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STATEMENT OF
JOHNNY C. FINCH, SENIOR ASSOCIATE DIRECTOR
GENERAL GOVERNMENT DIVISION
BEFORE THE
SUBCOMMITTEE ON OVERSIGHT
COMMITTEE ON WAYS AND MEANS
HOUSE OF REPRESENTATIVES
ON THE
USE AND EFFECTIVENESS OF THE
RESEARCH AND EXPERIMENTATION
TAX CREDIT



Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to assist the Subcommittee in its inquiry into the use and effectiveness of the research and experimentation tax credit. The credit, which was enacted as part of the Economic Recovery Tax Act of 1981, authorizes certain taxpayers to reduce their income tax liabilities by a percentage of the amount spent on qualified research and experimentation. Through this legislative provision, the Congress sought to encourage business firms to perform the research and experimentation necessary to increase the overall competitive stance of the U.S. economy. The tax credit is scheduled to expire on December 31, 1985.

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Today, this Subcommittee is holding hearings with a view toward determining whether the credit should be retained beyond 1985 and, if so, whether the credit should be modified to make it more effective. In preparation for this hearing, the Subcommittee asked us to gather certain information on industry and IRS experience with the credit.

Due to time constraints, we did not attempt to develop a complete, scientific analysis of the use and effectiveness of the research and experimentation tax credit. We tried instead to quickly identify, and then gather information on, a judgmental sample of companies that were potential users of the tax credit. In so doing, we recognized that any data we developed would not be projectable to larger populations. Although the information we developed is not statistically projectable, we nonetheless believe that it provides some insight into issues relating to the tax credit which should prove helpful in the congressional decisionmaking process.

We identified our sample of companies through several different sources including (1) data filed by public corporations with the Securities and Exchange Commission concerning their expenditures on research and development activities, (2) IRS-provided information pertaining to taxpayers who had claimed the tax credit, and (3) a listing of high technology companies provided to us by a trade association representative.

In total, we identified and sought to obtain information on 316 companies. Of these, 209 had claimed the tax credit during tax year 1981, 1982, and/or 1983. We used the information obtained from these 209 companies to ascertain who used the

credit, for what activities, and at what cost to the government. Seventy-one companies told us that they had not claimed the tax credit during those years. We used information from these 71 companies to explain why the credit was not claimed. The remaining 36 companies did not respond to our inquiries.

We interviewed representatives for 92 of the 209 companies that had claimed the tax credit. We also obtained tax return information from IRS for 45 of these 92 companies. IRS was unable to provide us with tax return information on the remaining 47 companies within the relatively short time period during which we carried out our study. For the remaining 117 of the 209 companies, we relied solely on tax return information supplied to us by IRS. Where feasible, we used the tax return information to (1) verify the information provided to us by certain companies and (2) obtain more detailed information on research and experimentation costs incurred both by companies that we contacted and by other companies that were potential users of the tax credit.

Before discussing our findings, Mr. Chairman, I think it would be helpful to provide some background information on the tax treatment of research and experimentation expenses.

BACKGROUND INFORMATION

Section 174 of the Internal Revenue Code offers taxpayers an option as to how they treat certain funds invested in research and experimentation activities. Taxpayers may elect to capitalize these investments and may write-off the amounts invested over a minimum 5-year period. Alternatively, taxpayers may elect to deduct on a current year basis the costs of

"research and experimental expenditures" incurred in connection with a trade or business.

Treasury regulations under section 174 define the above statutory phrase to mean "research and development costs in the experimental or laboratory sense." This generally includes all costs incurred when developing or improving an experimental or pilot model, a plant process, a product, a formula, or an invention. The regulations further provide that qualifying research expenditures do not include costs for the ordinary testing or inspecting of materials or products for quality control or costs for efficiency surveys, management studies, consumer surveys, advertising, or promotion. Also, section 174 elections cannot be applied to costs of acquiring another person's patent, model, or production process or to research expenditures incurred in connection with literary, historical, or similar projects. Finally, expenditures to ascertain the existence, location, extent, or quality of mineral deposits, including oil and gas, are excluded.

Besides capitalizing or expensing funds invested in research and experimentation activities, taxpayers also can claim a tax credit for certain incremental investments in such activities. The tax credit was enacted as part of the Economic Recovery Tax Act of 1981 and included as section 44F of the Internal Revenue Code. The credit applies only to the extent that the taxpayer's qualified expenditures for the taxable year exceed the average amount spent for research and experimentation during a base period. The rate of the credit is 25 percent of the incremental expenditure amount. Under present law, the

section 44F credit applies to research expenditures paid or incurred after June 30, 1981, and before January 1, 1986.

In enacting the section 44F credit, however, the Congress expressly excluded some expenditures from the definition of qualified research. These were expenditures for

- research conducted outside the United States;
- research in the social sciences or humanities; and
- research funded by any grant, contract, or any governmental entity:¹

Proposed Treasury Department regulations under section 44F seek to implement the Congress' intent that the credit generally be allowed for those costs allowed under section 174. That is, the regulations permit use of the tax credit for expenditures directed at developing innovative products and/or processes. But the proposed regulations are more descriptive than the section 174 regulations. For example, the section 44F regulations specifically exclude use of the credit for

- the routine, periodic, or cosmetic alteration or improvement of existing products, commercial production lines, or other ongoing operations;
- the routine design of tools, jigs, molds, and dies;
- the construction of copies of prototypes after construction and testing of the original prototype has been completed;
- planning for commercial production and trial production runs;
- engineering follow-through or trouble shooting during commercial production;

¹The party that actually carries out research for a contractor generally is not eligible to claim the tax credit. Rather, it is the party which elects to fund research via contract that is eligible to claim the tax credit.

--adapting an existing capability to a particular requirement or customer's need as part of a continuing activity; and

--routine data collections.

Under section 44F, eligible expenditures consist of both in-house and contract costs. In-house costs consist of research-related wages, supplies, and rental expenses. Contract costs refer to expenses associated with research conducted for the taxpayer under a contract, as well as the costs associated with grants and/or contributions made to universities or certain scientific research organizations for conducting basic research. But, in contrast to in-house costs, only 65 percent of contract costs are treated as eligible expenses for purposes of section 44F.

As a general rule, the section 44F credit applies to the amount of qualified research expenditures for the current taxable year that exceeds average research expenditures in the preceding 3 taxable years. The base period amount is not adjusted for inflation. For example, assume that a company had incurred eligible research expenses of \$100,000 in 1980, \$200,000 in 1981, and \$300,000 in 1982. Subsequently, the company incurs eligible research expenses of \$400,000 in 1983. For 1983, the company potentially could claim a tax credit of \$50,000 or 25 percent of the difference between the 1983 expenses and the average of the previous 3 years (i.e., $\$400,000 - \$200,000 \times 0.25 = \$50,000$).

Section 44F also contains a 50 percent limitation rule. Under this rule, base period research expenditures are treated as being at least equal to 50 percent of qualified research

expenditures for the current year. This limitation affects businesses that began operating after the credit's effective date, as well as those already in existence. To illustrate, a new business with \$200,000 in eligible research expenses in 1983 could earn a tax credit of \$25,000 or 25 percent of the difference between the 1983 expenses and one-half of the 1983 expenses (i.e., $\$200,000 - \$100,000 \times 0.25 = \$25,000$).

For companies already in business, the rule serves to reduce the value of the tax credit on certain incremental expenditures. Assume, for example, that a firm's average base year research and experimentation expenditures were \$100,000 and that its current year expenditures total \$300,000. Because base period expenses must equal at least 50 percent of current year expenses, the firm's base period expenses are deemed to equal \$150,000. The firm therefore can claim a tax credit of only \$37,500 ($\$150,000 \times 0.25$), instead of \$50,000 ($\$300,000 - 100,000 \times 0.25$). Thus, for research and experimentation expenditures which exceed average base year expenditures by more than 100 percent, the law has the practical effect of limiting the tax credit to 12.5 percent.

In addition, the amount of the credit that may be used in a particular tax year generally is limited to the taxpayer's income tax liability. That is, a taxpayer must have a tax liability in the current or prior three years in order to gain a current benefit from the tax credit. However, the amount of the credit that cannot be applied to the current or prior three tax years can be carried forward 15 years.

I would now like to discuss our findings concerning who has used the credit.

THE TAX CREDIT HAS BEEN CLAIMED
BY MANY DIFFERENT CORPORATIONS

In February 1984, the Treasury Department reported on an analysis it had done of 2,678 tax year 1981 returns. The study indicated that the research and experimentation tax credit had been claimed by a wide variety of companies engaged in many sectors of the U.S. economy. Treasury also noted that the tax credit had been claimed for a variety of different research and experimentation activities. Those claims reflected expenses incurred for research and experimentation after June 30, 1981--the effective date for section 44F. Treasury's sample of 1981 tax returns indicated that a projected 12,350 corporations had reported an estimated \$3.4 billion of qualified incremental research and experimentation expenditures, for which they in turn had claimed about \$858 million of research and experimentation tax credits.

Of the total amount of credit claimed by the 2,678 companies for which Treasury developed data, half went to 53 companies. Virtually all of these companies were very large corporations in terms of total assets and all spent large amounts on research and experimentation. Each of these 53 companies claimed tax credits of more than \$2.3 million. Treasury found that the 53 companies could be placed in two broad categories. The first group consisted of 26 companies whose main businesses were in such "high-tech" fields as pharmaceuticals, electronics, aerospace, scientific instruments, and photographic equipment.

These 26 high-tech companies accounted for \$223 million in tax credit claims. The second group consisted of 27 companies in "heavy industry," such as utilities, oil companies, and companies engaged in manufacturing chemicals, rubber, steel, motor vehicles, farm and construction equipment, industrial machinery, and electrical equipment. These 27 heavy industry companies claimed \$206 million in tax credits.

Beyond the 53 major corporations, numerous other companies claimed lesser tax credit amounts. According to Treasury, among the taxpayers who claimed the research and experimentation tax credit in 1981 were companies engaged in such lines of business as fast food restaurants, baked goods, home building, publishing, banking, stock brokerage, and movie production.

Our study included tax years 1981, 1982, and 1983. Like Treasury, we also found that a wide variety of companies had claimed the tax credit. Of the 209 companies included in our judgmental sample that had claimed the tax credit, 172, or 82 percent, were involved in manufacturing operations. Their products included chemicals, metal implements, machinery, computer hardware and software, electric and electronic equipment, and transportation equipment and parts. The remaining 37 companies included service companies, such as banks, credit bureaus, and providers of data processing and health services, as well as product wholesalers and retailers, public utilities, and mining firms.

Besides corporations, individual taxpayers and partnerships engaged in a trade or business also are eligible to use the tax credit. Accordingly, we sought to determine whether any

individual taxpayers or partnerships had claimed the credit. We asked revenue agents in six IRS district offices--Atlanta, Dallas, Detroit, Jacksonville, Oklahoma City, and Wichita--to identify all individual and/or partnership tax returns they had audited during July 1981 through May 1984 on which the credit was claimed. The agents identified a total of 10 individual and 3 partnership tax returns on which the research and experimentation tax credit had been claimed. The low number of such returns identified was to be expected because IRS had previously estimated that only 61, or less than 1-tenth of one percent, of all tax year 1982 partnership returns contained research and experimentation tax credit claims. Similarly, IRS estimated that only 2,627, or less than 1-tenth of one percent, of all individual taxpayers had claimed the credit. Given these statistics, it appears that partnerships and individuals have not been major users of the tax credit.

Now, Mr. Chairman, I would like to discuss the activities for which the tax credit has been claimed.

THE TAX CREDIT HAS BEEN CLAIMED
FOR MANY DIFFERENT ACTIVITIES

We sought to make two determinations about the activities for which the tax credit was claimed by various companies. First, we wanted to find out, in broad terms, the kinds of research and experimentation activities engaged in by various users of the credit. Second, we wanted to determine, where feasible, the types of research and experimentation activities that were initiated at the margin. That is, we asked various companies to tell us whether the tax credit had enabled them to

undertake research that otherwise would not have been undertaken.

We were able to obtain broad information on the research and experimentation activities engaged in by 182 of the 209 tax credit users included in our judgmental sample. We obtained this information through interviews or from IRS-supplied tax information.

A total of 139 companies were involved in research activities directed at developing new products and/or improving existing products. New and improved products included medical equipment, machinery, drugs, food products, smoke detectors, oil seals, engines, and brakes. In contrast, research activities for 44 companies involved the development of new or improved processes. For example, mining and oil companies were seeking to develop new techniques for the extraction of ores, oil, and fuel. Some manufacturing companies were attempting to develop new production techniques for electronic equipment associated with aerospace experimental projects as well as for processing new fuel and oil additives. The research activities for 43 companies involved computer software applications. These companies included banks, credit bureaus, and utilities, as well as companies for which computer software was a major product line. Software-related activities included the development of new computer programs and the enhancement of computer compatibility.²

Besides gathering broad, overall information on the kinds of research being conducted, we also asked company

²The subcategories of companies discussed in this paragraph exceed 182 because some companies were involved in multiple activities.

representatives whether the credit had enabled them to carry out any research and experimentation that otherwise would not have been undertaken. We were able to obtain this information from 86 of the 92 companies we contacted that had used the tax credit. Of these 86 companies, 5 told us that the tax credit had encouraged them to initiate new research projects. One company, for example, applied the credit to the development of new office machines, another to new automobile-related products, and a third to new uses for fiberglass. The value of the credit to these five companies for the period 1981 through 1983 was about \$10.6 million.

Twenty-eight of the 86 companies told us that the credit had encouraged them to intensify the level of their ongoing research efforts. For example, one cereal company told us that it applied the credit to ongoing research on food processes and products; another company applied it to developing drugs for use in the treatment of cancer and heart disease, and a third applied it to developing equipment in the orthopedic field. The value of the credit to these 28 companies for intensifying the level of ongoing research during the period 1981 through 1983 was about \$132.4 million.

Twenty-three of the 86 companies said that the credit encouraged them both to start new efforts and to intensify ongoing efforts. The companies used the research credit to develop such products as computer hardware/software, electronic banking equipment, and interior and exterior trim for automobiles. The value of the research credit to these 23 companies for the period 1981 through 1983 was about \$394.6 million.

Finally, 30 of the 86 companies told us that the credit had no effect on their research program. That is, company officials said that they would have increased their spending on research even if the credit had not been available.

As I previously mentioned, we also found that 71 potential users of the tax credit for which we gathered information had not claimed the credit for various reasons. Twenty-one corporations said that they had not claimed the credit because they had no tax liability. Most of these firms were involved in scientific research. The credit can, however, be carried forward for up to 15 years. Thirty-five companies said that their research and experimentation expenses did not qualify for tax credit purposes, as defined by law or the proposed Treasury regulations. Other reasons cited by the 15 remaining companies for not using the credit included a lack of incremental expenditures on research and experimentation and a lack of knowledge about the credit.

Now, I would like to discuss the extent to which the credit has achieved its stated objective.

AVAILABLE STATISTICAL DATA INDICATE
THAT RESEARCH AND EXPERIMENTATION
EXPENDITURES HAVE INCREASED SINCE THE
TAX CREDIT WENT INTO EFFECT

Some statistical evidence indicates that the research and experimentation tax credit may have achieved, at least to some extent, its intended objective. That is, available statistics indicate that there has in fact been a substantial increase in expenditures for research and experimentation since the credit went into effect on July 1, 1981. In this regard, we obtained

evidence as to whether the tax credit had encouraged research and experimentation from corporate tax return data for tax years 1981 and 1982. IRS was able to supply us with tax year 1981 information for 105 of the 209 companies that had claimed the tax credit. In addition, IRS supplied us with tax year 1982 information for 52 of the 209 companies. This information showed that the expenditures claimed for research and experimentation increased significantly since the tax credit went into effect in 1981.

Tax year 1981 information indicated that the 105 companies had spent a total of \$1.1 billion on qualified research and experimentation during the tax year 1980 base period. For the comparable 1981 period, when the tax credit first went into effect, the 105 companies spent nearly \$1.5 billion on research and experimentation--a 37 percent increase. The tax return form requires a breakdown of total qualified research and experimentation expenditures into five subcategories--wages and salaries, supplies, rental and/or lease costs, contract costs, and basic research. According to these figures, wage and salary costs incurred by the 105 companies increased by 27 percent, while supply costs grew by 43 percent. Similarly, rental and/or lease costs increased by 36 percent and contract costs grew by 293 percent. Also, the companies spent 87 percent more on basic research. From a dollar standpoint, however, wage and salary costs accounted for over \$202.6 million, or 50 percent, of the overall \$403.1 million increase in expenditures for research and experimentation by the 105 companies. Supply costs accounted for \$118.8 million, or 29 percent, of the increase. Rental

and/or lease costs, contract costs, and basic research costs accounted for the remaining \$81.7 million.

For 1982, the second year in which the tax credit was in effect, we were able to obtain tax return data for 52 of the 209 companies that had claimed the tax credit. These companies claimed an average of \$664.8 million in research expenditures for base period years 1980 and 1981, but over \$781.1 million in tax year 1982--a \$116.3 million or 17 percent increase. Costs for wages and salaries increased by 17 percent, while supply costs increased by 30 percent. Rental and/or lease costs increased by 9 percent, while basic research costs increased by 72 percent. Contract costs, however, did not increase. Again, wage and salary costs accounted for most of the dollar changes involved--\$82.1 million, or 70 percent, of the \$116.3 million.

Thus, available statistics show that, since the tax credit went into effect, expenditures for research and experimentation have increased, at least with respect to some of the major corporations included in our judgmental sample. In contemplating these statistics in terms of the contribution made by the tax credit, however, some consideration should be given to the effects of inflation and the possibility that taxpayer errors were made in computing both base period and incremental research and experimentation expenditures.

Some firms may have been able to claim the tax credit by maintaining a level, real rate of expenditure on research and experimentation activities. This is because the law does not take inflation into account in terms of defining incremental expenditures. Thus, to illustrate, a firm that spent \$100

million for research during the 1980 base period may have found it necessary to spend \$110 million in 1981, thereby compensating for the 10 percent inflation rate in 1981 while maintaining a constant level of effort. Such a firm would have carried out no real increase in research activities, yet could have earned a \$2.5 million tax credit for tax year 1981.

Also, there may be a question as to the extent that available statistics actually reflect increased spending on research, as opposed to changes in taxpayers' classification of expenses incurred. Many companies told us that computation of the tax credit entailed reconstructing prior year accounting records. Before enactment of the tax credit, firms had no particular reason to segregate those research and experimentation costs that are allowable for tax credit computation purposes. Thus, there was room for error in reconstructing base year calculations.

As firms began to compute allowable research and experimentation costs in late 1981 and 1982, there also was room for error in classifying various expenses as research-oriented. Any expense that could be so characterized would have the effect of enhancing incremental expenditure totals and thereby the amount of the current year tax credit--without necessarily increasing the actual level of research. Any such overstatements could, however, have the ultimate effect of increasing subsequent base period amounts and reducing later year tax credit claims. Whether classification difficulties did in fact affect tax credit computations is unknown, and probably will remain so

unless and until IRS completes a series of examinations involving that question.

Thus, Mr.. Chairman, while we cannot specify the exact extent to which spending on research and experimentation has increased since enactment of the tax credit in 1981, it seems clear that there has been an increase in such spending. Available information indicates, however, that the tax credit may not have been the only reason for the increased spending and I would now like to discuss that issue.

THE TAX CREDIT MAY NOT HAVE BEEN THE ONLY
IMPETUS FOR INCREASED EXPENDITURES
ON RESEARCH AND EXPERIMENTATION

As I previously mentioned, we were able to obtain views from representatives of 86 corporations in our sample that had used the credit. Thirty of the 86 companies, or 35 percent, told us that the tax credit had not encouraged them to carry out any more research and experimentation than otherwise would have been the case. These companies were involved in such research activities as developing techniques for extraction of fuels, producing new products out of iron ore and nickel, and developing micro-electronic and hydraulic equipment.

Various company representatives told us that factors such as enlightened management, the need to be competitive and to increase earnings, and the need for effective long-term planning affected decisions to increase research expenditures more so than did the tax credit. These 30 companies claimed about \$26.8 million, or 5 percent, of the \$564.5 million in tax credit claimed by the 86 companies which provided us with information in this area.

Also, a change in economic conditions could have been a major impetus for increased research expenditures. We noted that corporate earnings were depressed in the early 1980s due to the most recent recession. And, as a result, corporate investments in research and experimentation may have been lower than otherwise would have been the case. In late 1982 and in 1983, however, corporate profits increased substantially and, thus, more funds were available for research. Given that, it is possible that some firms increased their spending on research because higher profits made funds available for that purpose, not solely because of the tax credit.

On a related matter, we noted that several studies, including a Congressional Budget Office analysis, have indicated that the tax credit may not be sufficient to stimulate significant incremental investment in research and experimentation. Assume, for example, that a corporate manager must decide among several options as to how to use \$1 million in available funds. The manager perhaps could fund an internal training program, donate to charity, invest in securities, spend the funds on research and experimentation, etc. Assume further that the manager is 90 percent sure that an incremental investment of \$1 million in research and experimentation would produce a viable, new product. Given a 25 percent tax credit, the manager actually would have only \$750,000 at risk for that promising project.

Under the above scenario, the tax credit could well serve to encourage the manager to commit the \$1 million to research and experimentation. But if the chances for success were only 50 percent, it is difficult to predict whether a 25 percent tax

credit would have a substantial effect on the investment decision. And, if the chances for success were only 5 percent, it seems unlikely that \$250,000 in tax savings would greatly influence the decision of whether to put the remaining \$750,000 at risk.

Also, the tax credit provides only a prospective benefit for those firms that did not incur a tax liability in the current year or three prior years. This was the case for 21 of the 71 companies included in our sample that had not claimed the tax credit, including several computer, genetic, and biotech firms. Such firms may rely heavily on research results, but the tax credit is of no immediate value to them. The firms may, however, gain a future tax benefit due to the 15 year carry forward provision of the law.

Now, I would like to discuss the tax credit in terms of foregone revenues and administrative issues.

THE RESEARCH AND EXPERIMENTATION TAX
CREDIT HAS REDUCED FEDERAL TAX
REVENUES AND CAUSED ADMINISTRATIVE
PROBLEMS FOR IRS AND TAXPAYERS

Taxpayer expenditures for research and experimentation can reduce federal tax liabilities in two ways. First, those expenditures frequently are considered a cost of doing business and, as such, they are deductible for federal tax purposes. This has the effect of reducing a taxpayer's taxable income. Second, those same expenses may serve as the basis for computing the research and experimentation tax credit. That credit directly offsets any existing tax liability.

According to the latest Treasury Department estimates, the research and experimentation tax credit will result in about \$7 billion in foregone tax revenues during the period July 1981 through December 1989. In its anticipated peak year--1985-- Treasury expects the credit to result in foregone revenues of over \$1.5 billion. These estimates, of course, may be revised for a variety of reasons, including the unknown future course of the economy, the effect of any IRS examinations, and/or court rulings, etc.

Information we developed from tax returns showed that at least 36 of the 209 tax credit users included in our sample had claimed the tax credit in each of three years-- 1981, 1982, and 1983. And, we found that tax credit claim amounts increased substantially each year for these companies. The 36 companies claimed about \$89 million in tax credits for tax year 1981. In tax year 1982, the same companies claimed over \$122 million in tax credits. In tax year 1983, the 36 companies claimed over \$193 million in credits. Thus, the research and experimentation tax credit already has resulted in hundreds of millions of dollars in foregone tax revenues.

From a tax administration perspective, the credit has caused some difficulties for both IRS and taxpayers. IRS, for example, has experienced difficulties in the form of unagreed examination cases. Through May 1984, seven IRS district offices we contacted had initiated or completed 83 examinations involving the credit. In 30 of the 83 cases, IRS examiners believed that taxpayers had overstated their tax credit claims. But 10 of the 30 involved taxpayers have disagreed with IRS' findings.

The disagreements between IRS and the taxpayers seem to stem basically from the ambiguity of the law regarding certain qualified research expenditures. For example, 8 of the 10 unagreed cases involved issues pertaining to computer software expenses. Basically, under present law, innovative software products would seem to qualify for the tax credit. But neither the law nor the proposed regulations define the term "innovative." Thus, it is not surprising that taxpayers would liberally classify new software as innovative whereas IRS would tend toward a more conservative interpretation of innovation.

According to IRS revenue agents, the base period feature of the tax credit has also caused problems for IRS. For example, for tax year 1981 tax credit claims, an examiner needs to verify the accuracy of claimed 1980 expenses and carry out an incremental expenditure analysis for 1981. For tax year 1982 credit claims, IRS' work needs to include 1980 and 1981 for base period purposes and 1982 for incremental spending analysis purposes. For 1983 and subsequent tax years, the base period includes 3 years plus the incremental spending analysis for the tax year at issue. Further, the difficulty of this task would be greatly compounded if the company under examination were a first time user of the credit seeking to apply carry forward credits earned in prior years. For example, a company could be eligible to claim a tax credit in tax year 1983 but might not have a tax liability against which to apply the credit until tax year 1990. Any effective future examination of that claim thus would entail an analysis of records dating back to the 1980 to 1982 base period--a most challenging task.

Taxpayers have also experienced administrative problems with the credit. Representatives for 30 of the 92 companies included in our sample said that they had experienced difficulties in deciding whether certain research and experimentation activities qualified for tax credit purposes. For example, they questioned whether certain modifications to an existing product qualified and whether certain software-related activities were allowable. Thirty-one companies told us that, once they had determined that they were engaging in qualified research activities, they had experienced difficulties in deciding whether various expenses associated with these activities could be included when computing the tax credit. This was particularly the case with indirect overhead and administrative wage and supply expenses. Further, 27 companies said that they had experienced difficulty in computing base period expenses. The companies pointed out that their accounting systems were not designed to segregate the required cost data. Therefore, they had found it necessary to reconstruct data and refine their accounting systems.

In any case, however, the aforementioned difficulties apparently were not insurmountable. According to the corporate representatives who had experienced difficulties, they generally sought to resolve questions through reliance on in-house legal and regulatory interpretations and/or private sector consultants. Some corporate representatives told us that the vagueness of the law and accompanying regulations encouraged them to claim the credit when in doubt. Some further noted that such a stance is appropriate given the lack of clarity in the

law, the low risk of being selected for examination, and the low risk that a penalty will be applied in a situation where final regulations have not been issued.

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In summary, Mr. Chairman, we know that a wide variety of companies have claimed the research and experimentation tax credit for many different activities. According to the Treasury Department, the primary tax year 1981 beneficiaries of the tax credit, in dollar terms, were a relatively small group of major corporations. In our judgmental sample of firms, manufacturing companies were the primary users of the credit.

Some available statistics indicate, at least on the surface, that expenditures for research and experimentation have increased since enactment of the tax credit. However, some of the increase may be attributable to inflation and/or to taxpayer reclassification errors. Other information indicates that the tax credit may not have been the only impetus for increased expenditures for research and experimentation. There also are questions as to whether a 25 percent tax credit is sufficient to stimulate a significant increase in research and experimentation, especially in high-risk areas. And, the credit provides little in the way of an immediate incentive to spend increased funds on research and experimentation for firms that do not expect to incur a current year tax liability.

Concerning costs, we know that some corporations already have claimed millions of dollars in tax credits and that Treasury expects that the tax credit will result in foregone federal tax revenues of more than \$7 billion through 1989. Also, both

IRS and taxpayers have experienced some administrative difficulties with the credit.

Thus, we have some data and information on the effectiveness of the tax credit, but some of that data and information can lead to conflicting conclusions. Given that, we cannot now recommend that the credit be made permanent.

We recognize, however, that as an alternative to making the tax credit permanent, the Congress may decide to extend the expiration date. Should this be the case, we believe that the Congress should include an important proviso--that Treasury and/or IRS systematically gather data on the tax credit so that a more informed decision on its effectiveness can be made in the future.

If a decision is made to extend the credit, the Congress may also want to consider making some policy revisions. For example, the Congress may want to consider whether the size of the credit is appropriate. The Congress may also want to consider whether the law should take inflation into account, so as to limit the tax credit to real increases in spending on research. Finally, the Congress may want to clarify the law where possible. For example, we found that there is a need for clarification as to whether certain computer software-related expenses qualify for tax credit purposes. And, other witnesses may point out some additional areas where clarification of the law may be appropriate.

This concludes my prepared statement, Mr. Chairman. We would be pleased to respond to any questions.