.1	43.2
12. Commercial	19.4	11.6	20.9	18.7	17.8
<u>TCI TURNOVER</u> (sales/TCI)					
13. DOD	2.6	2.8	2.7	2.7	2.7
14. Other defense agencies	4.6	3.6	3.8	3.7	4.0
15. Commercial	1.3	1.3	1.5	1.2	1.3
<u>ECI TURNOVER</u> (sales/ECI)					
16. DOD	5.8	6.7	6.5	7.0	6.5
17. Other defense agencies	9.3	8.1	8.7	8.5	8.7
18. Commercial	2.6	2.7	2.9	2.6	2.7

SUMMARY OF SALES AND PROFITS BEFORE FEDERAL INCOME TAXES
 FOR GOCO PLANTS AND SERVICE CONTRACTS
 OF LARGE DOD CONTRACTORS

	1966	1967	1968	1969	Weighted average
<u>GOCO SALES</u>					
(in billions)					
DOD	\$1.7	\$1.9	\$2.3	\$2.5	\$2.1
Other defense agencies	0.7	0.8	0.8	0.8	0.8
<u>PROFIT AS PERCENT OF SALES</u>					
DOD	2.5%	3.1%	3.3%	3.3%	3.1%
Other defense agencies	4.3	4.6	4.2	3.3	4.1

SUMMARY OF FINANCIAL DATA BEFORE FEDERAL INCOME TAXES
FOR 10 DOD SUBCONTRACTORS

Line No.	1966	1967	1968	1969	Weighted average
<u>SALES (in billions of dollars)</u>					
1. DOD	0.5	0.7	0.7	0.5	0.6
2. Commercial	5.7	5.4	6.0	6.4	5.9
<u>PROFIT AS PERCENT OF SALES</u>					
3. DOD	9.3	9.0	6.0	3.5	7.1
4. Commercial	9.7	7.6	6.8	6.3	7.5
<u>PROFIT AS PERCENT OF TCI</u>					
5. DOD	12.1	11.3	8.4	5.4	9.4
6. Commercial	10.6	7.3	7.1	6.8	7.8
<u>PROFIT AS PERCENT OF ECI</u>					
7. DOD	20.7	19.2	13.5	7.5	15.4
8. Commercial	16.2	11.6	11.0	10.2	12.2
<u>TURNOVER OF TCI (sales/TCI)</u>					
9. DOD	1.2	1.1	1.2	1.1	1.1
10. Commercial	1.0	.8	.9	.9	0.9
<u>TURNOVER OF ECI (sales/ECI)</u>					
11. DOD	2.2	2.1	2.2	2.1	2.2
12. Commercial	1.7	1.5	1.6	1.6	1.6

SUMMARY OF FINANCIAL DATA BEFORE FEDERAL INCOME TAXES
FOR 61 SMALLER DEFENSE AGENCY CONTRACTORS

Line No.	1966	1967	1968	1969	Weighted average
<u>SALES</u> , (in billions of dollars)					
1. DOD	0.6	0.8	0.8	0.8	0.7
2. Other defense agencies	0.1	0.1	0.2	0.2	0.2
3. Commercial	11.0	11.4	12.0	12.9	11.8
<u>PROFIT AS PERCENT OF SALES</u>					
4. DOD	6.4	4.7	3.4	1.7	4.0
5. Other defense agencies	1.9	0.1	2.5	5.5	2.7
6. Commercial	12.3	9.9	9.5	8.2	10.0
<u>PROFIT AS PERCENT OF TCI</u>					
7. DOD	10.3	8.3	6.5	4.6	7.3
8. Other defense agencies	4.1	1.3	5.2	11.8	5.8
9. Commercial	16.2	13.0	12.4	11.1	13.0
<u>PROFIT AS PERCENT OF ECI</u>					
10. DOD	16.4	12.6	9.0	5.0	10.6
11. Other defense agencies	5.1	0.1	7.0	20.3	8.0
12. Commercial	26.2	20.5	19.6	17.9	20.9
<u>TCI TURNOVER</u> (sales/TCI)					
13. DOD	1.4	1.4	1.4	1.4	1.4
14. Other defense agencies	1.6	1.6	1.6	1.8	1.6
15. Commercial	1.2	1.2	1.2	1.2	1.2
<u>ECI TURNOVER</u> (sales/ECI)					
16. DOD	2.5	2.7	2.6	2.9	2.7
17. Other defense agencies	2.7	2.7	2.8	3.7	3.0
18. Commercial	2.1	2.1	2.1	2.2	2.1

APPENDIX

EXCERPTS FROM SECTION 408 OF PUBLIC LAW 91-121

"(a) The Comptroller General of the United States (hereinafter in this section referred to as the "Comptroller General") is authorized and directed, as soon as practicable after the date of enactment of this section, to conduct a study and review on a selective representative basis of the profits made by contractors and subcontractors on contracts on which there is no formally advertised competitive bidding entered into by the Department of the Army, the Department of the Navy, the Department of the Air Force, the Coast Guard, and the National Aeronautics and Space Administration under the authority of chapter 137 of title 10, United States Code, and on contracts entered into by the Atomic Energy Commission to meet requirements of the Department of Defense. The results of such study and review shall be submitted to the Congress as soon as practicable, but in no event later than December 31, 1970.

"(b) Any contractor or subcontractor referred to in subsection (a) of this section shall, upon the request of the Comptroller General, prepare and submit to the General Accounting Office such information maintained in the normal course of business by such contractor as the Comptroller General determines necessary or appropriate in conducting any study and review authorized by subsection (a) of this section. Information required under this subsection shall be submitted by a contractor or subcontractor in response to a written request made by the Comptroller General and shall be submitted in such form and detail as the Comptroller General may prescribe and shall be submitted within a reasonable period of time.

"(c) In order to determine the costs, including all types of direct and indirect costs, of performing any contract or subcontract referred to in subsection (a) of this section, and to determine the profit, if any, realized under any such contract or subcontract, either on a percentage of the cost basis, percentage of sales basis, or a return on private capital employed basis, the Comptroller General and authorized representatives of the General Accounting Office are authorized to audit and inspect and to make copies of any books, accounts, or other records of any such contractor or subcontractor.

"(d) Upon the request of the Comptroller General, or any officer or employee designated by him, the Committee on Armed Services of the House of Representatives or the Committee on Armed Services of the Senate may sign and issue subpoenas requiring the production of such books, accounts, or other records as may be material to the study and review carried out by the Comptroller General under this section.

"(e) Any disobedience to a subpoena issued by the Committee on Armed Services of the House of Representatives or the Committee on Armed Services of the Senate to carry out the provisions of this section shall be punishable as provided in section 102 of the Revised Statutes.

"(f) No book, account, or other record, or copy of any book, account, or record, of any contractor or subcontractor obtained by or for the Comptroller General under authority of this section which is not necessary for determining the profitability of any contract, as defined in subsection (a) of this section, between such contractor or subcontractor and the Department of Defense shall be available for examination, without the consent of such contractor or subcontractor, by any individual other than a duly authorized officer or employee of the General Accounting Office; and no officer or employee of the General Accounting Office shall disclose, to any person not authorized by the Comptroller General to receive such information, any information obtained under authority of this section relating to cost, expense, or profitability on any nondefense business transaction of any contractor or subcontractor.

"(g) The Comptroller General shall not disclose in any report made by him to the Congress or to either Committee on Armed Services under authority of this section any confidential information relating to the cost, expense, or profit of any contractor or subcontractor on any nondefense business transaction of such contractor or subcontractor."

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