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Use of Statistical Methods to Calculate Federal Income Tax Credits for Technological Research Activities

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To claim federal income tax credits for a research project, a taxpayer must prove that the project satisfies each prong of a four-part test. In IRS Field Attorney Advisory 20212501F (June 25, 2021), the Large Business and International Division ("LB&I") advised its field agents about use of statistical methods to determine allowable federal income tax credits for research. The advisory provides the following:

The requirement that the four tests under section 41(d)(1) apply separately to each business component, and related substantiation requirements under the Code and Regulations, are not altered or eliminated when a taxpayer uses statistics under Rev. Proc. 2011-42 or when the service uses a statistical sample to audit a research credit claim.

The "business component" is the research project in which the taxpayer engages to develop or improve a product or production process.

The four-part test is as follows:

- Part One requires a taxpayer to prove that, at the outset of the research project, its proposed product design is technologically uncertain.
- Part Two asks the taxpayer to prove that it undertook its research activities for the purpose of discovering technological information to eliminate the technological uncertainties.
- Part Three asks the taxpayer if it intends to use technological information that it discovers to develop or improve the product design.
- Part Four requires the taxpayer to prove that "substantially all" of the research activities constitute elements of a process of experimentation for specified technological purposes related to the function, performance, reliability, or quality of the product. IRC §41(d)(1).

If the taxpayer has complete records of the entire population of research projects that it conducted during the taxable year, the taxpayer should be able to extract a statistical sample of projects from the population, determine if the four-part test is satisfied with respect to each sample project, and then extend the sample findings to the population to calculate available credits for the taxable year. According to the advisory, LB&I will not accept a statistical study that demonstrates that for one project in the sample the taxpayer was technologically uncertain, for a second sample project the taxpayer undertook research to eliminate uncertainty, for a third sample project the taxpayer intended to improve product design, and for a fourth sample project the taxpayer engaged in a process of experimentation.

Not discussed in the advisory is whether LB&I might accept a non-statistical estimate of expenses the taxpayer paid or incurred for research projects that satisfied the four-part test. The prevailing rule is that a nonstatistical expense estimate might be acceptable because the taxpayer clearly did perform research satisfying the four-part test. The taxpayer must, however, produce some evidence on the basis of which the estimate may be made.

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More problematic is a taxpayer's reliance on a non-statistical, judgmental sample of the research projects to determine whether the population of all projects satisfies the four-part test. In these circumstances, LB&I likely would allow credits for the individual projects that satisfy the four-part test but not agree to a projection of the results of the nonjudgmental sample to the entire population of research projects unless such an agreement between LB&I and the taxpayer was made in advance of the judgmental sampling.

The conclusion of the field advisory – that a research project is credit-worthy only if the project satisfies the four-part test – appears unassailable. However, taxpayers' fundamental concern is the overwhelming documentation burden foisted on them to substantiate research credits. Statistical methods insufficiently relieve that burden. Congress enacted the credit forty years ago, but taxpayers are still asking for guidance from the IRS about activities that qualify and the evidence necessary to prove their claim. Congress should amend the credit to ease the documentation burden, and, of course, not use an amendment as an opportunity to eviscerate the credit. The credit should broadly incentivize domestic technological research, not make a taxpayer's cost of administering it prohibitive, and be sufficiently straightforward so that its complexity is not fertile ground for disputes and litigation.