Treasury Inspector General Tax Administration (TIGTA)

Federal Audit Executive Council
Bi-Monthly Meeting & Training
October 24, 2012
Finding The “RED DOT” in Tax Administration’s “BIG DATA”

OR

Reducing the Hay to Find a Needle
Agenda

- Background on IRS and TIGTA’s Oversight Role
- Selected Audit Findings - Data Analysis Examples
- Data Mining & Predictive Analytics Project
  - Organizations Visited
  - Centers for Medicare & Medicaid
  - Postal Service Inspector General
  - Recovery Accountability and Transparency Board
- Lessons Learned
- Suggested Reference Materials
- Questions & Discussion
## IRS Tax Statistics (BIG DATA)

<table>
<thead>
<tr>
<th>Type of Return</th>
<th>Number of Returns</th>
<th>Gross Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Tax</td>
<td>143,607,800</td>
<td>$1,331,160,000,000</td>
</tr>
<tr>
<td>Corporation Tax</td>
<td>2,312,909</td>
<td>$242,848,000,000</td>
</tr>
<tr>
<td>Other Taxes</td>
<td>29,664,798</td>
<td>$825,922,000,000</td>
</tr>
<tr>
<td>Individual Refunds</td>
<td>110,900,000</td>
<td>$327,400,000,000</td>
</tr>
<tr>
<td>S Corporations</td>
<td>4,094,562</td>
<td>N/A</td>
</tr>
<tr>
<td>Partnerships</td>
<td>3,248,481</td>
<td>N/A</td>
</tr>
<tr>
<td>Nonprofits</td>
<td>406,034</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Recent TIGTA Media Articles

- **BNA Daily Tax Report**
  - TIGTA finds IRS missing major “Red Flags” pointing to Billions in Identity Theft Fraud

- **ABA Journal**
  - TIGTA reports IRS sent refunds to ID thieves:
    - $3.3 Million Went to One Address Listed on 2,137 Returns

- **South Florida Sun-Sentinel**
  - TIGTA audit finds 741 Tax Returns filed from Belle Glade home

- **Computerworld**
  - Audit found the IRS paid refunds to criminals who filed false tax returns.
Selected TIGTA Reports

- Earned Income Tax Credit - $11-$13 Billion Improper
- Education Tax Credits - $3.2 Billion Erroneous
- Identify Theft - $5.2 Billion Lost
- Electric/Hybrid Car Credits - $33 Million in Error
- Adoption Tax Credit - $4 Million Questioned
- Prisoner Tax Fraud - $295 Million In Refund Fraud
- First Time Homebuyers Credits Questioned
# Identity Thieves Move Into Tax Administration

Report Number: 2012-42-080

<table>
<thead>
<tr>
<th>IRS Identified Cases</th>
<th>TIGTA Audit Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1 Million False Returns</td>
<td>• Identified 1.5 Million Additional Returns</td>
</tr>
<tr>
<td>• Blocked $6.5 Billion in Refunds</td>
<td>• $5.2 Billion in Fraudulent Refunds Escaped Detection</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$21 Billion over 5 Years if not corrected
<table>
<thead>
<tr>
<th>City Address</th>
<th>Number of Returns To One Address</th>
<th>Refund Amounts To One Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lansing</td>
<td>2137</td>
<td>$3,316,051</td>
</tr>
<tr>
<td>Chicago</td>
<td>765</td>
<td>$ 903,084</td>
</tr>
<tr>
<td>Belle Glade</td>
<td>741</td>
<td>$1,004,897</td>
</tr>
<tr>
<td>Orlando</td>
<td>703</td>
<td>$1,088,691</td>
</tr>
<tr>
<td>Tampa</td>
<td>518</td>
<td>$1,791,770</td>
</tr>
</tbody>
</table>
# Identity Theft

## Returns by Taxpayer Category

<table>
<thead>
<tr>
<th>Taxpayers Targeted</th>
<th>Number of Returns</th>
<th>Refund Amounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deceased</td>
<td>104,950</td>
<td>$415,047,568</td>
</tr>
<tr>
<td>Elderly</td>
<td>76,338</td>
<td>$374,419,730</td>
</tr>
<tr>
<td>U.S. Territories</td>
<td>67,789</td>
<td>$387,183,428</td>
</tr>
<tr>
<td>Students (16-22)</td>
<td>288,252</td>
<td>$695,343,022</td>
</tr>
<tr>
<td>Children (&lt;14)</td>
<td>2,274</td>
<td>$3,960,327</td>
</tr>
<tr>
<td>Non-Filers</td>
<td>952,612</td>
<td>$3,345,064,109</td>
</tr>
</tbody>
</table>
Identity Theft
In Tax Administration

- 1.5 Million Returns Questionable
- $5.2 Billion in Refunds
- Delayed access to 3rd Party data
- All 3rd party data not utilized
- Pay & chase does not work
- $21 Billion over 5 years projected
American Opportunity Tax Credit
Education Tax Credit
Report Number: 2011-41-083

• 2.1 Million Taxpayers submitted questionable returns claiming $2.6 Billion in erroneous credits
  • $2.1 Billion – No attendance documentation
  • $550 Million - Students not eligible
  • $88.4 Million – Student claimed on other tax return
  • $255,879 – Prisoners received credits

$12.8 Billion Over Life of Tax Credit
TIGTA Data Mining and Predictive Analytics Project

November, 2011 - June, 2012
What a Fraud Detection Model Gets Us

- Use data mining to remove 90% of the hay to **focus on the 10% with the most needles**
- **Not relying on** tips, hotline, debarred lists, or random samples of data
- **Find highest ROI leads** that humans are unable to find with basic techniques
Selected Government Organizations

- Centers for Medicare & Medicaid Services
- Justice Department
- Veterans’ Affairs
- Coast Guard
- Postal Service Inspector General
- Education Inspector General
- Recovery Accountability & Transparency Board
  - The Recovery Operations Center
Centers for Medicare & Medicaid Services (CMS)

- CMS is largest single payer for health care in US
- 1.5 billion claims submitted annually
- Additional data sources on the way (ACA)
- Billions of “non-claim” data points
- Expected to drive new innovation in Health Care
- Trusted to protect privacy
Centers for Medicare & Medicaid Services (CMS)

Command Center

The new Command Center opened in July 2012
The New Approach to Combating Fraud, Waste and Abuse

Yesterday

- Providers suspected of fraudulent activity are put on prepay review, sometimes indefinitely
- CMS initiates overpayment recovery
- Law enforcement determines if an arrest is appropriate

Today & Future State

- CMS will deny individual claims
- CMS and its contractors will use prepay review as an investigative technique
- CMS will revoke providers for improper practices
- CMS and Law Enforcement collaborate before, during and after case development
- CMS will address the root cause of identified vulnerabilities
Postal Service Inspector General

- Lease Building Risk Model
- Select facilities with greatest impact for Audit
- Identify risk of fraud
- Predict future space requirements
- Calculate market value of properties
Metrics in Lease Renewal Model

• Metrics
  • Safety (Building Age)
  • Risk Ranking
  • Worth (Revenue, Lease Expenses, Labor Costs)
  • Capacity (Volume, Revenue, Hours Worked)
  • Lease Rate (Current rate, Suggested rate, Growth)

• Each scored from 0 – 10 points
Claimant Risk Analysis Model

Postal Service Workers’ Compensation Claims

- Totaled more than $1.3 Billion
- Future Costs: $15.1 billion

Model Description

- Predictive Statistical Model
- Identifies claimants with risk of fraud
- Statistical model used 25 characteristics
Finding Healthcare Fraud

Healthcare Fraud: Map View

Use filters to help narrow down your search.
Highlights of Claimant Model

- Reactive to Proactive
- Return $$ to Postal Service
- Risk Scores – Work the “best” cases
- Shortens time to work cases
- Discover relevant and timely leads early
RETURN ON INVESTMENT IS KEY

ROI

SHOW ME THE MONEY!
Recovery Accountability & Transparency Board

New Monitoring Levels

Recipients are put through a risk model using variables that are constantly being monitored for relevancy.
ROC Data Mining

- Sifting through massive amounts of data “rapidly”:
  - Find hidden patterns and information
  - Identify fraudulent behavior
  - Dissect fraud exposing operational factors of crimes
Data Challenges

- Large volumes of data
- Data systems not integrated
- Numerous legacy systems to plow through
- Unstructured data
- Noise, uncertainty, quality, complexity
Lessons Learned

- Obtain top executive sponsorship
- Identify goal(s) and start small
- Identify the data needed and location
- Identify data cleansing requirements
- Identify software, staffing, and consulting
- Construct the business model
- Interpret the results visually
- Document return on investment
- Share results with interested parties
- Plan to refine your models often
Reference Material

  - www.treasury.gov/tigta
- Journal of Advanced Analytics
  - 3rd Quarter, 2012, Fraud Prevention
- TechAmerica Foundation
  - Demystifying Big Data
- Association of Government Accountants
  - Leveraging Data Analytics in Federal Organizations (May, 2012)
Reference Material

• Government Business Council
  • Technology Tackles Waste, Fraud, and Abuse
• Rexer Analytics
  • 5th Annual Date Miner Survey
• Predictive Analytics World Government Conference
• Interagency Fraud and Risk Data Mining Group
  • www.va.gov/oig/ifrdmg
Questions

Contact Information:

Alan Duncan
202-622-5894
alan.duncan@tigta.treas.gov