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Comments on Disentangling the Tax Gap

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This note briefly summarizes my oral comments on three presentations at the IRS Research Conference in June 2007:

- Bob Brown and Drew Johns presented a status report on tax gap measurement at the IRS, reviewing the history of the National Research Program (NRP) and future plans for new NRP studies and changes in existing methodologies.¹
- Jonathan Feinstein and Brian Erard presented a proposal for expanding and modifying the detection control model that was used in the latest published IRS tax gap estimates to quantify the amount of underreported individual income tax that IRS examiners fail to detect.
- William Trautman and Petro Lisowsky discussed the effects of alternative ways of consolidating business tax returns on book-tax differences, but it was unclear exactly how their findings would be applied directly in measuring the tax gap.

NRP—Methods and Plans, by Bob Brown and Drew Johns

The authors review the history of compliance measurement at the IRS. Between 1963 and 1988, IRS audited a random sample of individual income tax returns and conducted additional random audit studies (employment tax returns, small corporation tax returns) and operational audit studies (large corporate income tax returns) under the Taxpayer Compliance Measurement Program (TCMP). The results of TCMP audits were used to derive estimates of the tax gap and to develop audit selection formulas. No TCMP audit studies were performed after 1988.

Former Commissioner Charles Rossotti initiated the National Research Program (NRP) to update measures of taxpayer compliance and audit selection formulas. The first major NRP project was a reporting compliance

¹ The paper by Brown and Johns is the only paper in this session that is included in these proceedings.

study based on random audits of 46,000 Tax Year 2001 individual income tax returns. The audits were completed at the end of 2004, and IRS released new compliance estimates based on the results in 2006. NRP differed from TCMP by using less intrusive examination techniques, while relying more on external data (Brown and Johns, 2007; see also Toder, 2007).

Brown and Johns summarize NRP accomplishments to date and future plans. NRP has completed the 2001 individual reporting compliance study and is nearing completion of a study of 2003 and 2004 S corporation returns. NRP has also updated measures of payment compliance and filing compliance for individual taxpayers. For the future, NRP is planning to conduct annual reporting compliance studies of individual income tax returns, albeit with a smaller number of audits per year, and to use the estimates of income underreporting from the current study of flowthrough entities to adjust estimates of the individual income tax reporting gap.

The authors describe a number of benefits of NRP, beyond developing updated and improved measures of the tax gap. These include improved workload selection formulas, development of new case-building techniques that can be applied in operational audits, and better ways of capturing data from audits (the automated report generation system). The latter, as the authors note, could ultimately include better information on reasons for noncompliance, although this has not yet been done. More generally, a big potential, but as yet unrealized benefit, of NRP is to foster an IRS culture that includes integrating research more into daily operations, so that regular assessments of emerging compliance issues and IRS audit effectiveness gradually substitute for occasional one-off studies by researchers divorced from day-to-day operations.

The authors raise several important technical issues that NRP will confront as it substitutes annual random audit studies with smaller samples for less frequent studies with larger samples. The reduction in the number of audits creates challenges for the use of detection control estimates (see below), which require statistically valid estimates of the detection ability of individual auditors, because, with a smaller sample, each auditor will examine fewer returns. Developing a corps of auditors who specialize in NRP returns will alleviate this problem for pooled samples because the same auditors will be observable over multiple years of data. Pooling data by itself poses challenges, including taking account of tax law changes, changes in the CPI, and changes in population weights. There will also need to be an assessment of the validity of year-to-year changes in compliance measures using moving 3-year averages. For example, if 3 years of data are sufficient to make inferences about components of the tax gap, then separate valid tax gap estimates could be developed for Tax Years 2006-2008 and 2007-2009. But compari-

son of the two estimates would be less statistically robust because it would really only be a comparison of the smaller annual samples in 2006 and 2009 (2007 and 2008 would be common to both studies).

In my oral comments, I cautioned that reducing noncompliance is not analogous to the business goal of maximizing profit. Business profit is the difference between revenue and cost, while noncompliance is more closely analogous to uncollected revenue. Efforts to recover that revenue are only “profitable” to the extent that marginal revenues exceed marginal costs. Return on investment (including improved voluntary compliance due to enforcement, which is hard to measure) is more analogous to business profitability than changes in the tax gap. Moreover, changes in the estimated tax gap could occur for many reasons other than IRS effectiveness, including changes in the estimation method itself, changes in the tax law, and changes in taxpayer attitudes toward Government and the tax system.

Models of Household Tax Underreporting and the NRP Examination Process, by Jonathan Feinstein and Brian Erard

In earlier tax gap estimates based on TCMP studies, IRS applied a multiple of 3.28 to underreported income from “low visibility” items not subject to information reporting, such as income from businesses, partnerships, and farms reported on Schedules C, E, and F (Internal Revenue Service, 1996). The multiple was based on a comparison of 1976 TCMP audit results with and without the use of information reporting documents. For the tax gap estimate in NRP, IRS replaced the old TCMP multiplier with new multipliers derived from a detection control estimation (DCE) method developed by Feinstein (1990). DCE provides an econometric estimate of the amount that would be detected by a hypothetical auditor who combines all the best detection abilities (on an item-by-item basis) of the pool of actual auditors.

The DCE method used in NRP had a major effect on the size of the estimated tax gap. IRS staff indicates that the multipliers used for “low visibility” sources of income range from 3.3 to 4.2. Using for illustration a multiplier of 3.5, Toder (2007) estimates that detection control raised the estimated portion of the tax gap that came from underreporting of small business income and self-employment tax by more than \$106 billion, or 31 percent of the total estimated tax gap of \$345 billion for Tax Year 2001.

At the Conference, Feinstein and Erard (2007) presented an expanded model for detection control. The expanded DCE model carefully mimics

the NRP process of examining individual tax returns to capture the different ways that IRS classifiers and examiners may fail to detect noncompliance.

To briefly recap, NRP first selects a stratified random sample of returns to audit and then classifies each return into one of three buckets: 1) returns that will be accepted as filed, 2) returns that will be audited by correspondence on a limited number of issues, and 3) returns on which taxpayers will be subject to face-to-face audits. For the latter bucket (the face-to-face audits), classifiers then select the list of issues on the tax return that NRP auditors must examine. Auditors may choose to examine additional issues on a return that were not selected by classifiers if information revealed during an audit leads them to suspect that these might be additional sources of underreported tax. Errors can occur in both the classification and examination stages of this process.

The new DCE model estimates a likelihood function with five cases corresponding to three possible choice sets by classifiers and examiners. In choice set 1, an income component is classified and examined. Noncompliance is either not detected (case 1) or detected (case 2). In choice set 2, the classifier does not classify the income component, but the auditor examines it anyway. Noncompliance is either not detected (case 3) or detected (case 4). In choice set 3, the income component is neither classified nor examined; in that case, the only possible outcome is nondetection (case 5). For each case, the authors compare probabilities of classification, detection, and noncompliance.

At the Conference, the authors presented results showing the unweighted and weighted (to population totals) numbers of returns subject to face-to-face NRP examinations that fall into each of the five cases for a number of selected income items. They then apply the new econometric technique to derive estimated rates of detection and classification of noncompliance among examiners and classifiers. They do not present data, however, on the size of adjustments for nondetected items and do not present estimates of the parameters of the equations in the model. The results demonstrate that the new DCE technique can be applied successfully, but do not show whether the estimated tax gap would increase or decrease by substituting this more sophisticated version of the DCE model.

In summary, the paper develops a creative way of improving the DCE estimates by making them better represent the NRP process, but as yet the findings are preliminary and not fully documented. I hope that the authors will continue to pursue this promising approach to enhancing DCE.

Book-Tax Consolidation Differences, Rates of Return, and Capital Structure

by William Trautman and Petro Lisowsky

The subject of the Trautman and Lisowsky (2007) presentation (again, not included in this volume) was the effect of consolidation differences in business tax reporting on reported differences in book income and tax income. The authors suggest that the way consolidation is handled in income tax reporting could create a compliance risk.

Differences between reported book income and tax income could be the legitimate result of different book and tax reporting rules (for example, for depreciation), but also could reflect overstatement of book income (to look better to investors), understatement of taxable income (to lower tax liability), or both. Further, inappropriate differences between book and taxable income could result either from errors in reporting book income or taxable income for consistently defined entities or from the use of different consolidation rules that make the scope of the entity used for reporting book profits differ from the entity used for reporting taxable profits.

The authors focus on the role of consolidation rules in explaining book-tax income differences. They note that financial statements, but not tax returns, include income from foreign subsidiaries that are more than 50-percent owned by the parent company, income from domestic subsidiaries that are 50-to-80-percent owned, and the percentage equity ownership in domestic subsidiaries that are 20-to-50-percent owned. In contrast, tax returns, but not financial statements, report dividends from unconsolidated subsidiaries (less the dividends received deduction).

The authors present tables that show trends in overall book-tax differences between 1997 and 2004, by Large and Mid-Sized Business (LMSB) industry, global character of the firm, profit or loss, and quintile of the difference between book and tax income. They then show differences in reported items due to consolidation differences alone, using Schedule M-3 data. The authors find that book and tax differences are large and growing and biggest for financial services companies relative to other industries, multinationals compared with domestic only businesses, and profitable compared with unprofitable companies. In addition, they find that consolidation differences result in the reporting of more assets on tax compared with book returns, but higher rates of return on assets on book compared with tax returns.

Much of these results may have to do with how debt transactions are netted out in integrated returns, because the assignment of debt across entities affects net worth. In reviewing the tables, it appears that consolidation differences did not appear to affect the absolute value of net reported income very much, so that it is the denominator of the rate of return calculation (the net asset value) that appears to affect the calculation the most.

The main takeaway point from this presentation is that consolidation rules may matter for income measurement and differ significantly between book and tax measures. The rules certainly contribute to differences in apparent reported yields on tax returns and financial statements, but the paper does not make clear exactly how the consolidation rule differences might contribute to the actual or estimated size of the tax gap.

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