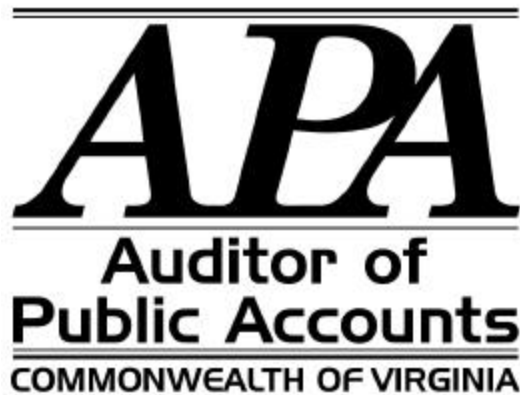


DEPARTMENT OF TAXATION
TAX RETURN ERROR RESOLUTION ANALYSIS
TAX YEAR 2000

December 2001



EXECUTIVE SUMMARY

The Department of Taxation introduced several changes in the processing of tax returns for Tax Year 2000, which they believe would improve efficiency and expedite processing. These changes included a redesigned tax form and several new ways for taxpayers to file their returns. Taxation hoped these changes and the variety of filing options would be less confusing to taxpayers.

While Taxation expected these changes would improve and expedite tax return processing, Taxation also understood that these changes could cause an increase in tax return errors. However, the number and types of errors greatly exceeded Taxation's expectation and management's steps to respond to the errors.

Conclusion

Although an increase in errors will occur as a result of significant system changes or the implementation of significantly new procedures and processes, adequate planning and reacting to such changes should be part of any such undertaking. Taxation did not retest the changes from information obtained through its focus groups when redesigning its tax forms. In addition, Taxation's timeframe did not allow tax software developers adequate time to incorporate changes into their software.

Although the significant increase in tax return errors occurred as early as March, Taxation did not provide sufficient human and computer resources to resolve these errors until May 2001, thereby slowing refunds to individual taxpayers. During July and August 2001, as a result of additional human resources and computer system changes, Taxation cleared tax refund returns totaling \$132 million, which was more than the number cleared over the first six months of the filing season and approximately an \$87 million increase over July and August 1999, a normal tax year.

Taxation is in the process of implementing a multiple-year system project to revise its operations and systems. Taxation should recognize the challenges encountered for the changes made to the Tax Year 2000 filing process and incorporate these lessons in any future changes.

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December 17, 2001

The Honorable James S. Gilmore III
Governor of Virginia
State Capitol
Richmond, Virginia

Members of the Virginia General Assembly
General Assembly Building
Richmond, Virginia

We have completed a review of the Department of Taxation's tax return error resolution process and submit our report entitled "**Tax Return Error Resolution Analysis for Tax Year 2000.**"

Objectives

We had three objectives for our review of the tax return error resolution process. These objectives were to determine:

1. The extent and types of errors that led to a significant increase in the number of tax returns sent to the error file;
2. What caused these errors to occur; and
3. How Taxation responded to the increase in errors.

Scope

To perform our review, we analyzed and recomputed Taxation's computer files of taxpayer errors and the accounting history of individual taxpayer data. We also reviewed Taxation's plan and documentation for changes in the tax forms and other tax processing changes implemented for Tax Year 2000. We met with Taxation staff to review documentation and to discuss what caused the errors and the steps Taxation took to both prevent errors and remove tax returns from the error file.

Finding

We determined that changes made by Taxation in the processing of tax returns for Tax Year 2000 contributed to an increase in tax return errors. However, the number and types of errors greatly exceeded Taxation's expectation and management's steps to respond to the errors. Without sufficient and timely resources, many taxpayer refund returns went to the error file and consequently, did not receive prompt resolution.

Conclusion

Although an increase in errors will occur as a result of significant system changes or the implementation of significantly new procedures and processes, adequate planning and reacting to such changes should be part of any such undertaking. Taxation did not retest the changes from information obtained through its focus groups when redesigning its tax forms. In addition, Taxation's timeframe did not allow tax software developers adequate time to incorporate changes into their software.

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AUDITOR OF PUBLIC ACCOUNTS

PBB:whb
whb:40

DEPARTMENT OF TAXATION
Tax Return Error Resolution Analysis
Tax Year 2000

OVERVIEW

The Department of Taxation (Taxation) introduced several changes in the processing of tax returns for Tax Year 2000, which they believe would improve efficiency and expedite processing. These changes included a redesigned tax form and several new ways for taxpayers to file their returns. Taxation hoped these changes and the variety of filing options would be less confusing to taxpayers.

While Taxation expected these changes would improve and expedite tax return processing, Taxation also understood that these changes could cause an increase in tax return errors. However, the number and type of errors greatly exceeded Taxation's expectation and management's steps to respond to the errors. Without sufficient and timely resources, many taxpayer refund returns went to the error file and consequently, did not receive prompt resolution, causing criticism and concerns by taxpayers, and state and local officials.

TAX RETURN INFORMATION

In Tax Year 2000, Taxation began offering a redesigned individual income tax form, a new manual processing system, which Taxation calls "lifeworks," and new filing options for individual returns. The new filing options include tele-file, I-file, and TACS. Tele-file and I-file allow tax filing using a phone and the Internet, respectively. TACS is the processing of returns using imaging or scanning technologies rather than manual entry.

Taxation has several ways to process the returns it receives, which Taxation refers to as "channels." Some channels directly reflect the filing option that the taxpayer selected such as tele-file or I-file. Taxation routes returns to the other channels based on available staff and equipment.

The number of individual tax returns processed for Tax Year 2000 was comparable with the prior year. By June 30, 2001, Taxation processed 2,911,307 returns as compared to 2,965,658 returns processed by June 30, 2000. Conversely, the number of Tax Year 2000 returns sent to the error file significantly increased, with tax due returns increasing 50,204. Refund returns increased from 139,664 for Tax Year 1999 to 247,042 for Tax Year 2000, an increase of 107,378, as indicated in Chart 1.

Of the 247,042 refund returns sent to error, 112,618 remained on the error file at June 30, 2001, an increase of 51,624 (85 percent) over the prior year (See Chart 2). This increase was due to the significant increase in the number of refund returns that posted to the error file. Taxation's error resolution rate did not increase proportionately, causing a delay in individual income tax refunds for many taxpayers.

Chart 1

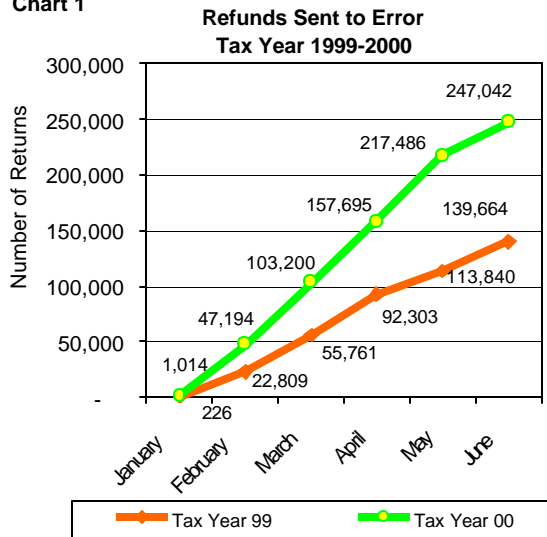
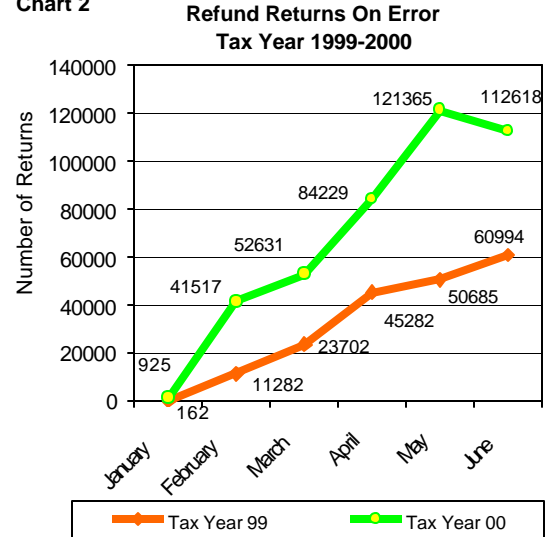


Chart 2



SCOPE OF TESTWORK

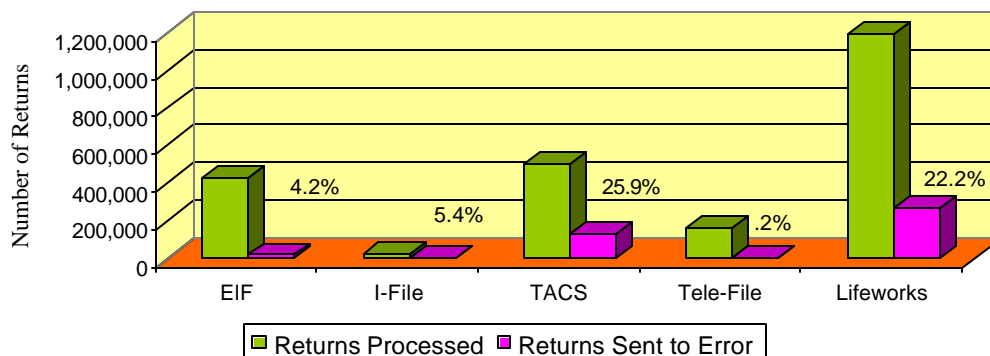
Taxation sends paper tax returns through either the lifeworks or TACS channels and as a result, most tax return errors occurred in these two channels. As of June 30, 2001, Lifeworks had an error rate of 22 percent and TACS had a 25 percent rate of returns sent to the error file (see Chart 3).

Our testing focused on error returns associated with these two channels. We determined that the increase in errors occurred primarily from the:

- Redesign of tax Form 760, and
- Tax software developers not properly changing their forms and software for the redesign.

Chart 3

Returns Processed & Error Rates per Channel - Tax Year 2000



Source: Taxation's Error Tracking Team Spreadsheet dated 7/03/01

Redesigned Tax Form 760

Forms Redesign	Timeline of Events – 2000									
	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct
Conceptual design meetings August 1999 to January 2000										
Develop 1 st draft of handprint form										
Review & develop 2 nd /3 rd drafts										
Conduct focus groups										
Develop & print final version										

In August 1999, Taxation began to analyze changing Form 760 for Tax Year 2000. Taxation began implementing these changes and redesigning its individual tax form in January 2000. In May 2000, Taxation's forms testing team, along with other employees, began holding weekly design sessions to further develop the tax form. During these sessions, the team reviewed, evaluated, and updated the form. The redesigned form had the following features:

- Simplified format (larger fonts, 1-column layout) that also accommodates imaging;
- A separate, new Schedule ADJ;
- Revised instruction booklet;
- Eliminated Filing Status 4 and treated the spouse tax adjustment as a line item; and
- Added barcodes to facilitate processing and assist imaging of returns:
 - 1D barcode (from Form 760 tax booklet) - contains tax year, page number, and form type;
 - 1D barcode (from developer software) - contains software identification number, tax year, page number and form type; and
 - 2D barcode (from developer software) - contains all information entered onto Form 760, including financial information (line item amounts) and general information, such as taxpayer name and address.

In May 2000, Taxation contracted with WB&A Market Research to obtain feedback from taxpayers on the changes in Form 760 and the instruction booklet (overall design, layout, and content). WB&A Market Research held four focus group sessions throughout the state during July and August 2000. Taxation selected participants based on criteria such as demographics, residency, filing status, and preparation of their own tax returns.

Thirty-eight participants attended the sessions and consensus was that form changes were not dramatic. However, the focus groups had the following concerns:

- There was more paper to fill out (four sheets vs. two), and flipping back and forth between the form and related schedules caused confusion;
- There was confusion on when to complete Schedule ADJ;
- The Spouse Tax Adjustment worksheet needed more information on how to convert Federal AGI to Virginia AGI; and
- The redesigned form had too many lines that did not pertain to their tax situation (former 760 short form users only).

Taxation revised Form 760 based on concerns identified by these focus group sessions. In September 2000, Taxation finalized Form 760 without further testing of these revisions. We found the following errors associated with the new Form 760, which have a direct correlation with those identified by the focus groups.

- Taxpayers did not always provide the data in the boxes to complete the spouse tax adjustment line item;
- Taxpayers did not properly complete the spouse tax adjustment worksheet to calculate the credit; and
- Taxpayers did not always properly complete Schedule ADJ.

Since Form 760 has remained essentially unchanged since 1972, Taxation should have allowed sufficient time for adequate design analysis, testing, and revisions and intensified its efforts to do multiple reviews of the form before releasing it.

Tax Software Development

	Timeline of Events - 2000										2001	
	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb
Forms Redesign												
Notify Developers of Changes	☒											
Receive Feedback from Developers												
Provide Developers with Revised Draft of Form						☒						
Provide Developers with Final Form								☒				
Develop Specifications to Give to Developers												
Provide Developers with Draft Specifications						☒						
Provide Developers with Final Specifications								☒				
Testing of Developer Forms & Notification of Outcomes												

A number of companies sell tax preparation software to both individuals and practitioners who professionally prepare tax returns. Taxation refers to these tax preparation software companies as software developers, even though they do not sell software to Taxation. All of the major software developers try to work closely with Taxation to ensure that their purchasers receive both the most accurate and complete information possible. The use of tax preparation software constitutes a significant portion of the returns processed by Taxation. Therefore, it is important that Taxation coordinate any changes with the software developers to reduce the potential for errors.

As illustrated above, Taxation sent drafts of their proposed design for the redesigned Form 760-handprint to developers in March 2000. They solicited feedback about the form design, the location of the one and two-dimensional barcodes, and the anchor marks used to align the form.

In prior years, Taxation normally only issued tax forms to tax software developers in August. However, for Tax Year 2000, Taxation needed to issue a redesigned tax form and related grid specifications required for the TACS (imaging) system.

Taxation issues software specifications and works with tax software developers following industry guidelines issued by the National Association of Computerized Tax Processors. These guidelines set out a working timetable to change and distribute those changes from year to year. However, these guidelines do not address situations where a department undertakes significant changes in both the design of the form and the methods of processing returns.

We noted the following events:

- Software developers received form drafts in March 2000 and grid specifications drafts in August 2000;
- Developers could not begin submitting their system-generated tax forms for testing and approval until Taxation finalized the form and grid specifications, which did not occur until October 2000;
- Taxation approved the last developer's form and grid specifications in February 2001;
- Taxation tested developer forms for appearance only (e.g., correct font, alignment). Taxation did not test the logic or mathematical accuracy of the developer's software; and
- Developers received general instructions that lacked specific details on the form and in some cases what information Taxation expected on certain line items.

The industry guidelines that Taxation tries to follow for normal annual changes does not provide sufficient time for software developers to address the volume and complex nature of changes that Taxation made nor to adequately prepare, submit, and address problems with their tax software.

TAX RETURN FINDINGS

Taxation intended that certain software developers would have the capability of producing a special 2D barcode that Taxation's system could read, therefore, eliminating the need for any manual processing. The 2D barcode would include all of the tax return information including the taxpayer data. Delays in distributing information and, in some cases, the lack of specific information, resulted in returns going to the error file.

Our test work found the following types of problems with the barcode and in general

- Some software developers did not properly include:
 - the contribution amount; and
 - the "65 and older exemption."
- The scanners read the Form 760C tax as a withholding credit instead of a tax.
- Many of the 2D barcodes on tax returns had incomplete data, which the software developer failed to include in the barcode.
- Tax developer software truncated taxpayer names and addresses differently than STARS, preventing STARS from properly accepting the information;.
- Taxation's system could not read some photocopied or printed developer forms since the developer did not follow the grid specifications or included the incorrect fields in the barcode.
- Some developer software used the Federal AGI instead of the Virginia AGI for purposes of calculating the Spouse Tax Adjustment.
- Some developer forms printed amounts as "\$X.00" instead of "\$X." Taxation's data capture software requires that dollar amounts do not include the cents.
- Some amounts on supporting schedules did not transfer to the tax return. Further, some amounts transferred as withholding credits instead of contribution charges.

By not providing final forms and grid specifications to developers until October 2000, and considering the significance of the changes, Taxation limited the ability and timing of developers to ensure their software met Taxation's specifications. Further, more extensive testing of the developer software could have prevented some of the errors from occurring.

TAXATION CORRECTIVE ACTIONS

Once Taxation noted recurring errors, staff began to review and implement computer system changes to reduce the chances of tax returns going to the error file. Between February and June 2001, Taxation implemented over 25 computer system changes. These computer system changes did not address all of the types of problems, but did decrease the volume of returns going to the error file.

To address tax returns that had already gone to the error file, Taxation increased the amount of mandatory overtime for error resolution and customer service staff in May 2001. In June, Taxation hired

twenty-one new employees for the Error Resolution Unit but due to training requirements, they were not effectively working on error returns until around June 30.

In March 2001, Taxation determined that computer system changes could clear multiple tax returns with the same error pattern. Taxation determined that several computer system changes would allow staff to “recycle” a return on the error file through the STARS edits and correct the errors. However, Taxation only made one “recycle” computer system change prior to June 30, 2001, clearing approximately 9,400 tax returns from the error file.

After June 30, and as result of additional human resources and more computer system changes, there was a sharp decline in the number of refund returns on the error file, with Taxation clearing more returns during July and August than was cleared over the first six months of the filing season (see Charts 4 and 5). July and August 2001 refunds totaled over \$132 million dollars, which is approximately an \$87 million increase over July and August 1999, a normal tax year.

Chart 4

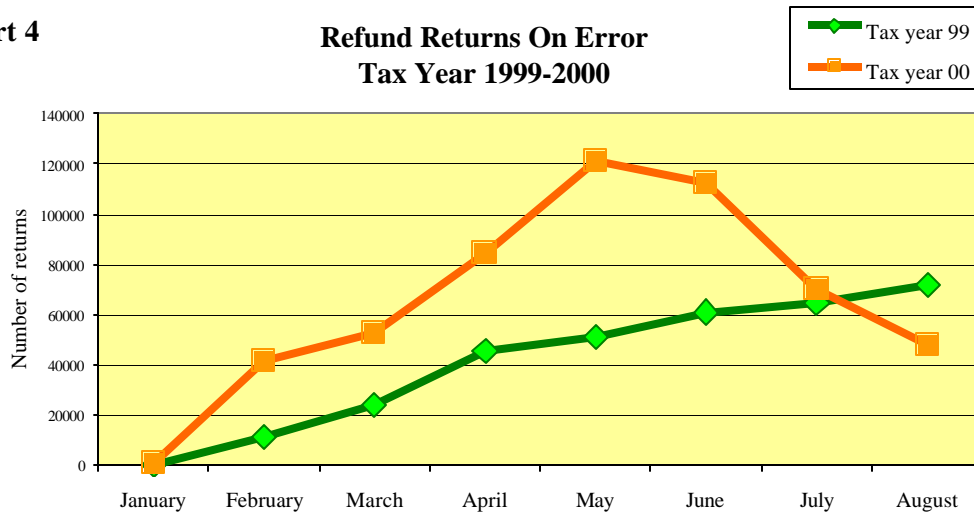
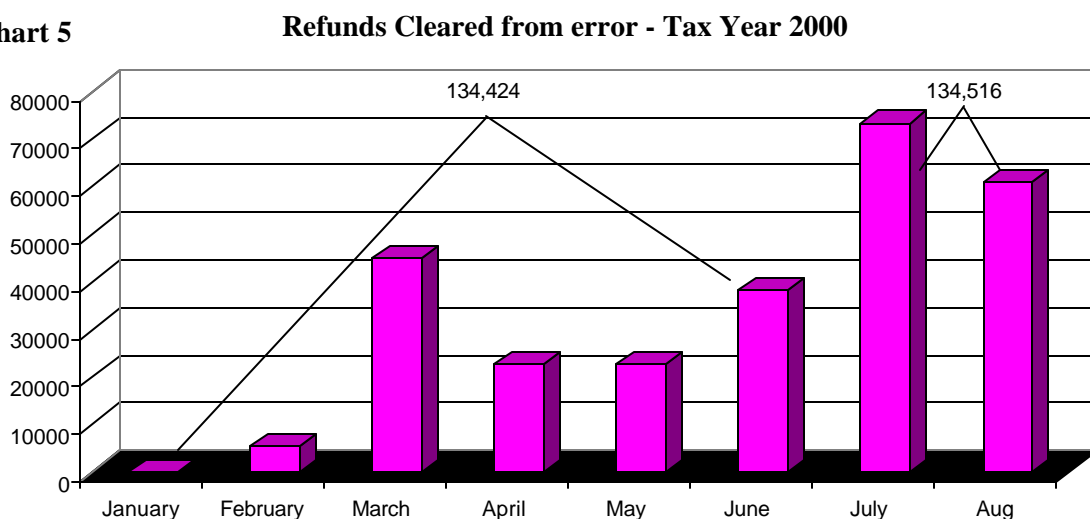


Chart 5



Although the significant increase in tax return errors occurred as early as March, Taxation did not provide sufficient human and computer resources to resolve these errors until May 2001. By this time, 217,486 refund returns were sent to the error file.

CONCLUSION

An increase in errors will occur as a result of significant system changes or the implementation of significantly new procedures and processes. Adequate planning and reacting to such changes should be part of any such undertaking. Taxation did not retest the changes from information obtained through its focus groups when redesigning its tax forms. In addition, Taxation's timeframe did not allow tax software developers adequate time to incorporate changes into their software.

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