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Identifying Fraud, Abuse, and Error in Personal Bankruptcy Filings

Noreen Clancy, Stephen J. Carroll

Prepared for the National Institute of Justice



Safety and Justice

A RAND INFRASTRUCTURE, SAFETY, AND ENVIRONMENT PROGRAM

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Preface

The U.S. Trustee Program (USTP) has long been dedicated to preventing fraud, abuse, and error, which can undermine the integrity and efficiency of the bankruptcy system. Over the past several years, it has taken steps to strengthen both its civil and criminal enforcement capabilities. These efforts have highlighted the need for additional methods to identify cases of potential fraud and abuse and the need for methods to measure the extent of fraud, abuse, and error.

The RAND Corporation worked with a study group of experts from government, academia, and the private sector to assist USTP in thinking about how to better identify and measure fraud, abuse, and error in personal bankruptcy filings. This monograph identifies some of the challenges facing USTP and suggests research efforts that USTP could undertake to develop data and knowledge that would enable it to more effectively identify and measure fraud, abuse, and error in personal bankruptcy filings.

This research was sponsored by the National Institute of Justice at the request of the Executive Office for U.S. Trustees. This monograph should be of interest to state and federal policymakers concerned with bankruptcy issues. It should also be of interest to practitioners involved in the bankruptcy system and to the credit industry.

The RAND Safety and Justice Program

This research was conducted under the auspices of the Safety and Justice Program within RAND Infrastructure, Safety, and Environment (ISE). The mission of RAND Infrastructure, Safety, and Environment is to improve the development, operation, use, and protection of society's essential physical assets and natural resources and to enhance the related social assets of safety and security of individuals in transit and in their workplaces and communities. Safety and Justice Program research addresses occupational safety, transportation safety, food safety, and public safety, including violence, policing, corrections, substance abuse, and public integrity.

Questions or comments about this monograph should be sent to the project leaders, Stephen Carroll (Stephen_Carroll@rand.org) and Noreen Clancy (Noreen_Clancy@rand.org). Information about the Safety and Justice Program is available online (<http://www.rand.org/ise/safety>). Inquiries about research projects should be sent to the following address:

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Executive Summary

The U.S. Trustee Program (USTP) is the component of the U.S. Department of Justice (DOJ) whose mission includes promoting the integrity and efficiency of the bankruptcy system by enforcing bankruptcy laws. Among its responsibilities is identifying fraud, abuse, and error in personal bankruptcy filings. Currently, precise figures on the prevalence of fraud, abuse, and error in personal bankruptcy filings do not exist.

USTP has long been concerned with preventing fraud, abuse, and error, which can undermine the integrity and efficiency of the bankruptcy system. USTP asked the RAND Corporation to assist it in thinking about how to better identify and measure fraud, abuse, and error in personal bankruptcies. Specifically, it asked RAND to conduct research and facilitate discussions by a study group of experts from government, academia, and the private sector to address five questions:

1. Are there any lessons to be learned from how other government programs or the private sector detect fraud and abuse?
2. Are there any transferable processes that USTP can consider adopting?
3. How might USTP develop indicators of fraud, abuse, and error?
4. How might USTP consider estimating the prevalence of fraud, abuse, and error?
5. What future research tasks could USTP conduct to develop data and knowledge that would enable it to more effectively identify fraud, abuse, and error in the bankruptcy system?

The development of improved means for distinguishing and identifying fraud, abuse, and error in personal bankruptcy filings will improve the enforcement of bankruptcy laws in at least two respects. First, acceptable measures of the extent of fraud, abuse, and error are needed to guide decisions regarding the allocation of resources to combating the problem. Second, the ability to identify and measure the extent of fraud, abuse, and error is critical to both the decision to pursue a given type of case and the evaluation of the relative success of different civil or criminal enforcement strategies.

The primary methods that USTP now uses to identify cases of debtor fraud, abuse, or error are as follows:

1. the private trustees' review of case information
2. the field office's review of the case

3. tips from former spouses, former business partners, creditors, and others who could have a grievance with the debtor or who might be offended by the debtor's behavior and misuse of the bankruptcy system
4. debtor audits.

Are There Any Lessons to Be Learned from How the Private Sector or Other Government Programs Detect Fraud and Abuse? Are There Any Transferable Processes USTP Can Consider Adopting?

Data-Enabled Forms

The primary difference between how fraud is identified in the bankruptcy system and how it is identified in the other public- and private-agency systems we examined has to do with the availability of data from which to conduct statistical fraud detection. Research on characteristics of bankruptcy filings is severely limited by the fact that bankruptcy cases are not currently data enabled, though the federal court system is working toward implementation of a data-enabled system. Currently, data cannot be electronically extracted from the cases and entered into a database for analysis. This greatly increases the difficulty and, consequently, the costs of analyses that could illuminate fraud, abuse, and error issues. Acquiring data-enabled forms should be an extremely high priority, as it will allow the bankruptcy courts and USTP to accomplish their missions far more effectively and efficiently.

Private Sector

Various forms of statistical fraud detection have been developed and used over the last two decades by the private sector, primarily by financial institutions such as the credit card industry, insurance industry (auto and health), telecommunication industry, and others. These systems have become increasingly sophisticated in recent years as they have been merged with artificial intelligence research resulting in the development of neural network models. Neural network technology mimics how the human brain would perceive and process information, such as recognizing unusual (perhaps fraudulent) activity. These programs attempt to identify patterns of behavior, compare those patterns with baseline information, and identify anomalies.

Neural networks require levels of electronic information not currently available to USTP due to the lack of data-enabled bankruptcy case filings. The building blocks for developing such systems can be created in the absence of, and in anticipation of, data-enabled forms.

Government Programs

Most of the concern regarding fraud and abuse in government programs is related to procurement and payment systems (e.g., military acquisition programs), which are not areas of concern for USTP. Therefore, this field of literature has little transferable value to USTP. We chose to examine the procedures of three federal agencies that held the promise of offering directly relevant experience—the IRS, the U.S. General Services Administration (GSA), and the U.S. Department of Health and Human Services.

The tax system is probably the most directly applicable to USTP, since it also depends on self-reported financial information. IRS use of discriminant analysis offers a highly promising model for USTP. The IRS uses discriminant analyses to develop a series of weights that are then applied to characteristics of individual returns to assign each return a score that is essentially an estimate of the likelihood that the return is fraudulent.

GSA uses a form of statistical fraud detection by having forensic accountants develop financial profiles and lifestyle analyses to assist in identifying fraud among service providers. Once profiles are set up, service and equipment providers can be compared against these profiles. Those that fall outside the norms may be committing fraud and may require closer inspection. This allows investigative efforts to be more targeted. USTP could create profiles of fraudulent filers based on previous fraudulent cases and then compare incoming cases to the profiles.

Fraud detection in the Medicare/Medicaid system is targeted at providers of professional services and equipment, rather than at the individual, which makes it less relevant to USTP.

How Might USTP Develop Indicators of Fraud, Abuse, and Error?

The ongoing debtor audit project should provide an opportunity to identify characteristics of cases that predict a higher probability of material fraud or abuse. One approach would be to develop a scoring system that ranks the severity of a misstatement in terms of its likely consequences for the dismissal of a case. USTP could have private trustees and field office analysts in each region review the cases from their region in which a misstatement was found to determine whether they believe that the misstatement, if not discovered, would have affected the outcome of the case. Researchers could then perform analyses, such as discriminant analyses used by the IRS, to explore the relationships between various characteristics of the filing and the likelihood that it contained a misstatement that would affect its outcome.

How Might USTP Consider Estimating the Prevalence of Fraud, Abuse, and Error?

If reliable indicators of fraud, abuse, and error can be developed, they can then be used to estimate the prevalence of fraud, abuse, and error by case characteristics, in a given geographical area, and nationally. This could be accomplished in two steps. First, use the indicators of fraud, abuse, and error described previously to define a set of mutually exclusive and exhaustive categories for cases such that the cases assigned to each category share characteristics that predict particularly high, or low, probabilities of fraud, abuse, or error. Second, use the fraud, abuse, and error indicators described previously to estimate the probability of fraud, abuse, or error in the cases in each category. The product of the number of cases in a category, by geographical area or nationally, and the probability of fraud, abuse, or error in cases in that category is an estimate of the number of those cases that include fraud, abuse, or error. Computing these estimates for all categories and weighting them by the distribution of cases across categories in

the geographical area of interest or nationally would yield the relevant estimates of the prevalence of fraud, abuse, and error.

What Future Research Tasks Could USTP Conduct to Develop Data and Knowledge That Would Enable USTP to More Effectively Identify Fraud, Abuse, and Error in the Bankruptcy System?

The research suggestions are broken into two subgroups. The first set of suggestions relates to the debtor audit project currently ongoing at USTP. These audits will provide a platform from which to conduct research into areas related to estimating the prevalence of fraud and abuse and the identification of fraud and abuse. The second set of suggestions would involve instituting new research endeavors and include developing expert systems to screen bankruptcy cases automatically when those cases do go digital.

Ongoing Research: Debtor Audits

The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA) requires the USTP (or the United States' Judicial Conference in judicial districts served by bankruptcy administrators) to conduct audits of samples of individual Chapter 7 and Chapter 13 filings. The audits are to determine the accuracy, veracity, and completeness of the petitions and supporting documents. At current filing rates, the project is expected to include several thousand randomly selected and targeted cases.

It is highly likely that research using the audits could identify characteristics of a case that are associated with an increased probability of fraud, abuse, or error (*indicators*). These indicators can be used to estimate the prevalence of fraud, abuse, and error and to direct analysts' and trustees' attention to cases that warrant more extensive reviews. A scoring system will need to be developed to distinguish between misstatements that warrant concern and misstatements that reflect inconsequential errors. Analyses could then seek to identify predictors of consequential misstatements.

In considering which cases to prosecute, USTP must consider both the magnitude of the problem in each particular case and the likely deterrent effects of pursuing any particular case. Over time, USTP could use the debtor audits to examine the success of different civil or criminal enforcement strategies in terms of their deterrent effect when brought against one type of fraud or abuse versus another.

Suggested New Research

Estimating the Effects of Analysts' and Trustees' Priorities. USTP field office staff and trustees must examine numerous cases every day. USTP could develop information that will provide field office staff and trustees with guidance as to their priorities in examining cases with various characteristics. USTP could also examine the relationship over time between field office staff and trustee priorities in reviewing various types of cases and prevalence estimates of the incidence of fraud, abuse, and error in the types of cases on which they focus.

Surveys of Field Office Analysts and Private Trustees. Field office staff and private trustees have developed insight and knowledge regarding fraud, abuse, and error in individual bankruptcy cases that have not been formally documented. They have essentially developed implicit useful indicators of fraud, abuse, and error. A more systematic survey of clerks, analysts, and private trustees could be conducted across regions to identify fraud indicators that have proved useful and those that have not. The goal of this research would be to formally document their informal knowledge and understanding to help design a system to identify patterns of fraud or simulate analysts' reasoning.

Developing Expert Systems for Identifying Likely Instances of Fraud, Abuse, and Error. At present, analysts and trustees manually review submitted bankruptcy cases to determine the validity of the information provided in the filing. The development of an expert system to aid in these reviews may significantly enhance their ability to identify fraud, abuse, and error. An expert system contains the knowledge of experts (in this case, the analysts and trustees) organized in the form of rules: "If [condition] then [action]." Experts determine the rules after interviewing the analysts and observing their actions to codify their logic into a set of rules that a computer could execute to offer a determination regarding case approval or disapproval.

Profile Cases Reopened at the Trustee's Request. Trustees occasionally ask the bankruptcy court to reopen a closed case to administer assets. These are frequently cases in which material, undisclosed assets were discovered after the case was closed. Although assets are sometimes overlooked, these cases often involve fraud or abuse. Profiling such cases may identify common characteristics that could be used to develop indicators of fraud, abuse, and error.

Profile Fraudulent Cases. USTP has a history of cases in which fraud has been proven. Such cases could be analyzed to create profiles of fraudulent filers. These profiles and the analyses of them could then be used to help define fraud indicators.

Profile Useful Tips. Tips are a prime source for identifying fraud, but tips are also sometimes mistakes or the result of someone trying to cause trouble for a filer. The outcomes of cases in which tips were received could be analyzed to create profiles of the kinds of tips that are more likely to result in dismissal or a civil or criminal enforcement action.

Follow Up on the Canadian Pilot Programs. The government of Canada is using innovative methods to help detect bankruptcy fraud. Investigation referrals are now being partly referred out to private investigative agents who use forensic accounting, securities fraud experts, and traditional private investigation techniques to uncover malfeasance. Pilot projects are currently under way to experiment with alternative models (public-private partnerships and contracting) to assess required costs and effectiveness. Following up on the effectiveness of these alternative models would be a worthwhile effort.

Explore the Possibility of Electronic Screening of Other Government Electronic Records. USTP might initiate discussions with other government agencies regarding the data they obtain on a routine basis, such as suspicious financial transactions. They could use the findings of the research activities discussed previously to explore the possibility that the data, if available, would be helpful in estimating the likelihood that a case involves fraud, abuse, or error.

Explore the Potential Value of Penalties. USTP could also review the literature on the deterrent effect of monetary penalties across a spectrum of issues to estimate the extent to

which creating penalties, such as exist in the tax system, would create a deterrent to committing fraud, abuse, or errors.

In sum, we conclude that research could be undertaken using the ongoing debtor audit project to assist in estimating the prevalence of fraud, abuse, and error in personal bankruptcy filings. There are several additional profiling and survey research tasks that USTP might undertake to better formalize indicators of suspicious filings or useful tips, ultimately as a precursor to leveraging digital filings through automated screenings for indicators of fraud, abuse, and error in the future.

Abbreviations

AO	Administrative Office of the U.S. Courts
BAPCPA	Bankruptcy Abuse Prevention and Consumer Protection Act of 2005
CMS	Centers for Medicare and Medicaid Services
CTR	currency transaction report
DOJ	U.S. Department of Justice
EOUST	Executive Office for U.S. Trustees
FinCEN	Financial Crimes Enforcement Network
GSA	U.S. General Services Administration
HHS	U.S. Department of Health and Human Services
ISE	RAND Infrastructure, Safety, and Environment
NAC	National Advocacy Center
NBTI	National Bankruptcy Training Institute
OIG	Office of the Inspector General
PACER	Public Access to Court Electronic Records
PDF	portable document format
SAR	suspicious activity report
UST	U.S. trustee
USTP	U.S. Trustee Program

Introduction

The U.S. Trustee Program (USTP) is the component of the U.S. Department of Justice (DOJ) whose mission includes promoting the integrity and efficiency of the bankruptcy system by enforcing bankruptcy laws. Among its responsibilities is the identification of fraud, abuse, and error in personal bankruptcy filings. Currently, precise figures on the prevalence of fraud, abuse, and error in personal bankruptcy filings do not exist. Attempts have been made to estimate the prevalence of fraud, but limited empirical research has been conducted.¹

USTP has long been concerned with preventing fraud, abuse, and error, which can undermine the integrity and efficiency of the bankruptcy system. Over the past several years, it has taken steps to strengthen both its civil and criminal enforcement capabilities. These efforts have highlighted the need for additional methods to identify cases of potential fraud and abuse and the need for methods to measure the extent of fraud, abuse, and error.²

USTP asked RAND to assist it in thinking about how to better identify and measure fraud, abuse, and error in personal bankruptcies. Specifically, it asked RAND to conduct research and facilitate discussions by a study group of experts to address five questions:

1. Are there any lessons to be learned from how other government programs or the private sector detect fraud and abuse?
2. Are there any transferable processes that USTP can consider adopting?
3. How might USTP develop indicators of fraud, abuse, and error?
4. How might USTP consider estimating the prevalence of fraud, abuse, and error?
5. What future research tasks could USTP conduct to develop data and knowledge that would enable it to more effectively identify fraud, abuse, and error in the bankruptcy system?

Fraud and abuse result from deliberate attempts to falsify or conceal information. Error results from a simple mistake, inadvertent falsification, or concealment. The differences among

¹ The FBI once estimated that 10 percent of bankruptcy cases could involve fraud. The estimate has been widely cited. The FBI has since stated that the estimate was based on comments made by local prosecutors and not based on any statistical study.

² The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA) made changes in the bankruptcy laws, in part because of perceived abuses by debtors and a lack of personal accountability.

fraud, abuse, and simple error reflect the debtor's intent, which is not observable. Therefore, in this study, we focused on the presence of a misstatement, regardless of intent.

Fraud, abuse, and error can result from both falsification and omission. Whether a debtor deliberately or mistakenly misreports the amount earned from some source or fails to report income from a source, the result is the same: The amount of income reported is inaccurate. The same is true for other financial values—e.g., the value of an asset, the magnitude of a debt. In this study, we focused on the presence of a misstatement, regardless of whether the inaccuracy resulted from a misreport or an omission.

The remainder of this chapter provides background on USTP's civil and criminal enforcement efforts, which have been its primary tools for combating fraud and abuse, then describes the approach used to address the research questions, and, finally, outlines the organization of the book.

Background

In 2001, DOJ launched USTP's National Civil Enforcement Initiative. Under the initiative, USTP seeks civil remedies in bankruptcy court against debtors who abuse the bankruptcy process, conceal assets, or commit other wrongdoing. From FY 2003 through FY 2005, USTP took more than 165,000 actions and inquiries to enforce bankruptcy laws, resulting in more than \$1.75 billion in debts not discharged, monetary sanctions, or similar relief. In 2003, USTP established its Criminal Enforcement Unit to invigorate the program's efforts to detect, refer, and assist in the prosecution of bankruptcy crimes nationwide.

The civil and criminal enforcement efforts have focused USTP attention on the need for additional methods to identify cases of potential fraud and abuse and to measure the extent of fraud, abuse, and error. In 2003, as part of a pilot project, USTP selected 1,500 personal bankruptcy cases in which both the income and the debt were high and sent these cases to outside auditing firms. The debtor audit pilot project found that the overwhelming majority of the 1,500 cases appeared to exhibit some form of fraud, abuse, or error. Although most misstatements did not require court action, the project strongly suggests that the prevalence of misstatements is high and that the potential for fraud, abuse, and errors is high, at least in cases in which both high income and high debt are present.

Judge Steven Rhodes (United States Bankruptcy Court for the Eastern District of Michigan) conducted two other relevant empirical studies. Both studies are limited to cases from the Eastern District of Michigan. The first study (Rhodes, 1999) examined 200 randomly selected consumer bankruptcy cases for completeness and consistency. Errors and problems were observed in 99 percent of the cases, with an average of three mistakes per case. The second study (Rhodes, 2002) reviewed undisclosed assets by examining 103 consumer asset cases from the same district. The study found that 38 percent of assets administered by trustees in Chapter 7 cases had not been disclosed by the debtors in their initial bankruptcy papers and 41 percent of the asset cases had undisclosed assets. Though restricted to just one district, both studies add to the cause for concern regarding potential fraud, abuse, and error in personal bankruptcy cases.

To develop procedures to more efficiently combat fraud, abuse, and error in personal bankruptcy cases, USTP needs to improve its ability to develop and use indicators of fraud, abuse, and error. There is not one form of fraud, abuse, and error; rather, these problems can arise in a number of different ways. The means, costs, and benefits of detecting and redressing them will vary accordingly. Debtors abuse the bankruptcy system in a variety of ways, and possible USTP responses will differ depending on the particular problem. The ability to identify and measure the prevalence of fraud, abuse, and error is critical to both the decision to pursue a given type of case and the evaluation of the relative success of different civil or criminal enforcement strategies. USTP initiated this study in an effort to investigate how to improve its detection capacity and develop better estimates of prevalence.

Research Approach

This study involved convening a study group of experts drawn from government, academia, and the private sector with experience in the identification of fraud, abuse, and error.³ The study group met twice to discuss these issues and USTP's options for future research.

The first study group meeting focused on three topics: (1) the bankruptcy process and the potential for fraud, abuse, and error in bankruptcy filings; (2) the methods currently used by USTP to identify fraud, abuse, and error; and (3) what may be learned from the experiences of other public and private agencies in identifying, measuring, and combating fraud, abuse, and error in their work and general observations about the differences. The second study group meeting then considered research, data, and procedures USTP might consider undertaking to better identify and measure fraud, abuse, and error in personal bankruptcy cases.

RAND conducted interviews and independent research to develop background that served as the basis for the study group's discussions. RAND reviewed USTP documents and interviewed key USTP staff, including individuals in the Executive Office for U.S. Trustees (EOUST) and select regional offices. RAND also interviewed key informants from private and public programs responsible for identifying fraud. Additionally, RAND reviewed the literature on identifying fraud, abuse, and error in various systems for any transferable lessons.

RAND provided a background paper to the study group in advance of its first meeting. That document provided an overview of the current process of identifying fraud, abuse, and error based on both the formal analyses reported in the literature and the practical experience reported by key informants in the interviews. Following the first study group meeting, we revised the background paper to address issues raised by the study group participants. RAND also added a list of suggestions that identified research that USTP could conduct to develop data and knowledge that would enable it to more effectively identify fraud, abuse, and error in the bankruptcy system.

RAND based the research suggestions both on the comments and suggestions made by study group participants and on its own independent interviews and research. This mono-

³ The appendix provides a list of the study group members.

graph represents the revised background paper and incorporates input from the study group members.

It should be noted that this study focused on debtor fraud, abuse, and error in the bankruptcy system. Some creditors may have abused the processes of the bankruptcy system, but this study did not address those problems.

Organization of This Monograph

Chapter Two reviews the bankruptcy system. Chapter Three summarizes the methods currently used by USTP to identify fraud, abuse, and error in personal bankruptcy filings. The practices that other private and public agencies use to identify fraud, abuse, or error in financial dealings are reviewed in Chapter Four. Chapter Five presents suggestions for research that USTP could conduct to develop data and knowledge that would enable it to more effectively identify fraud, abuse, and error in the bankruptcy system. Chapter Six presents other suggestions by study group members that may or may not lend themselves to further research. Finally, Chapter Seven presents the conclusions of this study.

The Bankruptcy System

The bankruptcy process is governed primarily by Title 11 of the U.S. Code, known as the Bankruptcy Code and the Federal Rules of Bankruptcy Procedure. There are two basic types of bankruptcy filings:

- liquidation under Chapter 7 of the Bankruptcy Code
- rehabilitation or reorganization of the debtor under chapters 11, 12, and 13 of the Bankruptcy Code.

This chapter provides a sketch of the bankruptcy process to provide context for understanding this monograph. Because this study focused on personal bankruptcy filings and did not consider filings by other entities such as corporations, the discussion is limited to the processes involved in individual bankruptcies, primarily Chapters 7 and 13. This discussion does not attempt to comprehensively detail the entire process; rather, it focuses on that portion of the process in which bankruptcy cases are screened and reviewed to highlight opportunities for identifying fraud, abuse, and error.

Chapter 7 Bankruptcy

A Chapter 7 bankruptcy debtor receives a discharge of almost all dischargeable unsecured debt in return for turning over all of the debtor's nonexempt assets to a trustee.¹ Certain debts are statutorily nondischargeable (e.g., certain tax debts, alimony, child support). A debtor may be denied a discharge only on specified grounds, including fraud or abuse committed in the bankruptcy process.

A debtor may file for Chapter 7 relief without regard to the amount of the debtor's assets, liabilities, or degree of solvency. However, the Bankruptcy Code does contain a barrier to filing based on the debtor's income. Debtors whose income exceeds the median income for their household size in their state of residence are required to estimate their 60-month disposable income according to specified calculations. If the resulting estimate is greater than a specified

¹ Although bankruptcies take place in the federal court system and follow federal law, state law governs the property that most debtors may exempt (e.g., equity in a personal home and contents). Debtors in certain states may elect to use federal exemptions instead of state ones. In those states, federal bankruptcy law might control the exemption process.

standard, they are presumed to have an ability to repay their debts and may be denied access to Chapter 7.² It is USTP's responsibility to make the initial determination whether the debtor qualifies for Chapter 7 under this means test. Ultimately, the court makes the final decision about the qualifying chapter.

Once a bankruptcy case is filed, USTP assigns a private trustee to the case, an estate is created, and the trustee represents the estate. Debtors are usually represented by their own private attorneys. As soon as an individual has filed, the bankruptcy court notifies all creditors and all attempts at collection must cease.

The debtor meets the trustee at a 341 meeting, which is named for the applicable statute. This provides a forum for creditors and parties in interest to ask the debtor questions under oath about the debtor's assets and financial affairs. All creditors are notified of this meeting and can choose to attend to ask questions.

If there are nonexempt assets to liquidate, the trustee does so and disburses the proceeds pursuant to the Bankruptcy Code distribution scheme. If there is a dispute over the collection or liquidation of nonexempt assets, a bankruptcy judge resolves the dispute. If the trustee determines that there are no nonexempt assets to be collected from the debtor and liquidated for the benefit of creditors and the U.S. trustee (UST) determines that the means test is satisfied, then the filing usually moves rapidly through the system and the debts are discharged.

Chapter 7 trustees are private individuals who work as trustees for USTP on a part-time basis. Most are attorneys or accountants. The trustees are paid out of the case filing fees. Chapter 7 trustees are paid a flat fee of \$60 per case but are also paid a percentage of the assets distributed. This provides an incentive for trustees to uncover assets that the debtor may be attempting to hide.

A bankruptcy filing remains on a debtor's credit record for 10 years, and debtors who receive a discharge are prohibited from filing for bankruptcy again for eight years. Historically, about 70 percent of personal bankruptcies are filed under Chapter 7.

Chapter 11 Bankruptcy

Chapter 11 of the Bankruptcy Code allows a debtor in business or an individual with debts in excess of \$1,200,000 to pay debts while continuing to operate. A Chapter 11 debtor, sometimes with the participation of creditors, creates a reorganization plan allowing repayment of all or part of the debt.

² The amendment adopting the means test and strict and uniform procedures and dollar amounts for calculating income, expenses, and disposable income was the most prominent feature of BAPCPA. The previous version of the Bankruptcy Code allowed for dismissal if a case was determined to be a *substantial abuse* case. Many, though not all, courts interpreted this language to imply an ability-to-repay test.

Chapter 12 Bankruptcy

Chapter 12 of the code allows eligible family farmers and fishing operators to file for bankruptcy, reorganize business affairs, continue operating, and repay all or part of the debt.

Chapter 13 Bankruptcy

As in Chapter 7 cases, once a Chapter 13 case is filed, a trustee is appointed to the case. The debtor proposes a repayment plan, which usually provides for only partial repayment of total debt. In return for monthly repayments to creditors, the debtor is permitted to retain all property, even that which a trustee would liquidate under Chapter 7. After the court confirms the plan, the trustee receives monthly payments from the debtor and disburses monthly payments to the creditors over a three- to five-year time frame.

According to the Administrative Office of the U.S. Courts (AO), historically, about 30 percent of personal bankruptcies are Chapter 13 cases. Only a third of Chapter 13 debtors fulfill their repayment plans (Norberg and Velkey, 2006). Failure to fulfill the plan leads to dismissal of the bankruptcy case or conversion to Chapter 7.

The historical percentages of Chapter 7 and Chapter 13 filings (70 and 30 percent, respectively) have already shifted to proportionally more Chapter 13 filings under the new bankruptcy laws (BAPCPA) (AO, undated). Methods developed for detecting fraud, abuse, and error should be effective regardless of how those filings break down in the future.

Bankruptcy Petitions and Schedules

Debtors in all chapters are required to file, under oath, a petition, schedules of assets and liabilities, and a statement of financial affairs. This initial paperwork is the key to identification of the debtor's assets, debts, and income. The bankruptcy system is self-reporting, like the internal revenue system. The debtor is expected to list assets, debts, and income accurately and completely on the petition and schedules. Many courts have interpreted the law to include a duty to update any filed papers if circumstances change.

Processing Bankruptcy Cases

USTP consists of three major organizational units: EOUST, 21 regional offices each headed by a UST, and 95 field offices headed by an assistant UST.

EOUST provides general policy and legal guidance to the regional and field offices in their implementation of federal bankruptcy laws and oversees the program's operations. Each UST is responsible for managing the field offices located within his or her region. The USTs' responsibilities include appointing and supervising private trustees who administer Chapters

7, 12, and 13 bankruptcy estates and taking legal action to enforce the requirements of the Bankruptcy Code and to prevent fraud and abuse.

Completing the petitions and supporting schedules is no small task. There are numerous forms and schedules to be filed as well as supporting documents. Some forms may not be appropriate in every case. But filers are instructed that

even if certain of the schedules or statements . . . are not applicable to a debtor's particular situation, they shall still be filed with either the notation "None" marked thereon or the applicable box checked indicating that there is nothing to report for that particular schedule or statement. (U.S. Bankruptcy Court, 2005, p. 3)

The majority of debtors hire private attorneys to assist them in properly completing the documents and filing for bankruptcy because of the complexity of categorizing assets, assigning values, and itemizing debt. Debtors can also employ the services of petition preparers in completing the forms and filing for bankruptcy. Petition preparers may be less expensive than private attorneys, but their role in assisting petitioners is limited because they are statutorily restricted from providing any type of legal advice, such as the categorization of assets or choice of exemptions.

Bankruptcy cases are filed in the local U.S. bankruptcy court and are reviewed by the USTP field office and the private trustee assigned to the case. These reviews are done in parallel. Once the case is filed, the clock starts ticking and certain procedures must occur within a certain period.

The 341 meeting must take place within 60 days after filing the case. The discharge of debt is entered 60 days after the 341 meeting. This puts a strict time limitation on the collection of information to prove or disprove suspicions of fraud or abuse. This can make it difficult for the trustee and the field office to identify and pursue fraud (e.g., it can take weeks or longer to get the documentation needed for the paper audit, which might require several years of credit card statements). The UST can request an extension from the bankruptcy court but must show good cause for delaying the discharge. Consequently, extensions are not often requested.

Identifying Debtor Fraud, Abuse, or Error

Debtor fraud involves debtor dishonesty; an example is concealment of assets or failure to report income. Debtor abuse involves misuse of the bankruptcy system. For example, a debtor abuses the system when the debtor obtains a Chapter 7 discharge despite a clear ability to repay creditors. Debtor error often appears to be fraud or abuse on the debtor's schedules but instead results from mistake or misunderstanding of the process or paperwork.

The development of improved means for distinguishing and identifying fraud, abuse, and error in personal bankruptcy filings will improve the enforcement of bankruptcy laws in at least two respects.

First, acceptable measures of the extent of fraud, abuse, and error are needed to guide decisions regarding the allocation of resources to combating the problem. Presumably, fraud, abuse, and error are not equally likely in all types of filings and in all geographic areas. Rather, it seems probable that some types of filings, possibly distinguished by identifiable demographic or financial characteristics, are more likely to involve fraud, abuse, and error than are others. If so, resources might be focused on those types of filings in which fraud, abuse, and error are relatively more likely. This will require the ability to identify and measure the extent of fraud, abuse, and error by type of filing and area.

Second, USTP must determine which cases to prosecute. Civil and criminal enforcement actions could have significant deterrent effects in addition to their direct effects on the cases prosecuted. The ability to identify and measure the extent of fraud, abuse, and error is critical to both the decision to pursue a given type of case and the evaluation of the relative success of different civil or criminal enforcement strategies.

Enforcement actions may have much greater deterrent effect when brought against one type of fraud or abuse versus another, even though the latter type might appear to be more serious. Accordingly, in deciding whether to pursue a particular case, USTP must consider the aggregate volume of fraud, abuse, and error that might be deterred if the case were successfully prosecuted. For example, a particular case might involve a relatively small misstatement and, consequently, the return to a successful civil or criminal action would not appear to warrant the use of limited resources. But if that case were representative of a large number of cases that involve that particular type of misstatement, a successful civil or criminal action might deter a significant amount of fraud, abuse, and error. How much fraud, abuse, and error the system catches may not be as important as how much it can deter.

Similarly, USTP must constantly review its strategies for choosing when to pursue enforcement actions. A critical part of such a review is an evaluation of the success of any particular strategy. USTP consistently reviews the success rates of its enforcement actions in terms of these actions' direct effects on the cases in which they are pursued. But estimates of the incidence of fraud, abuse, and error are needed to determine the deterrence effects of these actions and, consequently, the strategies used to determine when to take action.

In sum, options for better identifying fraud, abuse, and error in personal bankruptcy filings is critical to effectively allocating resources to detailed investigations of suspicious filings and to better allocating resources for civil and criminal enforcement actions to those cases that promote general deterrence. An improved understanding of the potential for and incidence of fraud, abuse, and error should contribute to identifying practices that will improve enforcement of bankruptcy laws.

Procedures Now Used to Identify Debtor Fraud, Abuse, or Error

The primary methods now used by USTP to identify cases of debtor fraud, abuse, or error are

1. the private trustees' review of case information
2. the field office's review of the petition, schedules, and statements
3. tips from former spouses, former business partners, creditors, and others who could have a grievance with the debtor or who might be offended by the debtor's behavior and misuse of the bankruptcy system
4. debtor audits.

Private Trustees' Case Reviews

Private trustees are responsible for verifying the information contained in the debtor's schedules. In Chapter 7, that responsibility arises from their duty to identify and liquidate assets; in Chapter 13, it arises from the duty to evaluate a debtor's repayment plan. Private trustees also have a duty to detect and report debtor fraud and abuse. Chapter 7 trustees are obliged to review cases for income abuse and refer suspected abusers to USTP (EOUST, 2001, section 6F, pp. 6-11–6-13). Trustees also have a duty to refer possible bankruptcy crimes (18 U.S.C. 3057; EOUST, 2001, section 8W, pp. 8-4–8-48) and are often in the best position to do so because of their duty to examine the financial affairs of each case assigned to them.

Trustees' review of bankruptcy petitions and schedules are limited because the paperwork must be reviewed manually. Petitions and schedules filed with the court and furnished to the trustee are not data enabled. No system of automated review for key indicators of fraud, abuse, or error is possible given the current manual review process. Time and volume limitations thus force the private trustees to focus their detailed reviews on a small fraction of the cases assigned to them.

Field Office Case Reviews

Although USTP relies primarily on trustees to detect debtor fraud, such as concealment of assets, USTP itself also reviews bankruptcy petitions and schedules. One of the prime provisions of the new bankruptcy law is the use of a means test, which allows debtors who earn below median income to file for Chapter 7. The bulk of those who make above median income are not eligible for Chapter 7 and would therefore file Chapter 13 and repay a portion of their debts. The USTP review includes means testing under section 707(b) of the Bankruptcy Code. USTP reviews 100 percent of cases for income abuse and has provided field offices with extensive training and other guidance on means testing.

In addition to their mandatory means test review, the USTs who manage the regional offices generally implement additional procedures to identify other fraud, abuse, and error. Typically, initial screening for fraud detection is done in connection with the 100-percent review for the means test.

Additional review of a case occurs when the debtor's paperwork raises suspicions of fraud or other abuse. In this situation, UST staff may conduct a paper audit to verify information in the filing. The reviewers may investigate by using online databases such as those provided by ChoicePoint or LexisNexis®, which provide aggregate-level (not detailed) credit information or information on SSNs or vehicle ownership. They may also ask clarifying questions of the debtor or request further information such as bank or credit card statements.

To assist the field offices, USTP has developed lists of fraud indicators designed to stimulate USTs' thinking when reviewing a case. It has included indicators specific to known fraud schemes such as credit card bustouts, health care or welfare fraud, and Ponzi schemes. These lists of indicators can be found in the *United States Trustee Criminal Enforcement Manual* (DOJ, 2006).

USTP has developed both civil and criminal enforcement manuals and provided criminal referral guidance that presents more detailed information to assist reviewers in identifying cases most likely to contain evidence of fraud or abuse. Classes in civil and criminal enforcement are also offered and required for USTP staff at the National Bankruptcy Training Institute (NBTI) at DOJ's National Advocacy Center (NAC) located at the University of South Carolina in Columbia, South Carolina.

Tips

USTP receives tips of fraud and abuse through direct reports to field offices and also via a bankruptcy fraud reporting Web page. Tips are an important source of information on criminal fraud in bankruptcy filings. In 2003, DOJ's Office of the Inspector General (OIG) reviewed the case files for each fraud referral to law enforcement authorities made by five of USTP's regional offices in FYs 1999 to 2001 (DOJ, 2003). The OIG found that about 48 percent of the fraud referrals to law enforcement resulted from tips.

However, because of data limitations, the OIG examined only the extent to which referrals to law enforcement authorities were stimulated by tips. The available data were not suf-

ficient to examine either the fraction of the cases referred to law enforcement authorities that those authorities chose to pursue or the fraction of the cases they pursued that resulted in a criminal penalty.

Furthermore, there are no data on the volume of tips regional offices receive that did not lead to referrals to law enforcement authorities. It may be that many tips led to the identification of fraud that was deemed insufficiently serious to merit criminal prosecution. In particular, there do not appear to be any data on the extent to which tips resulted either in civil enforcement actions or in dismissals. Nor are there data on either the content or the validity of tips. For example, what fraction of tips purports to identify concealed assets? What fraction of the tips purportedly identifying concealed assets proved to be accurate when investigated? In sum, a tip might identify fraud in a specific case. But the available data on tips of fraud are not sufficient to support generalizations about indicators of fraud, abuse, or error in bankruptcy filings.

Debtor Audits

BAPCPA requires USTP (or the United States' Judicial Conference in judicial districts served by bankruptcy administrators) to conduct audits of samples of individual Chapter 7 and Chapter 13 filings. The audits are to determine the accuracy, veracity, and completeness of the petitions and supporting documents. USTP contracted with auditing firms and the process was initiated in fall of 2006 and has therefore not yet been used to help identify fraud. However, the debtor audits hold much promise in that effort and the potential role of the debtor audits in identifying fraud, abuse, and error is discussed in greater detail in Chapter Five.

Observations of the Practices of Others in Detecting Fraud

Many governmental and nongovernmental entities are concerned about detecting fraud. Credit card fraud and identity theft readily spring to mind as private-sector concerns. The tax and Medicare systems are long-standing government victims of fraud. This chapter addresses the first research question: What can USTP learn from others in both the private and public sectors that have been concerned about fraud detection for decades?

We conducted a general literature review to scan the field of private and government programs concerned with fraud and abuse. (Most systems are concerned with errors but not all are subject to fraud and abuse; therefore, we restricted our review to programs concerned with fraud and abuse.) Most of the literature regarding fraud and abuse in government programs is related to procurement and payment systems (e.g., military acquisition programs), which are not areas of concern for USTP. Therefore, this field of literature has little transferable value to USTP. Fraud and abuse in these systems usually results from weak internal controls, which is not a particular problem for USTP. Income in every case is confirmed by staff of the UST's office and by a private trustee. There is the rare occurrence of abuse by a trustee or employee of a trustee, usually related to distribution of funds for repayment plans in Chapter 13 cases. These are rarely successful due to annual audits of the trustees by EOUST.

We examined specific public- and private-agencies' procedures with regard to how they identify fraud, abuse, or error to determine whether there are any lessons for USTP. We chose to examine the procedures of three federal agencies that held the promise of offering directly relevant experience—the IRS, the U.S. General Services Administration (GSA), and the U.S. Department of Health and Human Services (HHS). We also examined procedures in the private sector.

The primary difference between how fraud is identified in the bankruptcy system and how it is identified in the other systems we examined has to do with the availability of data from which to conduct statistical fraud detection. To replicate the approaches of these others would require USTP to have a system of data-enabled forms and a data capture and manipulation system, which it does not currently have but toward which it is working.¹

In the following section, we briefly review the programs we examined. Although most of these practices are not currently relevant to USTP due to USTP's unique manual review

¹ Bankruptcy petitions are filed in the federal court system. As such, the petitions are part of the AO, which is not yet able to accept fully data-enabled forms. Efforts are under way to move in that direction in the near future.

of cases, we observe, to the extent possible, those features that might be applicable to USTP either now or with the advent of data-enabled forms. Once USTP has data-enabled forms, the approach that the IRS uses will have the most direct relevance to USTP.

Private Sector

Various forms of statistical fraud detection have been developed and used over the past two decades by the private sector, primarily by financial institutions such as the credit card industry, insurance industry (auto and health), telecommunication industry, and others. More recently, these techniques are also being used by government agencies such as the U.S. Department of Treasury in detecting money laundering and by HHS in identifying Medicare/Medicaid fraud. These systems have become increasingly sophisticated in recent years as they have merged with artificial intelligence research resulting in the development of neural network models.

Neural network technology mimics how the human brain would perceive and process information, such as recognizing unusual (perhaps fraudulent) activity. These programs attempt to identify patterns of behavior, compare those patterns with baseline information, and identify anomalies. The statistical analysis returns a suspicion score. These scores can be rank ordered and investigative time can be spent on those with the highest score (Bolton and Hand, 2002; Durtschi, Hillison, and Pacini, 2004).

When a customer uses a credit card to purchase an item, the merchant swipes it electronically; such action initiates the purchase authorization. During authorization, that purchase is being compared with the owner's previous spending patterns and the spending patterns of known fraud schemes. This all takes place within seconds. This is neural network technology at work detecting fraud.

Neural network technology requires levels of electronic information not currently available to USTP due to the lack of data-enabled bankruptcy case filing. However, the building blocks for developing such a rule-based system can be created in the absence of, and in anticipation of, data-enabled forms. Establishing rules for detecting bankruptcy fraud will be quite different from the real-time effort used by the credit card industry. This is discussed in the next chapter on research suggestions, in the "Developing Expert Systems" section.

Public Sector

IRS

The tax system is probably the most directly applicable to USTP, since it also depends on self-reported financial information. A good portion of tax filings is now submitted electronically. The data from those submitted via hard copy are entered to create electronic forms. More specifically, only those data from fields needed to conduct the statistical analyses are entered.

To detect fraud, the IRS uses a combination of matching, filtering, and scoring returns. Unlike the bankruptcy system, the tax system has secondary sources of information to verify the information on the tax form. This is considered matching. Employers, financial institu-

tions, and others are required to report the same information to the IRS as the taxpayer. Discrepancies between what the taxpayer reports and what secondary sources report clearly raise suspicion of fraudulent activity.

It also filters returns based on the violation of allowable limits. For example, if a taxpayer exceeds the limits on deductions for things such as individual retirement accounts, the return will get pulled for examination.

Scoring takes data from the tax form and divides them into numerous strata. The population is stratified by major similarities, such as wage earners or those filing Schedule C. Discriminant analysis is performed on each stratum and then given a score. Historical data are used to develop the scores for the strata that are used in evaluating current year returns. Filings with outlier scores automatically get flagged for further review by an auditor. These become the targeted audits. Auditors may review the return and understand why the return received the score it did and allow it to continue on for processing. In other cases, auditors may determine that correspondence or an official audit is warranted.

Discriminant analysis is a statistical technique used to classify observations into a set of exhaustive, mutually exclusive, predefined classes. The purpose is to determine the unique class to which an observation belongs based on a set of variables known as *predictors* or *input variables*. For example, the IRS uses discriminant analysis to identify the returns most likely to have errors. The IRS's objective is to use its limited resources where they are of most value in reducing noncompliance while ensuring fairness, observing taxpayer rights, and reducing the need to burden those who do comply. Rather than audit a large fraction of returns, the IRS uses discriminant analyses to more effectively manage its compliance programs. By focusing audits on those returns deemed most likely to have errors, the IRS maximizes the extent to which everyone pays their fair share of taxes while minimizing the extent to which compliant taxpayers are unnecessarily or ineffectually contacted.

A discriminant analysis begins with a set of observations, sometimes termed the *training set*, for which the classes are known. The IRS analyses, for example, begin with a set of returns that have been audited so that each return is known to be either compliant or noncompliant.² The analyst then specifies a mathematical equation relating the class to which an observation belongs (compliant or noncompliant) to a list of variables describing various attributes of the return or the filer. The mathematical equation is generally linear, but nonlinear equations (e.g., the statistical equations termed *logit* or *probit*) are sometimes used. A coefficient is associated with each variable. Standard statistical techniques are then used to estimate the specific values of the coefficients that maximize the likelihood that, when the estimated coefficients are applied to the variables for the observations in the training set, the resulting predictions are accurate.

IRS use of discriminant analysis offers a highly promising model for USTP. USTP could use discriminant analyses to identify the variables that play an important part in predicting whether a case contains a material misstatement. Depending on the specific objective of the

² Information on the IRS analysis techniques was presented by Joseph Wilson, Director of Examination, Planning and Delivery, IRS, to the study group (Wilson, 2006). We also examined documents, though, to avoid alerting would-be violators, the IRS does not publish the details of its analyses.

analysis, material misstatements might be subdivided into categories depending on the type of misstatement (e.g., whether the misstatement pertains to income, assets, or specific types of debts) or its magnitude. The specific equation identified by the discriminant analysis can then be used to predict the category into which a case will fall. The equation thus would guide analysts and trustees to focus their attention on those cases that are most likely to contain material misstatements worthy of attention.

The IRS has 11,000 revenue auditors on the civil side attempting to identify fraud. On the criminal side, the IRS has 2,800 special agents nationwide who investigate fraud and several tools that help them identify fraud. In the 1970s, a law was passed making it mandatory for banks to fill out a currency transaction report (CTR) for transactions over \$10,000. Banks fill out suspicious activity reports (SARs) in the event that fraud is suspected but the total transaction is less than \$10,000. In addition to the random annual audits, these CTRs and SARs are another resource used by the IRS to initially detect fraud. IRS researchers must investigate a person's financial transactions going back three to five years to prove intent of fraud.

The IRS also participates in bankruptcy fraud working groups across the country, some of which are more active than others. These working groups include employees of USTP, IRS, FBI, and other law enforcement agencies.

The IRS is concerned about bankruptcy fraud because the IRS is often one of the main creditors that forgo payment in bankruptcy cases. The IRS intentionally seeks out high-profile cases to place in the public spotlight and thereby discourage others from tax evasion and other forms of fraud, including bankruptcy fraud. The IRS publicizes 70 percent of the bankruptcy cases in which it pursues prosecution.

The IRS has compiled a list of the top 25 signs of bankruptcy fraud. The items on the list generally pertain to business bankruptcies, not to personal bankruptcies. As such, this list is of limited use in identifying indicators of fraud, abuse, and error in personal bankruptcy filings. Nonetheless, it may offer some useful insights in considering indicators of fraud, abuse, and error in personal bankruptcy filings, especially points 1, 2, 4, 6, 8, and 10:

1. concealment of assets
2. serial bankruptcy filings, close in time
3. failure to keep usual business records
4. incomplete or missing books or records
5. conduct well outside the ordinary business or industry standards or practices
6. unusual depletion of assets shortly before (or after) the bankruptcy filing
7. recent departure of debtor's officers, directors, or general partners
8. unanswered questions or incomplete information on debtor's schedules or statement of financial affairs
9. frequent amendments to schedules, statements of financial affairs, and monthly operating reports
10. inconsistencies between recent financial statements or tax returns with the debtor's schedules and statement of financial affairs
11. absence of knowledgeable officers to testify at first meeting of creditors (341 meeting)

12. inability to contact the debtor or principals of a business debtor at the debtor's stated address
13. frequent dealings in cash, rather than recorded transactions
14. sudden postpetition depletion of inventory without plausible explanation
15. inflated salaries, payments of bonuses, or cash payments to officers, directors, shareholders, or other insiders
16. transfer of property to insiders, shareholders, and relatives shortly before bankruptcy
17. debtor refusal to answer questions at first meeting of creditors, at rule 2004 examination, at deposition, or in court based on Fifth Amendment right to be free from compulsory self-incrimination; or debtor hires criminal defense counsel
18. payoff of loans to directors, officers, shareholders, relatives, or other insiders shortly before filing
19. transactions with nondebtor subsidiaries, parent companies, or affiliated corporations owned by the same or related persons or entity
20. a history of prior litigation or postpetition litigation, e.g., involving breach of contracts, fraud, misrepresentations, breach of fiduciary duty
21. unusually complicated corporate structures and relationships
22. atypical creditor confusion concerning corporate structures and relationships
23. fire, theft, or other loss before or after filing
24. failure to pay withholding, unemployment, or sales taxes
25. startup by debtor's principals of a similar business near the time of bankruptcy filing.

There are no empirical analyses of the likelihood that the indicators on this list lead to the successful identification of fraud or abuse cases.

HHS

Perpetration of fraud in the Medicare/Medicaid system is long established and has resulted in an enormous amount of regulation in an attempt to stem fraud. Fraud detection is targeted at providers of professional services and equipment, rather than at the individual, which makes it less relevant to USTP.

The Centers for Medicare and Medicaid Services (CMS) administers the Medicare/Medicaid system. CMS established program safeguard contractor processes to support the Medicare Integrity Program. Many of these contractors use neural network technology to detect fraud in the claims review process. CMS also initiated a system that links state-run Medicaid data with federally run Medicare data in an attempt to identify additional fraud (Allmon, 2005).

CMS has established a research department that reviews filing trends on an ongoing basis in an effort to identify fraud and abuse by statistically reviewing filing patterns and flagging suspicious activity. CMS and selected contractors do the initial screening for fraud and then refer suspicious cases to a separate contractor whose sole responsibility is to investigate fraud and abuse. If this contractor can identify fraudulent activities, the case is referred to the Office of Investigations, a part of OIG.

The Office of Investigations has seasoned law enforcement professionals who investigate and build up the fraud case. It works closely with the U.S. Attorney's Office. Most U.S. Attorney's Offices have a dedicated health care fraud coordinator who works with HHS in moving the case through the system.³

Fraud detection in the health care system may have some transferable value to USTP in the statistical techniques used (neural networks), but it also has its limitations. A large portion of the fraud that CMS experiences is perpetrated by professional service and equipment providers rather than by individuals. CMS techniques can track trends over time from the same providers for the same services and equipment, which can help in identifying periods of suspicious activity, since a baseline of normal activity exists. EOUST has only a snapshot in time of an individual's circumstance. It cannot identify an activity as suspicious from normal behavior for that individual.

GSA

GSA is charged with simplifying the procurement, utilization, and disposal of government property. GSA conducts both audits and investigations. GSA uses a form of statistical fraud detection by having forensic accountants develop financial profiles and lifestyle analyses to assist in identifying fraud. These are common methods used by fraud examiners (auditors). Once profiles are set up, service and equipment providers can be compared against these profiles. Those that fall outside the norms may be committing fraud and may require closer inspection. This allows investigative efforts to be more targeted. This idea of creating profiles (in USTP's case, profiles of fraudulent petitioners) to assist in identifying fraud is worth exploring and is mentioned in the following chapter on research suggestions.

For investigations, GSA uses tools such as a database populated by the Financial Crimes Enforcement Network (FinCEN) and maintained by the U.S. Department of the Treasury to safeguard the financial system from the abuses of financial crimes. FinCEN's purpose is to support law enforcement, intelligence, and regulatory agencies through sharing and analysis of financial intelligence. The FinCEN database is primarily available to federal agencies with law enforcement authority.

GSA keeps a suspension and debarment list that tracks parties excluded from federal procurement and nonprocurement programs due to past violations. It is a public database. This provides incentives for service and equipment providers to fulfill their contracts if they want to do future business with the federal government. Once they go on the list, no federal agency will transact business with them.⁴

EOUST could create profiles of fraudulent filers based on previous fraudulent cases and then compare incoming cases with the profiles.

³ Some of the information about HHS' fraud detection process and techniques came from personal communication with members of the inspector general's staff.

⁴ Information on GSA's approach to fraud detection came from personal communication with OIG staff members.

Medi-Cal

Medi-Cal is California's state-run Medicare system. The Fraud Prevention Institute helped it initiate a program called FOCUS that, on the surface, seems straightforward: clearly convey to medical providers that fraud schemes will be detected in a swift and certain manner. Though simple, it acts as an effective deterrent, since it conveys the idea that someone is watching and committing fraud will be risky. It carries this out by meeting with medical providers and giving them an overview of the fraud prevention controls that are in place. It follows this up with an annual fraud risk assessment of medical providers. The strength in this program is in its establishment of up-front, clear rules; the provision of at least a semblance of monitoring; and continuing contact with would-be fraudsters.

This approach has limited application to USTP, since it is premised on continuous interaction with the same providers and can track their behavior across time to detect any changes in patterns. It does have transferable value as a fraud prevention tool that could be easily instituted by a one-page sheet explained by the trustee at the 341 hearing. The sheet could explain that, to protect the program's integrity for everyone, each bankruptcy filing could be subject to an audit (debtor audit program) and that including any false information or concealing information could result in criminal action. The filer could be asked to sign the sheet to signify that the fraud detection system and possible consequences were explained to them. Although not a practice of Medi-Cal, such a program could also include an amnesty period, perhaps 14 days, for the filer to correct the filing with no questions asked. Again, the idea is to convey to the filer that a fraud detection system is in place and that fraud will be exposed.

Canada

The government of Canada, Office of the Superintendent of Bankruptcy, is using innovative methods to help detect bankruptcy fraud. Canada contracts out its investigations of fraud cases to the Royal Canadian Mounted Police, but their current relationship is being evaluated in the face of increasing Mounted Police obligations due to national security threats. Investigation referrals are now being partly referred out to private investigative agents who use forensic accounting, securities fraud experts, and traditional private investigation techniques to uncover malfeasance. Pilot projects are currently under way to experiment with alternative models (public-private partnerships and contracting) to assess required costs and effectiveness. Following up on the outcomes of the pilot programs would be a worthwhile effort. How effective were these alternative models (such as contracting out investigations)? These efforts have the promise of transferable value to USTP in the future, depending on their outcomes.

Summary

The IRS' filtering and scoring techniques for detecting fraud should be particularly relevant to USTP once it has data-enabled forms and can conduct statistical analyses. The IRS matching approach is not immediately useful to USTP, since USTP does not automatically receive secondary information from which to verify reported information. However, once data-enabled

forms are implemented and fraudulent profiles (similar to those used by GSA) are established, USTP can request relevant documentation to verify information from flagged cases.

Research Suggestions

This chapter suggests future research tasks that USTP might undertake to design improved measures of fraud, abuse, and error; to more accurately estimate the prevalence of fraud, abuse, and error; and to improve its ability to detect fraud, abuse, and error.

The development of indicators of fraud, abuse, and error is not an end in and of itself. The purpose of developing indicators is to better understand how and under what circumstances fraud, abuse, and error take place. This understanding is needed to focus enforcement actions and deter future occurrence, thereby preserving the integrity of the bankruptcy system for its intended purpose—to give a financial fresh start to those truly in need. The following research suggestions include both tasks that USTP could undertake in an effort to develop more effective indicators of fraud, abuse, and error in the personal bankruptcy system and tasks to improve the estimation of the prevalence of fraud, abuse, and error.

Data-Enabled Filings

As has been mentioned throughout this monograph, research on characteristics of bankruptcy filings is severely limited by the fact that bankruptcy cases are not currently data enabled. Cases are electronically filed in the bankruptcy courts in portable document format (PDF) files, which are essentially just pictures of documents. Although some PDF files have embedded text, most personal bankruptcy filings cannot be converted to electronic data. Because the documents are not machine readable, data cannot be electronically extracted from the cases and entered into a database for analysis. Rather, each case must be manually reviewed to extract the information needed for analyses. This greatly increases the difficulty and, consequently, the costs of analyses that could illuminate fraud, abuse, and error issues.

The bankruptcy system is part of the federal court system, which controls the rules and protocols for filing federal court documents, including bankruptcy forms. USTP has been working with the AO in an attempt to move toward fully data-enabled forms. USTP believes that the courts are likely to establish a data-enabled standard in 2007. Accomplishing this goal should be an extremely high priority, as it will allow the bankruptcy courts and USTP to accomplish their missions far more effectively and efficiently.

Digitizing bankruptcy filings does not necessarily need to be an all-or-nothing proposition. Given resource constraints, a decision to abstract only a few key fields from paper bank-

ruptcy forms might still be helpful for automated screening if those fields are chosen carefully. In fact, this is the process that the IRS uses in converting paper-filed tax forms into an electronic format. They abstract only those fields necessary to conduct statistical analyses.

Research Costs and Priorities

The absence of data-enabled filings and the possibility that a data-enabled standard will be adopted in the foreseeable future preclude any possibility of estimating the likely costs of any of the research projects suggested here or of assigning priorities to them. Tasks that could be easily and inexpensively accomplished by reading data from cases directly into databases would be very costly and time-consuming to accomplish if the data had to be manually extracted from forms, keyed into a database, and then reviewed to identify and correct data-entry errors.

Uncertainty about costs translates into uncertainty about priorities, because a potential project's priority will depend on its costs and benefits relative to those of other projects. The proportion of the total costs of a research project that goes to data entry will vary across projects. Consequently, the reduction in data-entry costs that would result from the adoption of a data-enabled standard will vary across projects. Some projects' costs would be greatly reduced if bankruptcy forms were data enabled; the costs of other projects that were less dependent on data derived from bankruptcy forms would be less affected. The relative rankings in terms of priorities of various projects would vary depending on whether they were undertaken in the current data environment or conducted after a data-enabled standard was adopted.

Accordingly, the remainder of this chapter simply lists potential research projects we believe worthy of consideration by USTP without regard for either the likely costs (with, or without, data-enabled forms) or the consequent priorities. All of the projects listed here would be less expensive with data-enabled forms, but not equally so. The expert systems suggestion is the only one that would require data-enabled forms to implement. The administrators at USTP will be in the best position to assess costs and priorities relative to their current landscape and competing priorities.

The research suggestions are broken into two subgroups. The first set of suggestions relates to the debtor audits currently ongoing at USTP. These audits will provide a platform to conduct research into areas related to estimating the prevalence of fraud and abuse and the identification of fraud and abuse. The second set of suggestions would involve instituting new research endeavors.

Ongoing Research: Debtor Audits

BAPCPA requires USTP (or the United States' Judicial Conference in judicial districts served by bankruptcy administrators) to conduct audits of samples of individual Chapter 7 and Chapter 13 filings. The audits are to determine the accuracy, veracity, and completeness of the petitions and supporting documents. The audits will include two samples, one a random sample

and the other a selected sample of filings in which income and expenses are significantly greater than the norm in the districts in which they were filed.

The country has been divided into 10 geographic areas (nine for USTP regions, one for bankruptcy administrator districts). Two private accounting firms have been selected for the nine USTP geographic areas and one has been selected for the bankruptcy administrator districts. The audits will be conducted between October 20, 2006, and September 30, 2007, and annually thereafter. USTP will report in winter of 2007 on the percentage of cases audited in which a material misstatement is identified.

The EOUST debtor audit team will select cases. For random audits, in each district, a computerized algorithm will select every 250th case filed, assuming that the debtor filed schedules and statements of affairs. Selecting cases for selected audits is more difficult, because bankruptcy papers are not data enabled. Because the documents are not machine readable, each case must be manually reviewed by an EOUST paralegal to determine whether income or expenses are greater than the norm for the district in which it was filed. At current filing rates, the project is expected to include several thousand random and selected cases.

The auditors will perform a desk audit. They will not visit the debtor's home or place of business. They will get court-filed papers from the court's electronic system (Public Access to Court Electronic Records, or PACER) and perform Internet searches to test the veracity of documents. For example, they will look at property records, which are publicly available online in most jurisdictions. Documents requested will include six months of pre-filing pay stubs (Bankruptcy Code requires two months of pay stubs from all debtors), tax returns from two years prior to filing (Bankruptcy Code now requires several years of tax returns from all debtors), six months of banking and investment account records, any documentation explaining unusual withdrawals or deposits, copies of a divorce decree or resultant property settlement executed within three years pre-filing, and copies of child support orders from the previous three years.

At the conclusion of each debtor audit, the contractor conducting the audit will file a report with the court, USTP, and the case trustee listing the material misstatements found during the audit. The contractors will report only material misstatements on a case-by-case basis. The contractors are not required to perform any analyses of patterns of material misstatements across cases.

USTP has not formally announced its plans for analyses of the results of the audits. USTP might consider aggregating the data from the full set of audits and conducting analyses of patterns in the material misstatements found by the auditors. They could, for example, examine the relative frequency and magnitude of various types of misstatements: What fraction of audits found misstatements regarding a debtor's income? What fraction of audits found misstatements regarding a debtor's assets? They could also examine the relationships between debtors' characteristics and the magnitude and types of misstatements found by the auditors. For example, are higher-income debtors more, or less, likely to misstate income compared to lower-income debtors? The following sections outline suggested research efforts using data from the debtor audit project.

As noted previously, the debtor audits conducted in the debtor audit project are desk audits. The auditor reviews papers filed with the courts and conducts Internet searches to

obtain relevant information (e.g., property records) to test the veracity of documents. Auditors may overlook misstatements, particularly omissions of information such as ownership of assets not identified on papers filed with the court. Even if the asset is recorded on an Internet site, absent some indication of the existence of the asset, the auditor may not think to visit that site.

USTP might consider an audit of a sample of the audits conducted in the debtor audit project. Auditors would conduct full-scale investigations of the filings in the selected sample to determine the extent to which the desk audits were successful in identifying misstatements.

Potential Future Research Using Debtor Audit Project Data

Developing Indicators of Fraud, Abuse, and Error

The current audit project is only the initial wave of audits. USTP plans to conduct debtor audits on a continuing basis. The subsequent annual reports on the results of these audits should illuminate many of the questions regarding the identification of fraud, abuse, and error in individual bankruptcy filings. Moreover, the data developed in these audits could provide a basis for research into relevant issues aside from those directly addressed in the annual audit reports. In particular, the data developed by these audits will provide an opportunity to identify characteristics such as cases filed by relatively high-income debtors or cases filed by debtors who have particularly large numbers of creditors, and so on, of cases that predict a higher probability of material fraud or abuse.

As noted earlier, the presence of a characteristic, or a specified combination of characteristics, in a case is not likely to be sufficient to demonstrate the presence of fraud, abuse, or error. But it is highly likely that research using the audits could identify characteristics, or combinations of characteristics, in a case that are associated with an increased probability of fraud, abuse, or error. If these characteristics, or combinations of characteristics, can be identified, they can be used to estimate the prevalence of fraud, abuse, and error and to direct analysts' and trustees' attention to cases that warrant more extensive reviews.

Simply noting the presence of a material misstatement in a case will not suffice in developing indicators of fraud, abuse, or error. The debtor audit pilot project found misstatements on the majority of cases audited. Some scoring system will need to be developed to distinguish between misstatements that warrant concern and misstatements that reflect inconsequential errors. Analyses could then seek to identify predictors of consequential misstatements.

One approach would be to develop a scoring system that ranks the severity of a misstatement in terms of its likely consequences for the dismissal of a case. USTP could have private trustees and field office analysts in each region review the cases from their region in which a misstatement was found to determine whether they believe the misstatement, if not discovered, would have affected the outcome of the case. Researchers could then perform analyses such as the discriminant analysis used by the IRS to explore the relationships between various characteristics of the filing and the likelihood that it contained a misstatement that would affect its outcome.

The purpose of this research would be to identify case characteristics that suggest the possible presence of a material misstatement, not to test analysts' and trustees' ability to note misstatements. Therefore, the question of whether an analyst or trustee would have likely noted a misstatement is irrelevant. Rather, the focus would be to develop indicators of the possible presence of misstatements sufficiently significant that, if present, could affect a case's outcome.

This should be an iterative process in that the estimates should be revised each year as additional data become available.

Estimating the Prevalence of Fraud, Abuse, and Error

If reliable indicators of fraud, abuse, and error can be developed, they can then be used to estimate the prevalence of fraud, abuse, and error by case characteristics, in a given geographical area and nationally. The process of developing indicators described previously essentially consists of estimating the probability that a case with specified characteristics will contain material misstatements. Consequently, the product of the number of cases with specified characteristics and the probability of fraud, abuse, or error in a case with those characteristics is an estimate of the number of those cases that include fraud, abuse, or error.

The estimates described previously are direct estimates of the prevalence of fraud, abuse, or error in cases with the specified characteristics. The prevalence of fraud, abuse, or error in a given geographical area or nationwide could be accomplished in two steps. First, use the indicators of fraud, abuse, and error described previously to define a set of mutually exclusive and exhaustive categories for cases such that the cases assigned to each category share characteristics that predict particularly high, or low, probabilities of fraud, abuse, or error. Second, use the fraud, abuse, and error indicators described previously to estimate the probability of fraud, abuse, or error in the cases in each category. The product of the number of cases in a category, by geographical area or nationally, and the probability of fraud, abuse, or error in cases in that category is an estimate of the number of those cases that include fraud, abuse, or error. Computing these estimates for all categories and weighting by the distribution of cases across categories in the geographical area of interest or nationally would yield the relevant estimates of the prevalence of fraud, abuse, and error.

Estimating the Deterrent Effects of Enforcement Actions

As noted earlier, civil and criminal enforcement actions could have significant deterrent effects in addition to their direct effects on the cases prosecuted. Therefore, in considering which cases to prosecute, USTP must consider both the magnitude of the problem in each particular case and the likely deterrent effects of pursuing any particular case. Over time, USTP could examine the relative success of different civil or criminal enforcement strategies in terms of their deterrent effect when brought against one type of fraud or abuse than another.

Presently, USTP consistently reviews the success rates of its enforcement actions in terms of the direct effects of these actions on the cases in which they are pursued. They could also examine the relationship over time between the pursuit of certain types of enforcement strategies and prevalence estimates of the incidence of fraud, abuse, and error in the types of cases on which those strategies are used.

Estimating the Direct Effects of Enforcement Actions

USTP currently measures the direct effects of its enforcement actions in terms of the amount of debt that was not discharged as a result of its enforcement actions (e.g., dismissal, denial of discharge). However, this number may be misleading. Institutional creditors frequently charge off debt when the case is filed and the automatic stay takes effect and do not resurrect it even though a successful enforcement action precluded discharge of the debt. In such cases, the debtor essentially receives a de facto discharge, if not a legal one. It is possible that many debtors, or their advisors, are fully aware of this and, consequently, are less concerned about obtaining a discharge than is generally assumed. If so, the consequences of enforcement actions and their resulting deterrent effects are smaller than they appear.

USTP might select a sample of cases in which it undertook an enforcement action that proved successful in that the debt was not discharged legally. It would then approach the creditors involved in the case and seek data from them regarding the extent to which the debt to them was paid or is being paid according to a repayment agreement.

Estimating the Effects of Analysts' and Trustees' Priorities

USTP field office staff and trustees must examine numerous cases every day. Their allocation of time among cases can have a significant effect on the extent to which they succeed in identifying cases that include fraud, abuse, and error. It may be that analysts' and trustees' efforts to identify cases that include fraud, abuse, or error and either seek dismissal or refer the case for civil or criminal enforcement action have much greater deterrent effect when directed toward one type of fraud or abuse than another, even though the latter type might appear to be more serious.

Accordingly, in deciding the extent to which they will examine a particular case, field office staff and trustees must consider the aggregate volume of fraud, abuse, and error that might be deterred if a case is successfully challenged. However, they have no way to directly observe the extent to which their efforts might deter those who would otherwise engage in fraud or abuse. Therefore, USTP could develop information that will provide field office staff and trustees with guidance as to their priorities in examining cases with various characteristics. USTP could also examine the relationship over time between field office staff and trustee priorities in reviewing various types of cases and prevalence estimates of the incidence of fraud, abuse, and error in the types of cases on which they focus.

Suggested New Research

Survey Field Office Analysts and Private Trustees

Field office staff and private trustees have developed insight and knowledge regarding fraud, abuse, and error in individual bankruptcy cases that have not been formally documented. They have essentially developed implicit useful indicators of fraud, abuse, and error.

As part of RAND's research, field office staff were interviewed and their practices observed in an attempt to understand what triggers the suspicion of potential fraud, abuse, or error while reviewing cases. Each reviewer identified certain key items or relationships that they examined

on each case that came before them. If they saw something in those key items or relationships that appeared suspicious, they conducted a detailed examination of the case. If clear indication of fraud or abuse is not discovered, the reviewer may refer the case on to the private trustee with a note drawing attention to the questionable item or relationship.

RAND researchers asked analysts in the region 16 office to review recent filings in which they suspected fraud, abuse, or error and describe what they had seen in the filing that gave rise to their suspicions. These indicators are as follows:

- Debtor has ID problems.
 - Debtor filed using someone else’s SSN or a false SSN.
 - Debtor filed bankruptcy with an individual taxpayer identification number without disclosing that he or she had used an SSN not assigned for work, credit, or other purposes.
- Debtor has very high unsecured debt.
 - Debtor has unsecured debt well in excess of what could possibly have been repaid given debtor’s income and no indication of either recent unusual expenses or sharp fall in income.
 - Debtor has very high unsecured debt relative to assets raising question of what debt funds were used for.
- Expenses are high relative to income and there is no indication of either a recent increase in expenses or a fall in income.
- Income appears sufficiently high to repay most, if not all, debt, given reasonable expenses.
- Family structure is inconsistent with expenses.
 - Expenses appear high for a single person or for a married person with no other dependents.
 - Debtor reports no dependents but expenses include children’s school tuition or other child care costs.
 - Debtor reports being single but no rent or utility expense.
 - Debtor reports being married with no children but no spousal income.
 - Debtor reports being separated with no children but no alimony.
- Payroll deductions for taxes and social security appear too high, given income and dependents.
- Debtor makes apparent excessive alimony maintenance and support payments, given reported income.

A more systematic survey of clerks, analysts, and private trustees could be conducted across regions to identify fraud indicators that have proved useful and those that have not.

The clerks, analysts, and trustees would be asked to fill out a brief instrument each time they encountered a case that they thought suspicious. (The instruments provided to clerks and analysts might differ from those provided to trustees to reflect the differences in the information available to them.) In each case, the respondent would be asked to identify the factors that raised their suspicions, what they did to pursue the matter, and the ultimate outcome of

the case. Analysts and private trustees tend to use experience and hunch in noting something potentially suspicious in a case. The goal of this research would be to formally document their informal knowledge and understanding to help design a system to identify patterns of fraud or simulate analysts' reasoning.

The survey design would likely need to account for geographic variations and rural/urban differences.

Develop Expert Systems for Identifying Likely Instances of Fraud, Abuse, and Error

At present, analysts and trustees manually review submitted bankruptcy cases to determine the validity of the information provided in the case. The development of an expert system to aid in these reviews may significantly enhance their ability to identify fraud, abuse, and error.

An expert system contains the knowledge of experts (in this case, the analysts and trustees) placed in the form of rules: "If [condition] then [action]." For example, one (very hypothetical) rule might be, "If the debtor claims recent significant loan repayments to friends or relatives with little or no documentation, take particular care in reviewing the case." The rules are determined from the experts by a person who might be called a *knowledge engineer*—a person who enters into a dialogue with the analysts, asking why they made a particular determination, what factors led to the recommendation, and so on. After interviewing the analysts and observing their actions, the knowledge engineer attempts to codify their logic into a set of rules that a computer could execute to make its own determination regarding approval or disapproval of a case.

There are other approaches to the development of rule-based systems to assist decision-making. In particular, neural networks are frequently used to model complex relationships between inputs and outputs or to find patterns in data. Neural networks are essentially mathematical models defining a relationship between variables. In practical terms, in a neural network model, nodes are connected together to form a network of nodes—thus the term *neural network*. The key attribute of neural networks is not the models themselves but, rather, the possibility of learning, which in practice means using a set of observations to find the particular mathematical models that fit the observed data in an optimal sense. A neural network is an adaptive system that changes its structure based on external or internal information that flows through the network.

Although a neural network does not have to be adaptive per se, its practical use comes with algorithms designed to alter the strength (weights) of the connections in the network to produce a desired signal flow.

Expert systems may be preferred over other possible approaches because they possess a major advantage of importance in this situation: They can produce an audit trail of logic explaining their decision. It would be important to be able to document the reasons that an expert system came to a particular conclusion, and a traceback listing of the rules that were used in making a determination can be used for that purpose. Most neural networks and other forms of expert systems are not nearly as complete, if at all, in this particular feature.

After creating a set of rules based on the analysts' logic, the expert system would then be tested by running a set of cases through it and comparing their results with the analysts'. When discrepancies result, the expert system could be modified until the results were in close agree-

ment. (In fact, sometimes the analyst might say, “I hadn’t considered those factors; perhaps the expert system’s recommendation is the better one.”) A modest-sized expert system (perhaps 50 to 80 rules) could suffice for this application, and at the very least would provide a second pair of eyes to review cases. Over time, it might come to be trusted to handle routine cases or at least be used to flag unusual ones for human review.

Among several advantages of the expert system is greater consistency in review of bankruptcy cases and the availability of consistent audit trails indicating exactly which rules were used to come to a determination or recommendation.

The foundational work of developing a set of rules based on analysts’ logic could be done prior to the development of, and in anticipation of, data-enabled forms. However, the full application of an expert system would be far too costly and cumbersome unless forms were fully data enabled. Consequently, the full development of an expert system should be postponed until a data-enabled standard is implemented.

Follow Up on the Canadian Pilot Programs

Many of the study group members expressed considerable interest in Canadian efforts to develop improved means for detecting bankruptcy fraud. Similarly, reviewers of earlier drafts of this monograph were quite interested in these programs. The nature of their remarks clearly indicated that they were not familiar with Canadian efforts in this area. The combination of interest in the potential of these programs and apparent lack of familiarity suggests that detailed reviews of their effects would be a worthwhile effort. How well have some of the pilot programs worked (e.g., contracting out investigations)? These efforts have the promise of transferable value to USTP in the future, depending on their outcomes.

It should be noted that, while the Canadian systems are similar to the U.S. system in many respects, primarily because all are rooted in the historical UK system, important differences might affect their effectiveness if they were transferred to the United States. An important component of any follow-up on either of these efforts would be a detailed examination of the investigative procedures they employ and an evaluation of the availability of these procedures in the U.S. legal system.

Profile Cases Reopened at the Trustee’s Request

Trustees occasionally ask the Bankruptcy Court to reopen a closed case to administer assets. These are frequently cases in which material, undisclosed assets were discovered after the case was closed. Although assets are sometimes overlooked, these cases often involve fraud or abuse. Profiling such cases may identify common characteristics that could be used to develop indicators of fraud, abuse, and error. The examination of these cases could be extended to identify the kinds and sources of information that led the trustee to request that the case be reopened. Analyses of this information might yield indicators that could guide trustees in investigating cases that have raised their suspicions.

Profile Fraudulent Cases

USTP has a history of cases in which fraud has been proven. Such cases could be analyzed to create profiles of fraudulent filers. What is the distribution of fraudulent entries across the

items in a case? Are there correlations among different items in terms of fraudulent entries? Are there correlations between filers' characteristics and patterns of fraud? For example, are the kinds of fraud found in claims filed by relatively low-income filers similar to the kinds of fraud found in claims filed by relatively high-income filers? These profiles and the analyses of them could then be used to help define fraud indicators.

Profile Useful Tips

Tips are a prime source for identifying fraud, but tips are also sometimes mistakes or the result of someone trying to cause trouble for a filer. How reliable are tips as an accurate indication of fraud? What fraction of tips leads to identification of fraud? Are some types of tips (e.g., tips from certain types of sources or about certain aspects of a filing) more likely to prove valid than are others? Because following up on a tip consumes resources, USTP would benefit from an improved ability to determine when a tip is likely to lead to discovery of fraud and when it would be more cost-effective not to follow up on a tip. The outcomes of cases in which tips were received could be analyzed to create profiles of the kinds of tips that are more likely to result in dismissal or a civil or criminal enforcement action.

Explore the Potential Value of Penalties for Fraud, Abuse, or Error

In the large majority of cases in which analysts or private trustees discover fraud, abuse, or error, USTP seeks dismissal of the case, denial of the debtor's discharge, or, in a Chapter 7 case, conversion to Chapter 13. A very small fraction of cases in which fraud is discovered is referred to criminal enforcement. Even when cases are referred to the U.S. Attorney, depending on the U.S. Attorney's caseload, there may not be a criminal action. USTP could also review the literature on the deterrent effect of monetary penalties across a spectrum of issues to estimate the extent to which creating penalties, such as exist in the tax system, would create a deterrent to fraud, abuse, or error.

Explore the Possibility of Electronic Screening of Other Government Electronic Records

Other government agencies may collect electronic data that would bear on the likelihood that a filing with particular characteristics contains fraud, abuse, or error. If so, and if appropriate arrangements for data access with due regard for privacy concerns can be made, USTP may be able to develop methods for using other agencies' data systems to help identify fraud, abuse, or error. At this point, this suggestion is highly speculative due to the Privacy Act of 1974, which limits the sharing of private information by government agencies without law enforcement authority.

Nonetheless, USTP might initiate discussions with other agencies regarding the data they obtain on a routine basis, some of which may be public information. Once USTP identifies data routinely collected by another agency, it could use the findings of the research activities discussed previously to explore the possibility that the data, if available, would be helpful in estimating the likelihood that a case contains fraud, abuse, or error. USTP could then explore the question of gaining access to the data and developing systems to integrate the data with the data that USTP collects itself in the process of identifying fraud, abuse, and error.

Other Study Group Suggestions

Study group members made other useful suggestions that may or may not lend themselves to policy or process changes or research projects. Because these suggestions fall outside the scope of this study, we could not explore them in the course of our work. However, they are worth consideration by USTP in its efforts to do a better job of deterring or identifying fraud, abuse, and errors. Accordingly, we note them below.

Increase the strength and repetition of the message throughout the process that bankruptcy fraud is an illegal and serious offense. This is a common approach used by other agencies such as the IRS. This might include a cover sheet on the case outlining the seriousness of committing fraud or abuse (perhaps requiring a signature). It could also include an amnesty period that allows the filer to correct any mistakes without question within a short window of time. The trustee could reiterate this same statement at the 341 hearing. Again, it could require a signature stating that the filer understands the consequences of committing fraud or abuse.

In the training that is provided to USTP analysts and private trustees, consider including **specialized training in the area of identifying deceptive behavior**. Numerous studies have been conducted and techniques have been developed to help law enforcement and other entities determine whether someone is answering truthfully, such as the Reid technique. The Reid technique is a nine-step method of factual analysis, interviewing, and interrogation designed to eliminate innocent suspects from the system, thereby focusing on the most likely suspects (Buckley, 2005). The Reid technique is widely used by law enforcement agencies in North America and is argued to be very effective. Such methods could be particularly useful for trustees, who may be the only officials in the bankruptcy system who meet face to face with petitioners.

Consider establishing a system that uses a percentage of dollars recovered from fraudulent filers to fund **financial incentives for future detection of fraud**.

USTP should consider these suggestions relative to some changes in the new law, which may have mitigated the problem that these suggestions are attempting to address. For example, attorneys must now sign the cases certifying that the information in the filing is correct. In evaluating suggestions, USTP will want to be sensitive to creating new barriers or disincentives to entering the bankruptcy process, since bankruptcy is often the best option for some debtors.

Summary and Conclusions

The RAND research and the study group discussions addressed five questions:

1. Are there any lessons to be learned from how other government programs or the private sector detect fraud and abuse?
2. Are there any transferable processes that USTP can consider adopting?
3. How might USTP develop indicators of fraud, abuse, and error?
4. How might USTP consider estimating the prevalence of fraud, abuse, and error?
5. What future research tasks could USTP conduct to develop data and knowledge that would enable USTP to more effectively identify fraud, abuse, and error in the bankruptcy system?

This chapter presents the RAND research team's conclusions. The RAND research team considered the study group's discussions and suggestions in formulating the conclusions presented here. However, the study group was not asked to approve these conclusions. We do not suggest that the study group members agree with all the conclusions presented below.

Lessons Learned and Transferable Processes

Data-Enabled Forms

The primary difference between how fraud is identified in the bankruptcy system and how it is identified in the other public- and private-sector systems we examined has to do with the availability of data from which to conduct statistical fraud detection. To replicate the approaches of these others would require USTP to have a system of data-enabled forms and a data capture and manipulation system, which it does not currently have but toward which it is working. The most important lesson for USTP from other public and private programs aimed at detecting fraud is that having data-enabled forms and a data capture and manipulation system is an essential step toward improving USTP's ability both to estimate the prevalence of fraud and to detect fraud.

Government Programs

Most of the concern regarding fraud and abuse in government programs is focused on procurement and payment systems, which are not areas of concern for USTP. Therefore, there is little

that USTP can learn from most government programs about either estimating the prevalence of fraud or detecting fraud.

The tax system is the most directly applicable to USTP. The IRS's scoring system is highly relevant to USTP's concerns. The IRS uses discriminant analyses to develop a series of weights that are then applied to characteristics of individual returns to assign each return a score that is essentially an estimate of the likelihood that the return is fraudulent. Filings with outlier scores are automatically flagged for further review by an auditor. These become the targeted audits. Auditors may review the return and understand why the return received the score it did and allow it to continue on for processing. In other cases, auditors may determine that correspondence or an official audit is warranted.

GSA uses forensic accountants to develop financial profiles and lifestyle analyses to assist in identifying fraud. Once profiles are set up, service and equipment providers can be compared against these profiles. Those that fall outside the norms may be committing fraud and may require closer inspection. This allows investigative efforts to be more targeted. Creating profiles (in USTP's case, profiles of fraudulent petitioners) assists in identifying whether fraud is worth exploring. Without an electronic data system that can be manipulated, this may be a very labor-intensive task.

The FOCUS program initiated by Medi-Cal through the Fraud Prevention Institute confronts medical providers with information regarding illegal practices in medical claims and conducts an annual fraud risk assessment of medical providers. This approach has limited application to USTP, since it is premised on continuous interaction with the same providers. It does have transferable value as a fraud prevention tool that could be easily instituted with a one-page sheet explained by the trustee at the 341 hearing. The sheet could explain that, to protect the program's integrity for everyone, each bankruptcy filing could be subject to an audit (debtor audit program) and that including any false information or concealing information could result in criminal action.

The government of Canada's Office of the Superintendent of Bankruptcy has initiated pilot projects to experiment with alternative models (public-private partnerships and contracting) to assess required costs and effectiveness. Following up on the outcomes of the pilot programs would be a worthwhile effort.

Private Sector

The private sector has developed and used various forms of statistical fraud detection over the past two decades. These systems have become increasingly sophisticated in recent years with the development of neural network models that mimic how the human brain would perceive and process information, such as recognizing unusual (perhaps fraudulent) activity. These programs attempt to identify patterns of behavior, compare those patterns with baseline information, and identify anomalies. The statistical analysis returns a suspicion score that can be rank ordered and investigative time can be spent on those with the highest scores.

The development of an expert system to aid analysts and trustees may significantly enhance their ability to identify fraud, abuse, and error. An expert system contains the knowledge of experts (in this case, the analysts and trustees) placed in the form of rules: "If [condi-

tion] then [action].” The rules are used to develop a system that a computer could execute to offer a determination regarding approval or rejection of a case.

Neural network and expert system technologies require levels of electronic information not currently available to USTP due to the lack of data-enabled bankruptcy case filings. However, the building blocks for developing such systems can be created in anticipation of data-enabled forms.

How Might USTP Develop Indicators of Fraud, Abuse, and Error?

The ongoing debtor audit project should provide an opportunity to identify characteristics of cases that predict a higher probability of material fraud or abuse. As noted earlier, the presence of a characteristic, or a specified combination of characteristics, in a case is not likely to be sufficient to demonstrate the presence of fraud, abuse, or error. But it is highly likely that research using the audits could identify characteristics, or combinations of characteristics, in a case that are associated with an increased probability of fraud, abuse, or error. If these characteristics, or combinations of characteristics, can be identified, they can be used to estimate the prevalence of fraud, abuse, and error and to direct analysts’ and trustees’ attention to cases that warrant more extensive reviews.

One approach would be to develop a scoring system that ranks the severity of a misstatement in terms of its likely consequences for the dismissal of a case. USTP could have private trustees and field office analysts in each region review the cases from their region in which a misstatement was found to determine whether they believe that the misstatement, if not discovered, would have affected the outcome of the case. Researchers could then perform analyses such as discriminant analyses used by the IRS to explore the relationships between various characteristics of the filing and the likelihood that it contained a misstatement that would affect its outcome.

How Might USTP Estimate the Prevalence of Fraud, Abuse, and Error?

If reliable indicators of fraud, abuse, and error can be developed, they can then be used to estimate the prevalence of fraud, abuse, and error by case characteristics, in a given geographical area and nationally. The process of developing indicators described previously essentially consists of estimating the probability that a case with specified characteristics will contain material misstatements. Consequently, the product of the number of cases with specified characteristics and the probability of fraud, abuse, or error in a case with those characteristics is an estimate of the number of those cases that include fraud, abuse, or error.

The estimates described previously are direct estimates of the prevalence of fraud, abuse, or error in cases with the specified characteristics. The prevalence of fraud, abuse, or error in a given geographical area or nationwide could be accomplished in two steps. First, use the indicators of fraud, abuse, and error described previously to define a set of mutually exclusive and exhaustive categories for cases such that the cases assigned to each category share characteris-

tics that predict particularly high, or low, probabilities of fraud, abuse, or error. Second, use the fraud, abuse, and error indicators described previously to estimate the probability of fraud, abuse, or error in the cases in each category. The product of the number of cases in a category, by geographical area or nationally, and the probability of fraud, abuse, or error in cases in that category is an estimate of the number of those cases that include fraud, abuse, or error. Computing these estimates for all categories and weighting them by the distribution of cases across categories in the geographical area of interest or nationally would yield the relevant estimates of the prevalence of fraud, abuse, and error.

What Future Research Tasks Could USTP Conduct to Develop Data and Knowledge That Would Enable It to More Effectively Identify Fraud, Abuse, and Error in the Bankruptcy System?

Chapter Five suggests future research tasks that USTP might undertake to design improved measures of fraud, abuse, and error; to more accurately estimate the prevalence of fraud, abuse, and error; and to improve its ability to detect fraud, abuse, and error. The research suggestions presented there include both tasks that USTP could undertake in an effort to develop more effective indicators of fraud, abuse, and error in the personal bankruptcy system and tasks to improve the estimation of the prevalence of fraud, abuse, and error.

The research tasks suggested in Chapter Five fall into three broad categories. The first comprises studies USTP could undertake with data from the debtor audit project. Those are relatively short-term, high-priority tasks to take maximum advantage of data that USTP already plans to collect. The second set of suggested research tasks concerns additional profiling and survey tasks USTP could perform to refine red flags for suspicious cases. These include tasks such as surveying the reasoning of analysts and trustees and developing fraudulent profiles. These tasks complement the tasks based on the debtor audit project data. Finally, we suggest longer-term studies for developing expert systems to screen bankruptcy cases automatically when those cases eventually do go digital. An expert system could use the surveying and profiling research to develop the sets of rules upon which the expert system is based.

Conclusions

USTP has long been concerned with preventing fraud, abuse, and error in connection with personal bankruptcy filings. Given that USTP has finite resources to detect and prosecute such cases, improved techniques for identifying fraud, abuse, and error are a high development priority for the agency. This monograph draws on a literature review, expert study panel, and elite interviews to describe current processes for investigating bankruptcy fraud and abuse, to specify related challenges facing USTP, and to suggest avenues for future research and development that could assist the agency in better pursuing its mission.

At present, USTP relies on a bankruptcy filing process that is not digitally enabled and, therefore, does not support automated screening of claims for potential indicators of fraud,

abuse, and error. The conversion to a digital filing process (possibly as early as 2007) could allow USTP to implement automated screening and expert decision-support protocols to identify filings that present heightened risk. Such screening, however, would require that USTP define specific risk criteria by which to score individual claims. Notably, some of those criteria may already exist, based on the heuristics that bankruptcy trustees and USTP analysts currently use to earmark suspicious filings for more detailed investigation. Other relevant criteria might be developed through statistical analyses of bankruptcy data gathered by the debtor audit project and particularly so to the extent that, for example, debtor characteristics can be tied to an independent judgment regarding the importance of particular misstatements as indicators of fraud.

We conclude that there are several additional profiling and survey research tasks that USTP might undertake to better formalize indicators of suspicious filings and useful tips, ultimately as a precursor to leveraging digital filings through automated screenings for indicators of fraud, abuse, and error in the future.

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