



ACFE<sup>SM</sup>

Association of Certified Fraud Examiners



# 2008 REPORT TO THE NATION ON OCCUPATIONAL FRAUD & ABUSE

# Letter from the President

When the Association of Certified Fraud Examiners was founded 20 years ago, we knew that occupational fraud was a significant and largely misunderstood problem for organizations. Our personal experiences, along with a host of anecdotal evidence, indicated that fraud had a massive impact on businesses and agencies in all sectors of the economy. Unfortunately, at that time, very little research had been conducted on occupational fraud so there was no way to know just how big the problem was or to find much useful information about the individuals who committed these crimes or the organizations victimized by them.



ACFE's Chairman and Founder, Joseph T. Wells, conceived of the *Report to the Nation on Occupational Fraud and Abuse* as a way to shed light on the costs and effects of occupational fraud. It is fair to say that over the course of his career Mr. Wells has contributed more to the study of fraud than any other person, and in many ways the *Report to the Nation* represents one of his most significant achievements.

In 1996, when the first *Report to the Nation* was published, it constituted the largest privately funded study ever conducted on fraud. The ACFE has published subsequent editions in 2002, 2004, 2006, and now 2008, and over that time the *Report to the Nation* has come to be regarded as the most authoritative statistical resource available on occupational fraud.

The growth and influence of the *Report to the Nation* are almost entirely due to the efforts of Mr. Wells and his conviction that understanding how fraud works is crucial to effectively combating it. Because of Mr. Wells' contributions, Dr. Gil Geis, the first president of ACFE, originally named this study *The Wells Report*. Though he was too humble to accept that name, each edition of the *Report to the Nation* truly belongs to Joe Wells.

It also belongs to the Certified Fraud Examiners who contribute the raw data from which the *Report to the Nation* is compiled. The 2008 edition of the Report is based on 959 cases of occupational fraud which were reported by the CFEs who investigated and resolved them. Without the information supplied by those CFEs, this Report would not exist. I sincerely thank them for their contributions.

I am pleased to present the *2008 Report to the Nation on Occupational Fraud and Abuse* to practitioners, business and government organizations, academics, the media, and the general public. I hope the information contained in this Report will further the general understanding of occupational fraud and support the efforts of those who work to deter, prevent, detect, and investigate it.

A handwritten signature in blue ink that reads "James D. Ratley". The signature is written in a cursive style with a large, stylized initial 'J'.

James D. Ratley, CFE  
President, Association of Certified Fraud Examiners

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# Executive Summary

This study is based on data compiled from 959 cases of occupational fraud that were investigated between January 2006 and February 2008. All information was provided by the Certified Fraud Examiners (CFEs) who investigated those cases.



**One-fourth of the frauds in this Report caused at least \$1 million in losses.**

- **Occupational fraud schemes tend to be extremely costly.** The median loss caused by the occupational frauds in this study was \$175,000. More than one-quarter of the frauds involved losses of at least \$1 million.
- **Occupational fraud schemes frequently continue for years before they are detected.** The typical fraud in our study lasted two years from the time it began until the time it was caught by the victim organization.
- This Report focuses on 11 distinct categories of occupational fraud. **The most common fraud schemes were corruption, which occurred in 27% of all cases, and fraudulent billing schemes, which occurred in 24%.** Financial statement fraud was the most costly category with a median loss of \$2 million among the 99 financial misstatements in this Report.
- Participants in our survey estimated that U.S. organizations lose 7% of their annual revenues to fraud. Applied to the projected 2008 United States Gross Domestic Product, this 7% figure translates to **approximately \$994 billion in fraud losses.**
- Despite increased focus on anti-fraud controls in the wake of Sarbanes-Oxley and mandated consideration of fraud in financial statement audits due to SAS 99, our data shows that **occupational frauds are much more likely to be detected by a tip than by audits, controls or any other means.** Forty-six percent of the cases in this Report were detected by tips from employees, customers, vendors, and other sources. Tips were also the most common means of detection in 2002, 2004, and 2006.

- **The implementation of anti-fraud controls appears to have a measurable impact on an organization's exposure to fraud.** We examined 15 specific anti-fraud controls and measured the median loss in fraud cases depending on whether organizations did or did not have a given control at the time of the fraud. In every comparison, there were significantly lower losses when the controls had been implemented. For example, organizations that conducted surprise audits suffered a median loss of \$70,000, while those that did not had a median loss of \$207,000. We found similar reductions in fraud losses for organizations that had anonymous fraud hotlines, offered employee support programs, provided fraud training for managers, and had internal audit or fraud examination departments.
- The Report includes frauds that impacted organizations in a number of different industries. The industries most commonly victimized by fraud in our study were banking and financial services (15% of cases), government (12%) and healthcare (8%). **Among industries with at least 50 cases, the largest median losses occurred in manufacturing (\$441,000), banking (\$250,000), and insurance (\$216,000).**
- **Small businesses are especially vulnerable to occupational fraud.** The median loss suffered by organizations with fewer than 100 employees was \$200,000. This was higher than the median loss in any other category, including the largest organizations. Small businesses also suffered the largest losses in our 2006 study. Check tampering and fraudulent billing were the most common small business fraud schemes.
- **Lack of adequate internal controls was most commonly cited as the factor that allowed fraud to occur.** Thirty-five percent of respondents cited inadequate internal controls as a primary contributing factor in the frauds they investigated. Lack of management review and override of existing controls were each cited by 17% of respondents.
- **Seventy-eight percent of victim organizations modified their anti-fraud controls after discovering that they had been defrauded.** The most common change was to conduct management review of internal controls, which occurred in 56% of cases. Implementation of surprise audits was the next most common response, followed by fraud training for managers and employees.
- **Occupational frauds were most often committed by the accounting department or upper management.** Twenty-nine percent of frauds in this Report were committed by persons in the accounting department, while 18% were committed by executives or upper management. Fraud committed by executives were particularly costly, resulting in a median loss of \$853,000.
- **Occupational fraudsters are generally first-time offenders.** Only 7% of fraud perpetrators in this study had prior convictions and only 12% had been previously terminated by an employer for fraud-related conduct. These results are consistent with our 2004 and 2006 Reports.
- Fraud perpetrators often display behavioral traits that serve as indicators of possible illegal behavior. **The most commonly cited behavioral red flags were perpetrators living beyond their apparent means (39% of cases) or experiencing financial difficulties at the time of the frauds (34%).** In financial statement fraud cases, which tend to be the most costly, excessive organizational pressure to perform was a particularly strong warning sign.

# Introduction

The term “occupational fraud” may be defined as: “The use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization’s resources or assets.”

This definition is very broad, encompassing a wide range of misconduct by employees, managers, and executives. Occupational fraud schemes can be as simple as pilferage of company supplies or as complex as sophisticated financial statement frauds.

Occupational fraud and abuse is a significant problem faced by organizations of all types, sizes, locations, and industries. Unfortunately, it is also a problem that will not be easily solved. One of the ACFE’s primary missions is to educate the public and anti-fraud professionals about the serious threat occupational fraud poses.

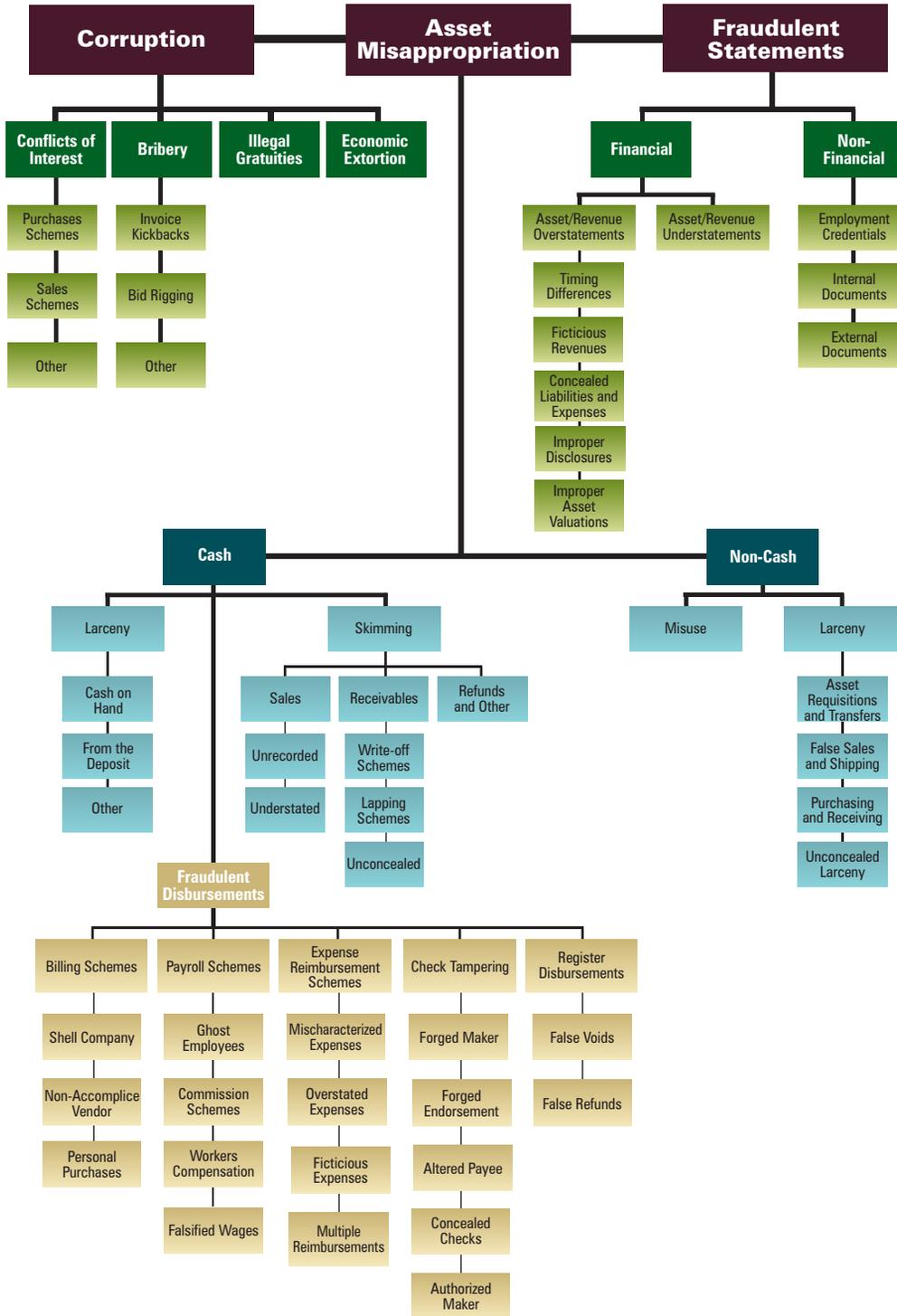
In 1996, ACFE released the first *Report to the Nation on Occupational Fraud and Abuse* to provide an informative look into the immense costs imposed by occupational fraud. At the time, the Report was the largest known privately funded study on the subject. The stated goals of the first Report were to:

- Summarize the opinions of experts on the percentage and amount of organizational revenue lost to all forms of occupational fraud and abuse
- Examine the characteristics of the employees who commit occupational fraud and abuse
- Determine what kinds of organizations are victims of occupational fraud and abuse
- Categorize the ways in which serious fraud and abuse occurs

Since the inception of the *Report to the Nation* more than a decade ago, we have released four updated editions — in 2002, 2004, 2006, and the current version in 2008. Like the first Report, each subsequent edition has been based on detailed case information provided by Certified Fraud Examiners (CFEs). With each new edition, we add to and modify the questions we ask of our survey participants in order to enhance the quality of the data we collect. This evolution of the Report has enabled us to continue to draw more meaningful information from the experiences of CFEs and the frauds they encounter.

In this, our fifth edition of the *Report to the Nation*, we have built on the framework used in past editions and have added discussions of several topics that we believe enhance the value of the Report, including a more in-depth analysis of the victim organizations’ internal control systems and an examination of the behavioral warning signs displayed by perpetrators during the course of their fraud schemes. We believe these inclusions, in addition to the fine-tuning of the information published in previous versions, render the current Report the most comprehensive and educational edition to date.

## Occupational Fraud and Abuse Classification System



# Measuring the Cost of Occupational Fraud

Fraud, by its very nature, does not lend itself to being scientifically observed or measured in an accurate manner. One of the primary characteristics of fraud is that it is clandestine, or hidden; almost all fraud involves the attempted concealment of the crime.

Consequently, many instances of occupational fraud may go completely undetected. Further, even for those cases that do come to light, the full amount stolen may not be ascertainable, or the victim organization may decide not to report the theft to the authorities or the general public. As a result, determining the true breadth and depth of this form of crime is nearly impossible.



**The typical organization loses 7% of its annual revenues to occupational fraud.**

Even with these limitations, examining the impact of fraud on U.S. businesses is an important endeavor. While it is unlikely that we can accurately measure the true costs of occupational fraud at any given point in time, it is still useful to try to gain some understanding of the scope of the problem with which we are confronted. Accordingly, we asked each survey participant to provide his or her best estimate of the percentage of annual revenues lost by the typical U.S. organization to fraud each year. The median response indicated that the typical U.S. organization loses 7% of its annual revenues to fraudulent activity. If this percentage were applied to the estimated 2008 U.S. gross domestic product of \$14.196 trillion\*, we could project that roughly \$994 billion would be lost to fraud in 2008.

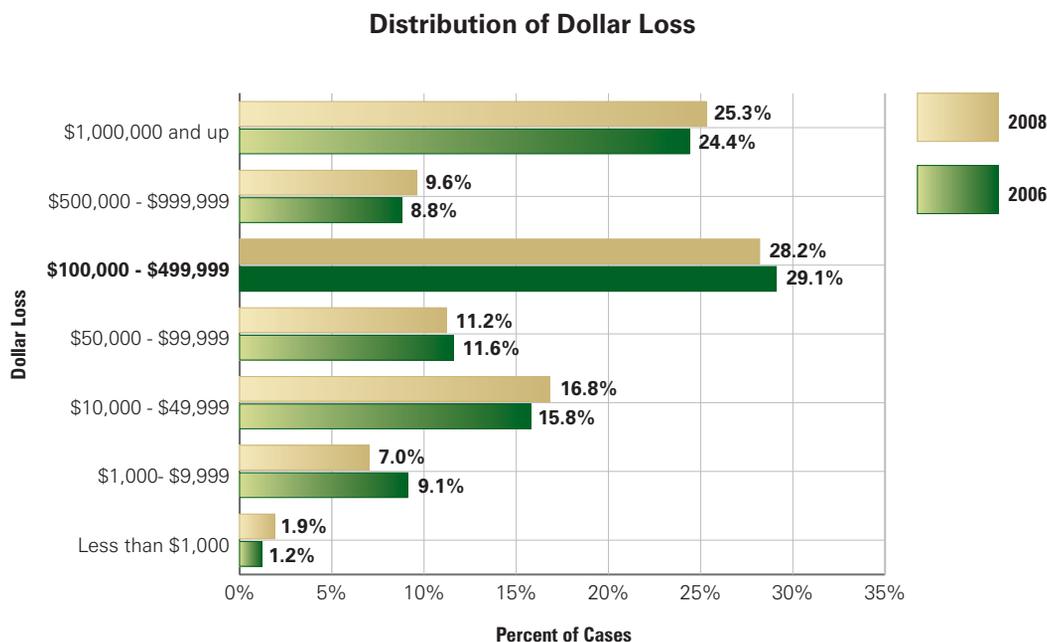
We want to make clear that this estimate is based solely on the opinions of CFEs who are in the trenches fighting fraud on a daily basis, rather than on any specific data or factual observations. Thus, this figure should not be considered a literal representation of the true cost of fraud facing U.S. organizations.

\*Based on U.S. Department of Commerce first quarter 2008 GDP estimate.

As previously discussed, many obstacles stand in the way of accurately valuing the amount lost to all employee fraud. However, the 7% figure is a meaningful and insightful estimate that may be as close to a reliable measure of the cost of fraud as one can get. The figure provides a best-guess point of reference based on the opinions of 959 anti-fraud experts with a median of 15 years' experience in the prevention and detection of occupational fraud.

### Distribution of Losses

Of the 959 cases of occupational fraud that comprised our study, 937 included the total dollar loss. The median loss for all schemes in the study was \$175,000. As the following chart shows, more than one-fourth of all cases in the 2008 study involved losses of at least \$1 million. The distribution of dollar losses among cases in the 2008 study was similar to the distribution in our 2006 Report; in both studies, more than 60% of schemes caused the victim organization to suffer a loss of at least \$100,000.



# 2

## How Occupational Fraud is Committed

Based on previous ACFE research on and observations of the methods used to commit occupational fraud, we have broken down the schemes reported to us into three primary categories: asset misappropriation, corruption, and financial statement fraud.

Asset misappropriation schemes are frauds in which the perpetrator steals or misuses an organization's resources. Common examples of asset misappropriation include false invoicing, payroll fraud, and skimming.

In the context of occupational fraud, corruption refers to schemes in which fraudsters use their influence in business transactions in a way that violates their duty to their employers in order to obtain a benefit for themselves or someone else. For example, employees might receive or offer bribes, extort funds from third parties, or engage in conflicts of interest.

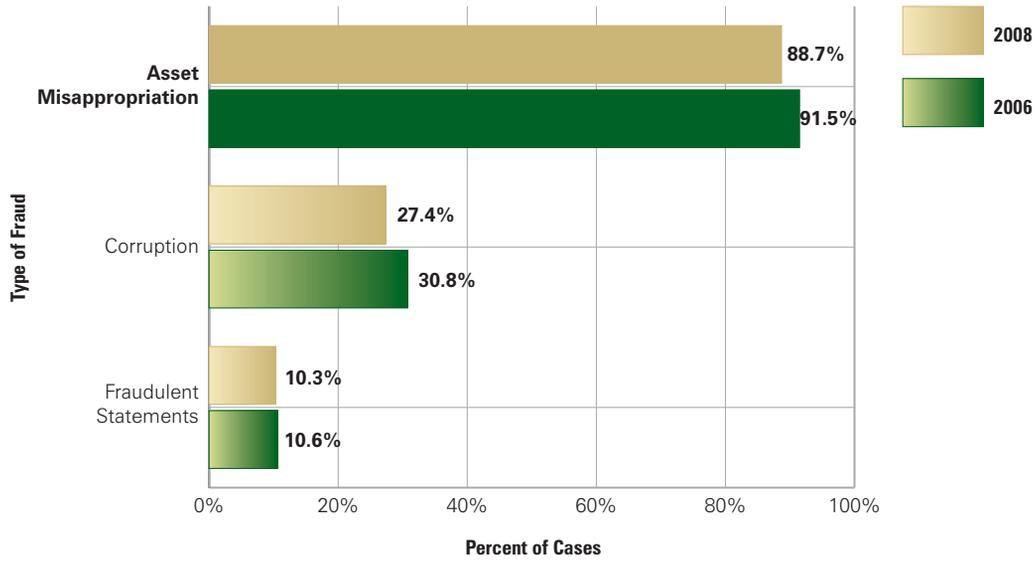
The third category of occupational fraud, financial statement fraud, involves the intentional misstatement or omission of material information from the organization's financial reports; these are the cases of "cooking the books" that often make front page headlines. Financial statement fraud cases often involve the reporting of fictitious revenues or the concealment of expenses or liabilities in order to make an organization appear more profitable than it really is.

Continuing the trend from our previous surveys, asset misappropriation schemes were both the most commonly reported and the least costly of the three major categories of occupational fraud (although the median loss in asset misappropriation schemes was \$150,000, which is still quite significant). Fraudulent statements, on the other hand, were the least commonly reported type of occupational fraud, but they caused considerably more damage than frauds in the other two categories. The median loss caused by fraudulent statement schemes in our study was \$2,000,000, which dwarfed the losses in the other two categories. This finding was consistent with our earlier reports. As was the case in 2006, corruption schemes fell in the middle of the spectrum in terms of frequency and cost. Corruption occurred in just over one quarter of the cases we reviewed, with a median loss of \$375,000.

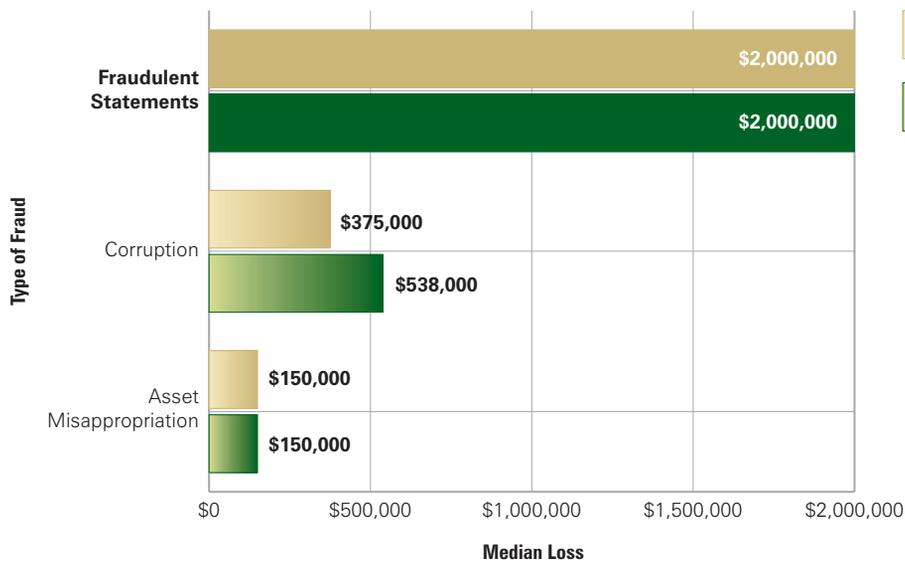


**Financial misstatements are the most costly form of occupational fraud, with median losses of \$2 million per scheme.**

### Occupational Frauds by Category — Frequency



### Occupational Frauds by Category — Median Loss



## Comparison of the Methods Used to Commit Occupational Fraud

Throughout this report, we will measure how different forms of fraud impact various types of organizations, as well as the most common schemes associated with different categories of fraud perpetrators. Because approximately 90% of all occupational frauds involve asset misappropriations, we need to focus on this category with more specificity in order to conduct a meaningful analysis of how fraudsters attack their organizations.

### Sub-Categories of Asset Misappropriation

We subdivided asset misappropriation schemes into nine distinct categories, which are illustrated on the following page. The first two categories, skimming and cash larceny, are frauds that target an organization's incoming receipts. The next five categories — billing schemes, check tampering, expense reimbursements, payroll schemes and cash register disbursements — target outgoing disbursements of cash. Cash on hand misappropriations involve the theft of cash or currency maintained onsite by the victim organization. The last category, non-cash misappropriations, involves the theft or misuse of physical assets such as inventory or equipment, or the misappropriation of proprietary information.

As the table on the next page illustrates, the majority of asset misappropriation schemes focus on cash, as opposed to other organizational assets. Eight of the nine categories target cash and overall, approximately 85% of all asset misappropriation cases in our study involved the theft or misuse of cash. Fraudsters who steal cash generally must access the money at one of three points within the victim organization: the point of receipt, the point of disbursement, or cash kept on hand. As we see in the following table, fraudulent disbursements are the most common form of cash scheme. Billing schemes were the most commonly reported form of asset misappropriation, while check tampering and expense reimbursement fraud were each reported in over 100 cases.

While not as common as fraudulent disbursements, schemes targeting cash receipts were also frequently reported; particularly skimming, which occurred in approximately one out of every six cases we reviewed. Schemes targeting cash on hand were less common than those involving receipts or disbursements, and the median loss of \$35,000 in cash on hand frauds was among the lowest of any category. Frauds targeting non-cash assets, on the other hand, were both relatively common (16% of cases) and relatively costly (median loss of \$100,000).

Asset Misappropriation Sub-Categories					
Category	Description	Examples	Cases Reported	Percent of all cases <sup>2</sup>	Median Loss
<b>Schemes Involving Cash Receipts</b>					
Skimming	Any scheme in which cash is stolen from an organization <i>before</i> it is recorded on the organization's books and records.	<ul style="list-style-type: none"> <li>Employee accepts payment from a customer but does not record the sale</li> </ul>	159	16.6%	\$80,000
Cash Larceny	Any scheme in which cash receipts are stolen from an organization <i>after</i> they been recorded on the organization's books and records.	<ul style="list-style-type: none"> <li>Employee steals cash and checks from daily receipts before they can be deposited in the bank</li> </ul>	99	10.3%	\$75,000
<b>Schemes Involving Fraudulent Disbursements of Cash</b>					
Billing	Any scheme in which a person causes his or her employer to issue a payment by submitting invoices for fictitious goods or services, inflated invoices, or invoices for personal purchases.	<ul style="list-style-type: none"> <li>Employee creates a shell company and bills employer for nonexistent services</li> <li>Employee purchases personal items, submits invoice to employer for payment</li> </ul>	229	23.9%	\$100,000
Check Tampering	Any scheme in which a person steals his or her employer's funds by forging or altering a check on one of the organization's bank accounts, or steals a check the organization has legitimately issued to another payee.	<ul style="list-style-type: none"> <li>Employee steals blank company checks, makes them out to himself or an accomplice</li> <li>Employee steals outgoing check to a vendor, deposits it into his own bank account</li> </ul>	141	14.7%	\$138,000
Expense Reimbursements	Any scheme in which an employee makes a claim for reimbursement of fictitious or inflated business expenses.	<ul style="list-style-type: none"> <li>Employee files fraudulent expense report, claiming personal travel, nonexistent meals, etc.</li> </ul>	127	13.2%	\$25,000
Payroll	Any scheme in which an employee causes his or her employer to issue a payment by making false claims for compensation.	<ul style="list-style-type: none"> <li>Employee claims overtime for hours not worked</li> <li>Employee adds ghost employees to the payroll</li> </ul>	89	9.3%	\$49,000
Cash Register Disbursements	Any scheme in which an employee makes false entries on a cash register to conceal the fraudulent removal of cash.	<ul style="list-style-type: none"> <li>Employee fraudulently voids a sale on his cash register and steals the cash</li> </ul>	27	2.8%	\$25,000
Cash on Hand Misappropriations	Any scheme in which the perpetrator misappropriates cash kept on hand at the victim organization's premises.	<ul style="list-style-type: none"> <li>Employee steals cash from a company vault</li> </ul>	121	12.6%	\$35,000
Non-Cash Misappropriations	Any scheme in which an employee steals or misuses non-cash assets of the victim organization.	<ul style="list-style-type: none"> <li>Employee steals inventory from a warehouse or storeroom</li> <li>Employee steals or misuses confidential customer financial information</li> </ul>	156	16.3%	\$100,000

<sup>2</sup>The sum of percentages in this table exceeds 100 percent because several cases involved multiple asset misappropriation schemes from more than one category.

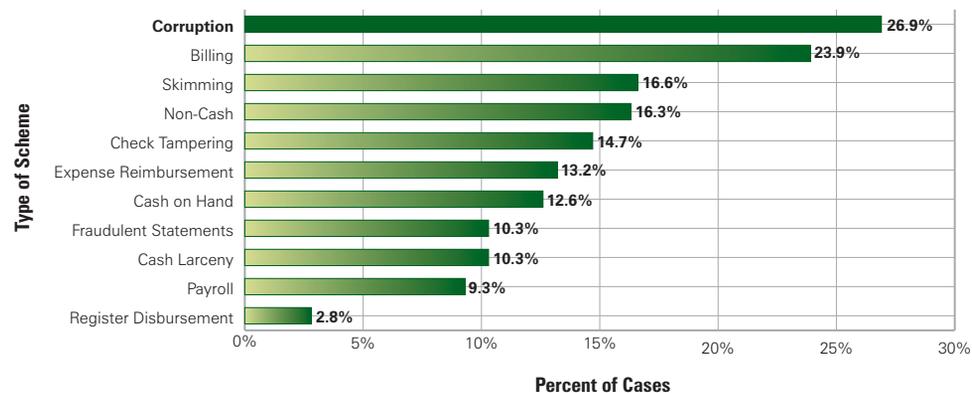
## How Occupational Fraud is Committed

### Comparison of Occupational Fraud Schemes by Frequency

Once we have subdivided asset misappropriations into nine distinct subcategories, our analysis of particular fraud schemes takes on more meaning. We can study these particular forms of asset misappropriation alongside the categories of corruption and financial statement fraud. This analysis gives us a better understanding of the specific ways in which employees defraud their employers.

As the chart below illustrates, corruption schemes were the most commonly reported form of fraud. Over one fourth of all the frauds in our study involved some form of corruption (paying or receiving bribes, engaging in conflicts of interest, extorting illegal payments or accepting illegal gratuities). Billing schemes were the next most common method of occupational fraud. Fraudulent billing was reported in about 24% of cases. Cash register disbursements and payroll fraud were the least-reported categories, each showing up in less than 10% of cases.

**Breakdown of All Occupational Fraud Schemes — Frequency<sup>3</sup>**

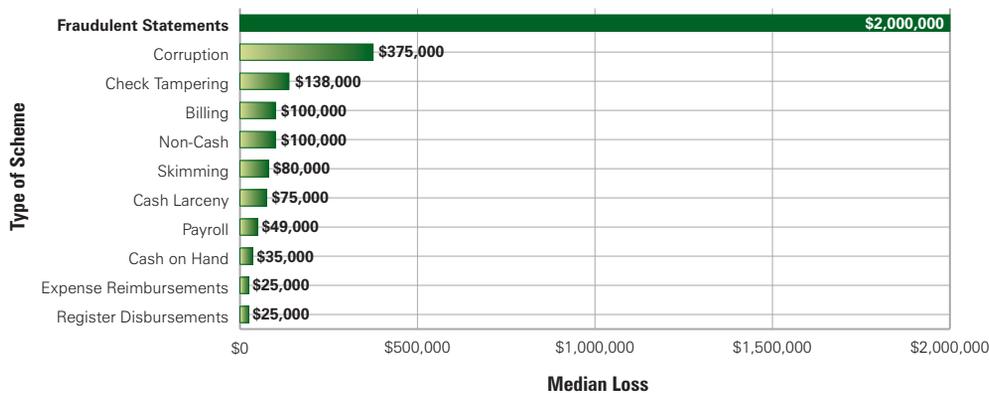


<sup>3</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

## Comparison of Occupational Fraud Schemes by Median Loss

When comparing the median losses caused by each of the 11 identified occupational fraud schemes, the first thing that jumps out is the great disparity between fraudulent statements and all other forms of fraud. As we noted earlier, the median loss caused by a fraudulent statement scheme was \$2,000,000, which was consistent with our findings in 2006. Fraudulent statements differ from other forms of occupational fraud in that the typical goal of a fraudulent statement scheme is not to directly enrich the perpetrator, but rather to mislead third parties (investors, owners, regulators, etc.) as to the profitability or viability of an organization. Thus, when we look at the losses resulting from financial statement fraud, we are often measuring lost market capitalization or lost shareholder value rather than direct loss of financial assets. In other words, a \$2 million fraudulent statement scheme may not involve the removal of \$2 million from the bank account of the victim organization. This does not make the scheme any less harmful; in fact, the lost shareholder value resulting from financial statement fraud can have crippling effects on even the largest companies, as we have seen with high-profile frauds such as Enron and WorldCom. It can also have a tremendous impact on the organization's shareholders. However, it is important to remember, when comparing the losses caused by financial statement fraud and other schemes, that the financial statement losses have a different character than the losses resulting from the other forms of fraud, which by and large measure direct theft or misappropriation of a company's assets.

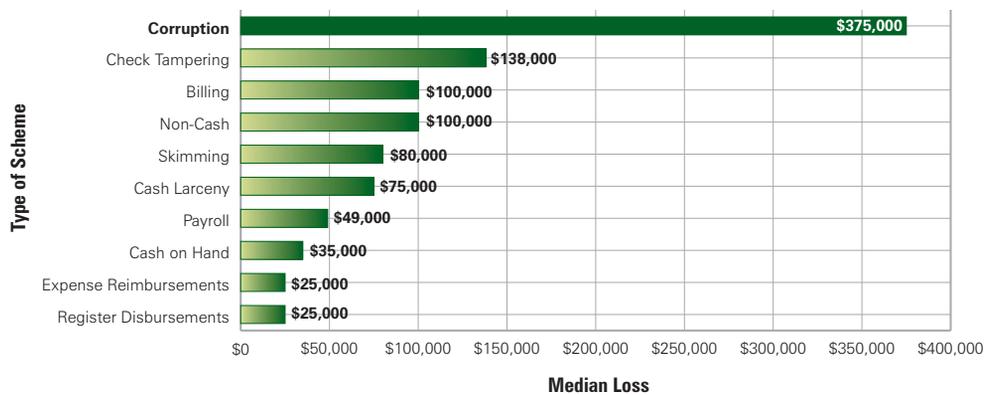
### Breakdown of All Occupational Fraud Schemes — Median Loss



## How Occupational Fraud is Committed

If we remove fraudulent financial statements from the preceding chart, we get a better view of the relative costs of the other 10 methods of occupational fraud that generally involve the direct theft or misappropriation of a victim organization's assets. In the chart below, we see that not only is corruption the most common occupational fraud scheme in our study, but it is also by far the most costly scheme other than financial statement fraud. The median loss resulting from a corruption case in our study was \$375,000, which was almost three times as large as the median loss resulting from check tampering, the next most costly scheme. Interestingly, the five most common asset misappropriation/corruption schemes were also the five most costly based on median loss.

**Breakdown of All Occupational Fraud Schemes Excluding Fraudulent Financial Statements — Median Loss**

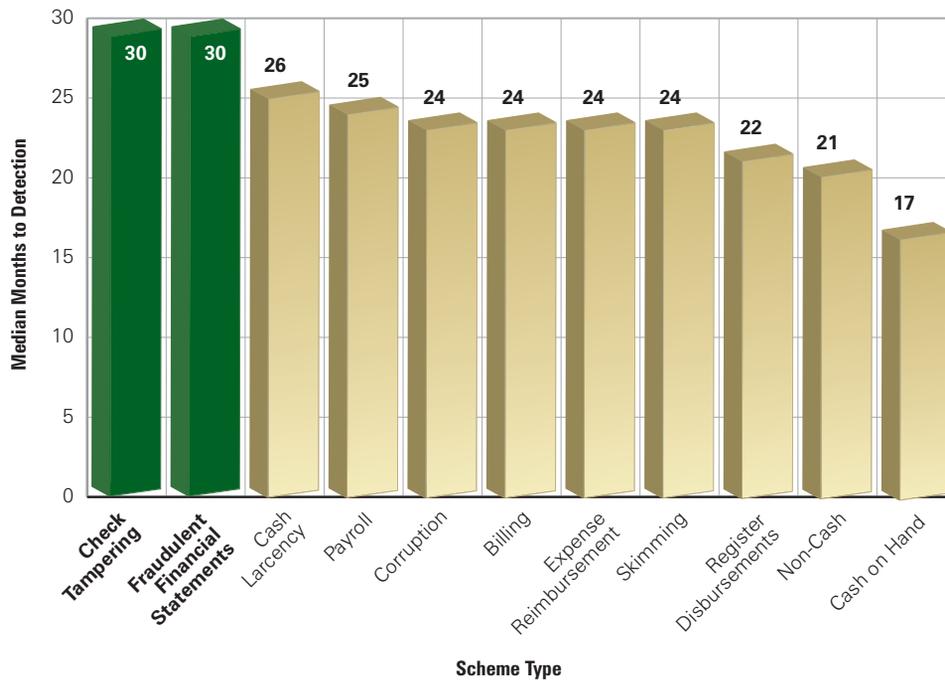


### Duration of Fraud Schemes

One way occupational frauds differ from other forms of theft is that they are generally ongoing crimes that can last for months or even years before they are detected. This is one aspect of these crimes that makes it so difficult to precisely measure the true costs of fraud — at any given time, an organization may be the victim of fraud but yet be completely unaware of that fact. For instance, when a person holds up a bank and steals \$100,000, management of the bank immediately knows it has been robbed. On the other hand, when a bank teller issues \$100,000 worth of fraudulent wire transfers over the course of several months, the loss to the bank is the same, but management may have no idea it has been victimized.

Our study illustrates this problem by showing how long occupational fraud schemes tend to last before they are discovered. In 925 of the 959 cases included in our study, the respondent was able to tell us how long the scheme had lasted before it was detected. In these cases, the median length of time a fraud scheme went undetected was 24 months. This number varied based on the type of fraud undertaken by the perpetrator, as seen in the following table. Check tampering and fraudulent financial statement schemes had the longest median duration at 30 months, while schemes involving the theft of cash on hand were on the opposite end of the spectrum with a median length of 17 months before they were detected.

**Median Duration of Fraud Based on Scheme Type**



# 3

## Detection of Fraud Schemes

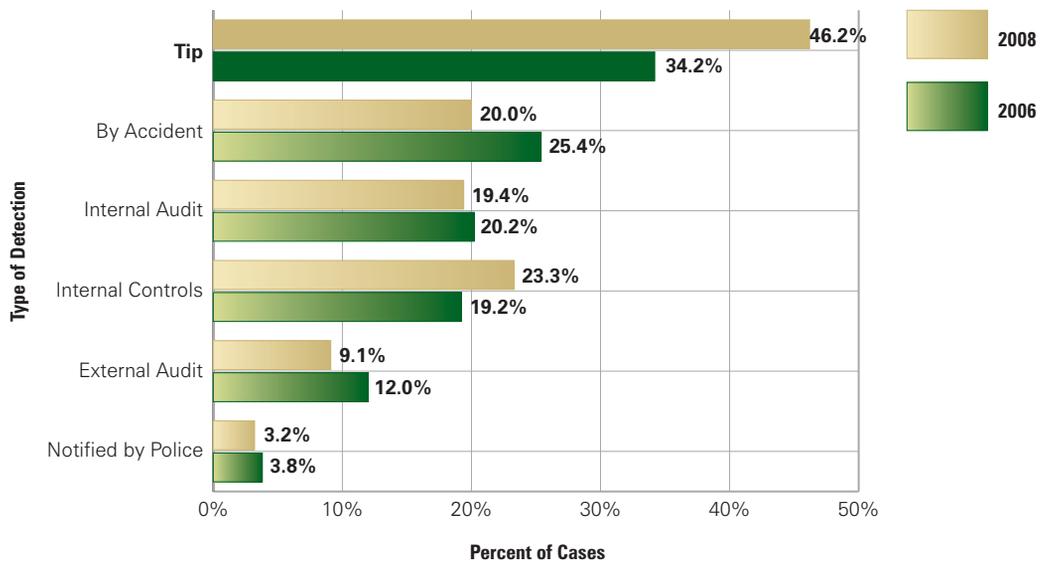


**Occupational frauds are much more likely to be detected by tips than by any other method.**

Respondents to our survey were asked to identify how the frauds were first discovered. Nearly half of the cases in our 2008 study were uncovered by a tip or complaint from an employee, customer, vendor, or other source.

While tips have historically been the most common means of detection in our surveys, the percentage of fraud discoveries attributed to tips in 2008 is quite a bit greater than in 2006. It is encouraging to note that the percentage of cases discovered by accident was five percent lower than in 2006, while internal controls were credited with catching a slightly larger number of frauds.

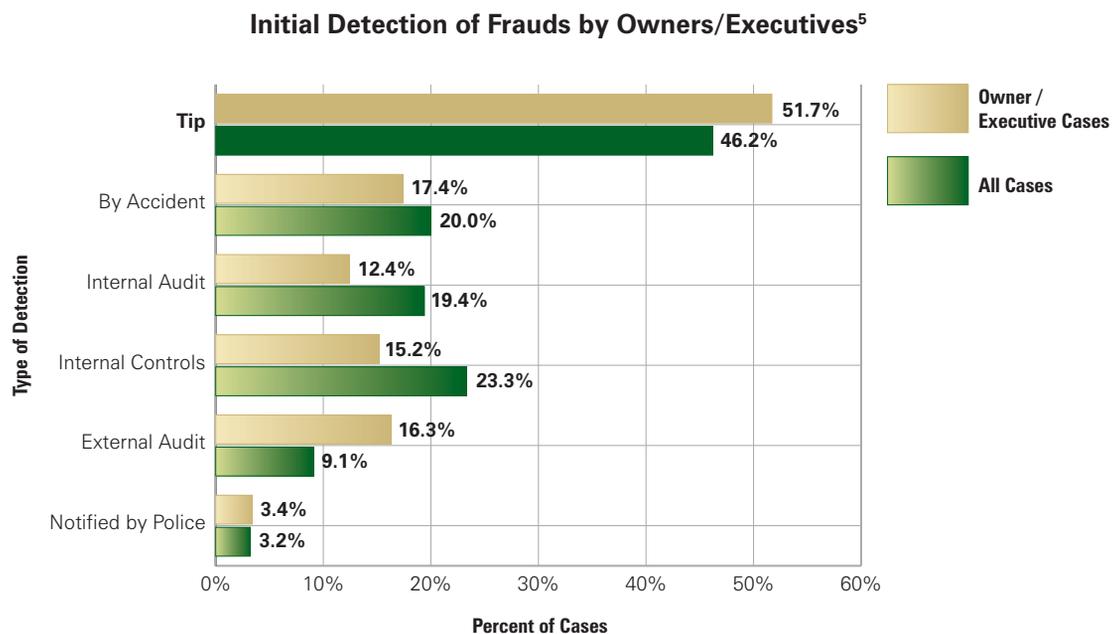
**Initial Detection of Occupational Frauds<sup>4</sup>**



<sup>4</sup>The sum of percentages in this chart exceeds 100 percent because in some cases respondents identified more than one detection method.

## Detecting Fraud Committed by Owners and Executives

Tips were by far the most commonly cited detection method in cases that were perpetrated by owners and executives. Not surprisingly, internal controls were not as effective at detecting frauds committed by top-level perpetrators, as these individuals are often uniquely positioned to override even the best-designed controls. In contrast, external audits detected a greater percentage of cases involving owners and executives; this finding underscores the importance of independent assessments and external accountability as well as the need for auditors to be especially vigilant in reviewing transactions involving owners and executives.

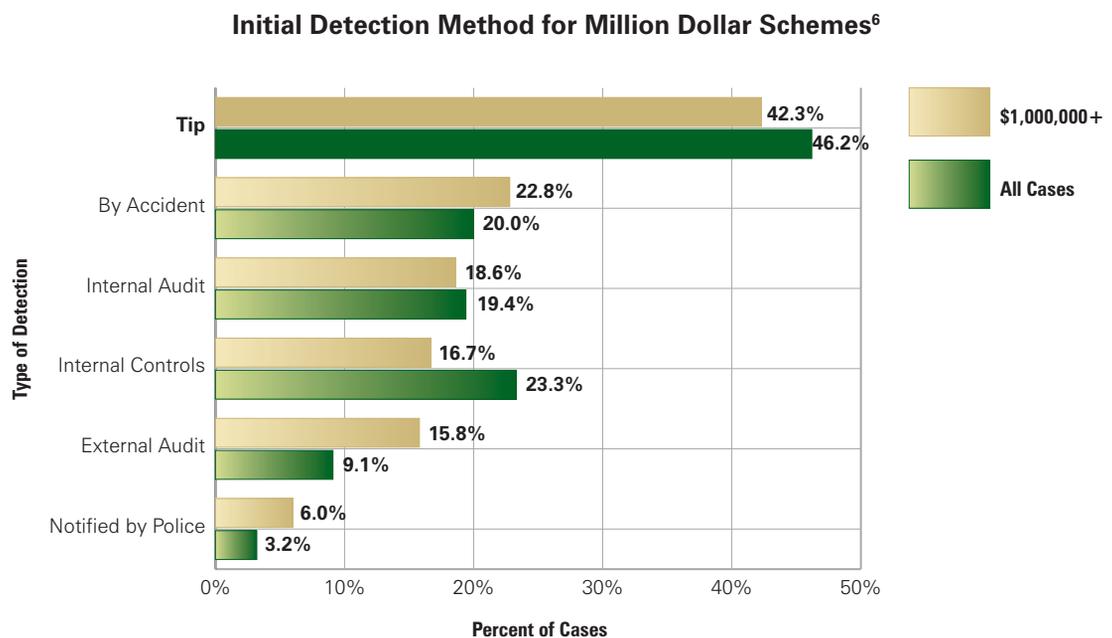


<sup>5</sup>The sum of percentages in this chart exceeds 100 percent because in some cases respondents identified more than one detection method.

# Detection of Fraud Schemes

## Detecting the Largest Frauds

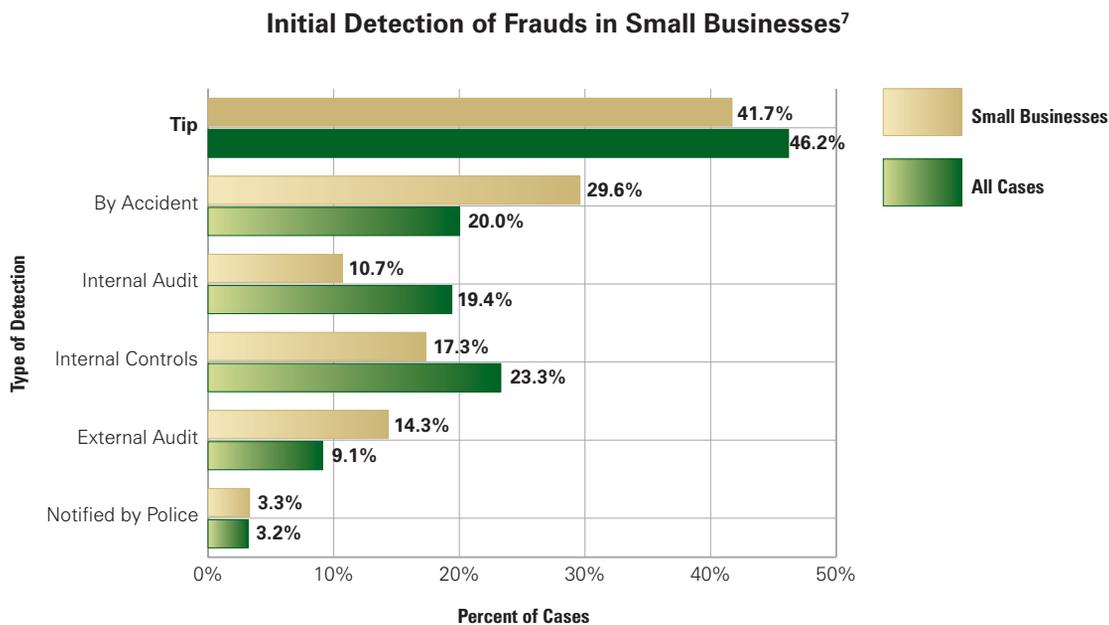
The value of effective independent audits is illustrated by their role in detecting large frauds. Among the 237 cases involving a loss of \$1 million or more, external audits were cited as the detection method 16% of the time, as compared to 9% of all cases. Tips were the most common detection method for these cases with 42% of million-dollar frauds being uncovered through a tip or complaint.



<sup>6</sup>The sum of percentages in this chart exceeds 100 percent because in some cases respondents identified more than one detection method.

## Detecting Fraud in Small Businesses

Small businesses (those with less than 100 employees) are typically thought to have fewer or weaker controls in place than their larger counterparts, primarily due to a lack of personnel or financial resources. The results of our survey bear this out, as a lower percentage of frauds in small businesses were caught by internal controls. Additionally, internal audits and tips were cited as the detection method in fewer small business cases than among all cases, while small business frauds were also more likely to be detected by accident. These findings indicate that small organizations have room for improvement in their proactive fraud detection efforts.

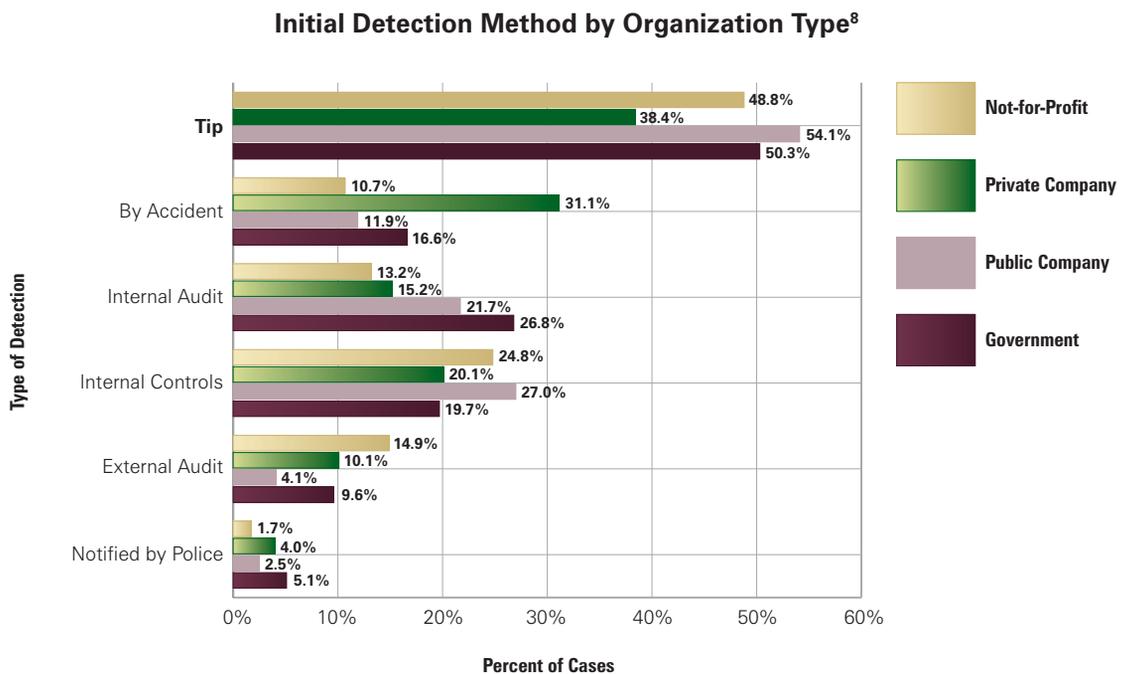


<sup>7</sup>The sum of percentages in this chart exceeds 100 percent because in some cases respondents identified more than one detection method.

### Detection Methods by Organization Type

In comparing detection methods based on the victim’s organization type, we see that, with a few exceptions, the relative frequency of initial detection methods is generally consistent across the four categories of organizations. In each category, tips were the most common detection method, generally followed by internal controls and internal audits. The biggest deviation we found was in frauds at privately held companies. In these cases, frauds were initially detected by accident nearly a third of the time, which is a substantially higher rate than in any other organization type. It is not clear exactly why so many frauds at privately held companies were detected by accident as opposed to other methods, but we note that this result is similar to our 2006 Report, in which 35% of frauds in private companies were detected by accident. Private companies also experienced a smaller proportion of cases being reported through a tip or complaint.

Internal audits were the source of detection in over a quarter of the government fraud cases, which exceeded the rate for any other type of organization. Surprisingly, publicly traded companies cited the smallest percentage of fraud detected by external audits even though they are the only organizations among the four categories that are generally required to undergo an independent audit. However, public companies also had the largest percentage of frauds detected through both tips and internal controls; this may reflect the continued impact of the Sarbanes-Oxley Act of 2002, which mandates the establishment of anonymous reporting mechanisms and increases the emphasis on strong internal control systems for publicly traded organizations.



<sup>8</sup>The sum of percentages for each organization type in this chart exceeds 100 percent because in some cases respondents identified more than one detection method.

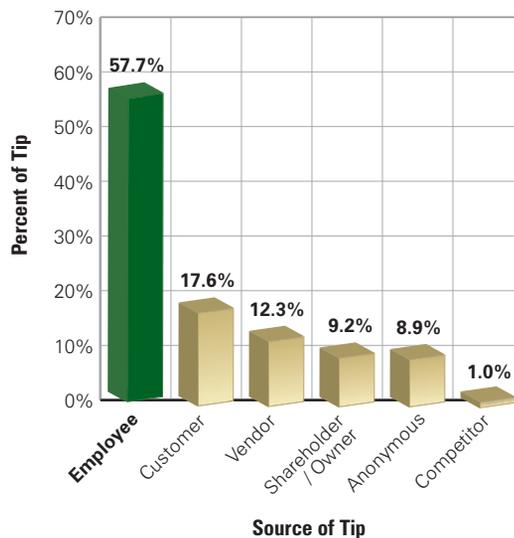
## Tips

Of the 417 cases in our study in which a tip or complaint was instrumental in the detection of the fraud, 31% were received via a hotline or other formal reporting mechanism. This is a relatively high number considering that less than half of the victim organizations in our survey had a formal reporting mechanism. The fact that tips continue to be the most effective means of detecting fraud suggests that organizations could improve their detection efforts by establishing formal structures to receive reports about possible fraudulent conduct.

By far, the greatest percentage of tips came from employees of the victim organization, which is consistent with our findings in 2006. The fact that over half of all fraud detection tips came from employees suggests that organizations should focus on employee education as a key component of their fraud detection strategies. Employees should be trained to understand what constitutes fraud and how it harms the organization. They should be encouraged to report illegal or suspicious behavior, and they should be reassured that reports may be made confidentially and that the organization prohibits retaliation against whistleblowers. It is also worth

noting that over 30% of tips came from external sources. While training and educating employees about reporting fraud is clearly an important step, organizations should also involve these third parties in their fraud detection programs by making them aware of the organization's reporting mechanism and encouraging them to report improper conduct.

**Percent of Tips by Source<sup>9</sup>**



<sup>9</sup>The sum of percentages in this chart exceeds 100 percent because in some cases respondents identified more than one source of the initial tip.

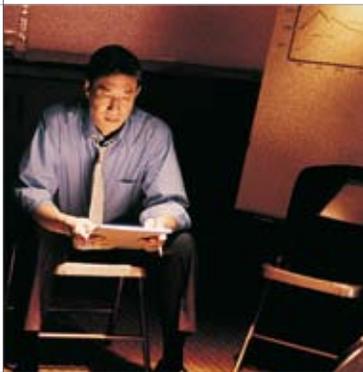
# 4

## Victim Organizations

As part of our survey, we asked each respondent to provide demographic information about the organization that was defrauded.

We believe it is useful to measure the different ways in which occupational fraud impacts different types of organizations. Our hope is that this analysis may

enable organizations to better identify where to strengthen or focus their anti-fraud efforts based on the experiences of other similar organizations.

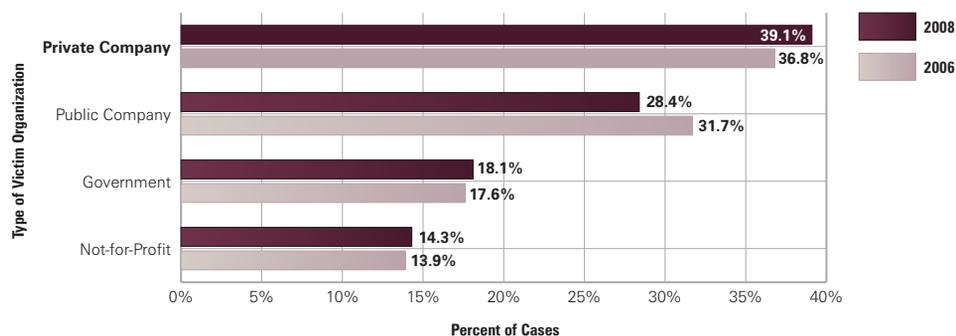


**Small businesses suffer disproportionately large fraud losses.**

### Types of Organizations

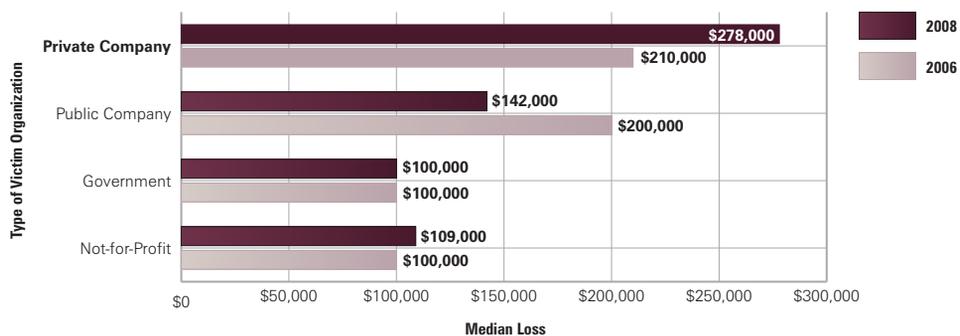
Nearly 40% of the victims in our study were privately owned companies, making this category the most highly represented among cases reported to us. Additionally, 28% of the 959 cases occurred in public companies, 18% occurred in government agencies, and 14% took place in non-profit organizations. This distribution is similar to that from our 2006 study. Please note, this should not be read to imply that private companies are necessarily more likely to experience fraud than other types of organizations. Our survey was distributed to CFEs, rather than to a random sample of organizations, so the data below simply shows us what types of organizations hired the CFEs in our study. However, it is useful to see that we are drawing on a fairly well-distributed sample of organization types.

**Organization Type of Victim — Frequency**



Frauds at the private companies cited in our survey caused the greatest median loss at \$278,000. This is nearly twice as great as the median loss suffered by public companies and over two-and-a-half times the median loss that occurred at government agencies and non-profit organizations. The gap between privately held and publicly traded companies was much less pronounced in our 2006 Report.

### Organization Type of Victim — Median Loss



While the median losses at government agencies and not-for-profit organizations were significantly lower than those at private companies, all three types of entities endured fraud schemes that had a median length of two years. In contrast, frauds reported at public companies had a shorter median duration of 18 months.

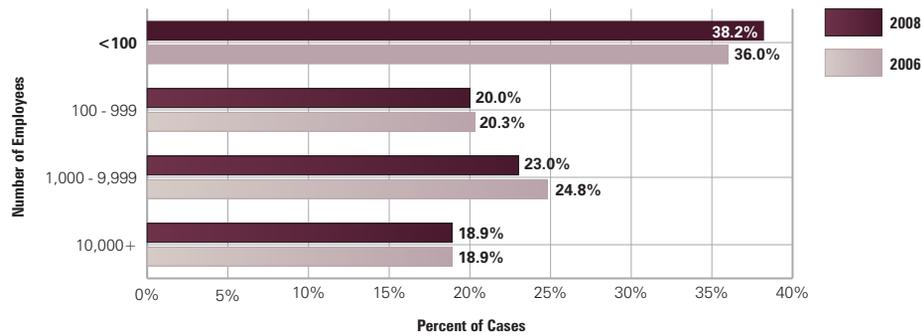
### Median Duration of Fraud Based on Victim Organization Type

Organization Type	Median Months to Detection
Government Agency	24
Not-for-Profit	24
Private Company	24
Publicly Traded Company	18

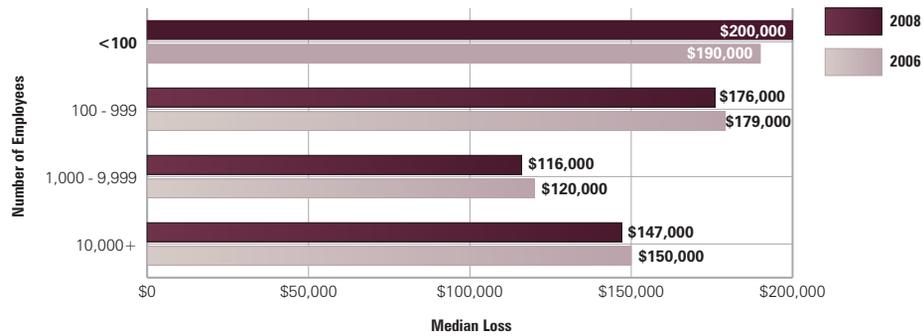
## Size of Organizations

Continuing the trend we have seen in our previous studies, small businesses — defined as those with less than 100 employees — suffered both a greater percentage of frauds (38%) and a higher median loss (\$200,000) than their larger counterparts. These findings accentuate the unique problems in combating fraud — primarily the limited amount of fiscal and human resources available for anti-fraud efforts — frequently faced by small organizations.

**Size of Victim Organization — Frequency**



**Size of Victim Organization — Median Loss**

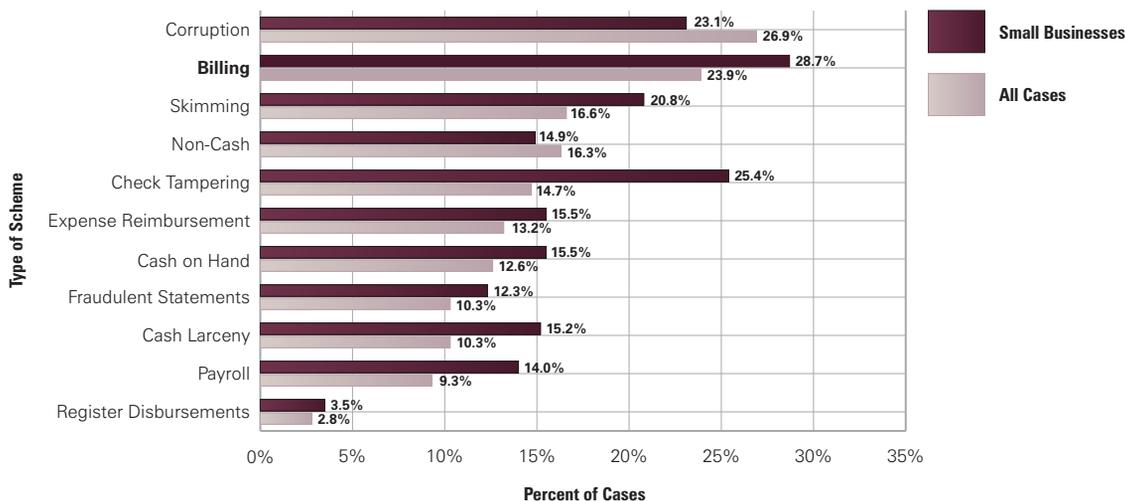


## Methods of Fraud in Small Businesses

To better understand the fraud issues faced by small businesses, we measured the frequency with which different fraud schemes occurred in these organizations. As the chart below illustrates, check tampering was much more common in small businesses than in other organizations. Over one-fourth of all small business frauds involved this form of fraud, which commonly occurs in situations where duties over the cash disbursement function are not segregated. Anecdotal evidence suggests this control weakness is often present in small organizations. Billing schemes, skimming, cash larceny, and payroll fraud were also noticeably more common in small businesses.

Small Businesses — <100 Employees (342 Cases)		
Scheme	Cases	Percent
Billing	98	28.7%
Check Tampering	87	25.4%
Corruption	79	23.1%
Skimming	71	20.8%
Expense Reimbursement	53	15.5%
Cash on Hand	53	15.5%
Cash Larceny	52	15.2%
Non-cash	51	14.9%
Payroll	48	14.0%
Fraudulent Financial Statements	42	12.3%
Register Disbursements	12	3.5%

Methods of Fraud — Small Business Cases vs. All Cases<sup>10</sup>



<sup>10</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

## Industry

In addition to categorizing fraud victims by organization type, we also classified them based on the industries in which they operate. Again, this analysis does not necessarily indicate which industries are more or less likely to be victimized by fraud; it is more a representation of the companies that hired Certified Fraud Examiners over the last two years to investigate an internal fraud case. However, the findings in the tables below highlight some interesting differences among the types and severity of fraud cases experienced by companies in different industries. For example, of the 905 cases in which information about the victim's industry was provided, the greatest percentage (15%) occurred in the banking and financial services sector. On the opposite end of the spectrum, the agriculture, forestry, fishing, and hunting industry was cited in only 1.4% of cases, but experienced the second greatest median loss at \$450,000. The telecommunications industry endured the largest losses, with a median of \$800,000 for the 16 cases reported from that sector.

Industry of Victim Organizations (Sorted by Frequency)			
Industry	# of Cases	% of Cases	Median Loss
Banking / Financial Services	132	14.6%	\$250,000
Government and Public Administration	106	11.7%	\$93,000
Healthcare	76	8.4%	\$150,000
Manufacturing	65	7.2%	\$441,000
Retail	63	7.0%	\$153,000
Education	59	6.5%	\$58,000
Insurance	51	5.6%	\$216,000
Construction	42	4.6%	\$330,000
Religious, Charitable, or Social Services	39	4.3%	\$106,000
Services — Other	35	3.9%	\$100,000
Services — Professional	34	3.8%	\$180,000
Transportation and Warehousing	31	3.4%	\$250,000
Real Estate	29	3.2%	\$184,000
Technology	28	3.1%	\$405,000
Utilities	22	2.4%	\$90,000
Oil and Gas	17	1.9%	\$250,000
Wholesale Trade	17	1.9%	\$150,000
Arts, Entertainment, and Recreation	16	1.8%	\$270,000
Telecommunications	16	1.8%	\$800,000
Communications / Publishing	14	1.5%	\$150,000
Agriculture, Forestry, Fishing and Hunting	13	1.4%	\$450,000

Industry of Victim Organizations (Sorted by Median Loss)			
Industry	# of Cases	% of Cases	Median Loss
Telecommunications	16	1.8%	\$800,000
Agriculture, Forestry, Fishing and Hunting	13	1.4%	\$450,000
Manufacturing	65	7.2%	\$441,000
Technology	28	3.1%	\$405,000
Construction	42	4.6%	\$330,000
Arts, Entertainment, and Recreation	16	1.8%	\$270,000
Banking / Financial Services	132	14.6%	\$250,000
Transportation and Warehousing	31	3.4%	\$250,000
Oil and Gas	17	1.9%	\$250,000
Insurance	51	5.6%	\$216,000
Real Estate	29	3.2%	\$184,000
Services — Professional	34	3.8%	\$180,000
Retail	63	7.0%	\$153,000
Healthcare	76	8.4%	\$150,000
Wholesale Trade	17	1.9%	\$150,000
Communications / Publishing	14	1.5%	\$150,000
Religious, Charitable, or Social Services	39	4.3%	\$106,000
Services — Other	35	3.9%	\$100,000
Government and Public Administration	106	11.7%	\$93,000
Utilities	22	2.4%	\$90,000
Education	59	6.5%	\$58,000

## Methods of Fraud Based on Industry

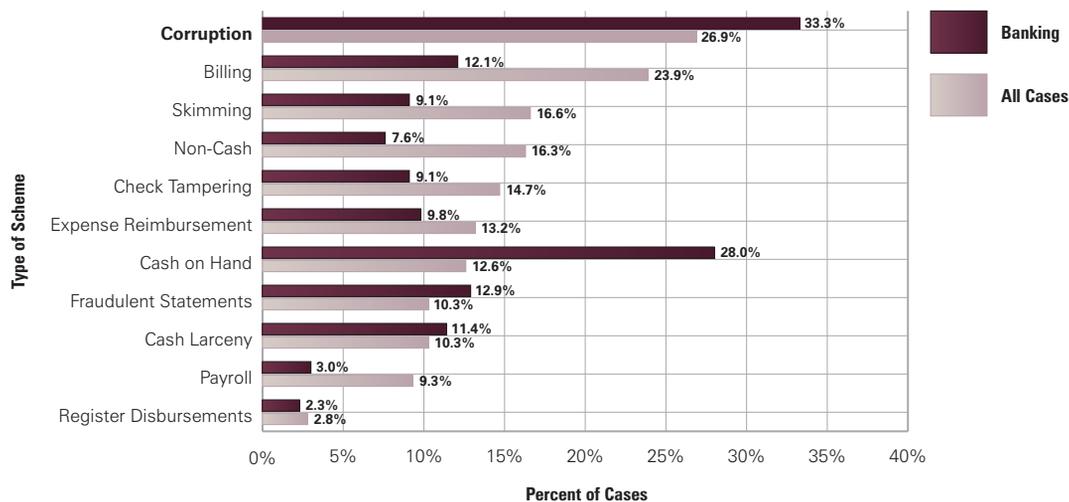
### Most Common Scheme Types

The structure and transactions of an organization vary widely from industry to industry. Because of this, organizations in different industries are often vulnerable to different types of frauds. To determine which methods of fraud were most commonly cited, we analyzed the cases in each industry where there were at least 50 reported cases.

### Banking and Financial Services

Not surprisingly, in the banking and financial services sector, misappropriations of cash on hand were much more common than among all cases. Cash on hand schemes involve the theft of cash maintained on the premises of a victim organization. Banks have significant stores of cash on their premises, which can make them targets for this type of fraud. Cash on hand schemes tend to be relatively low-cost, with a median loss of \$35,000 among the cases in our study. Corruption cases, on the other hand, tend to be much more costly; their median loss was \$375,000. We reviewed 132 cases that targeted financial institutions, and one-third of those frauds involved corruption, which was a higher rate than among all cases. Conversely, other common forms of occupational fraud like false billing, skimming, non-cash theft, and check tampering were much less common in banking institutions than among all cases reported.

**Occupational Fraud Schemes in Banking and Financial Services Industry (132 cases)<sup>11</sup>**

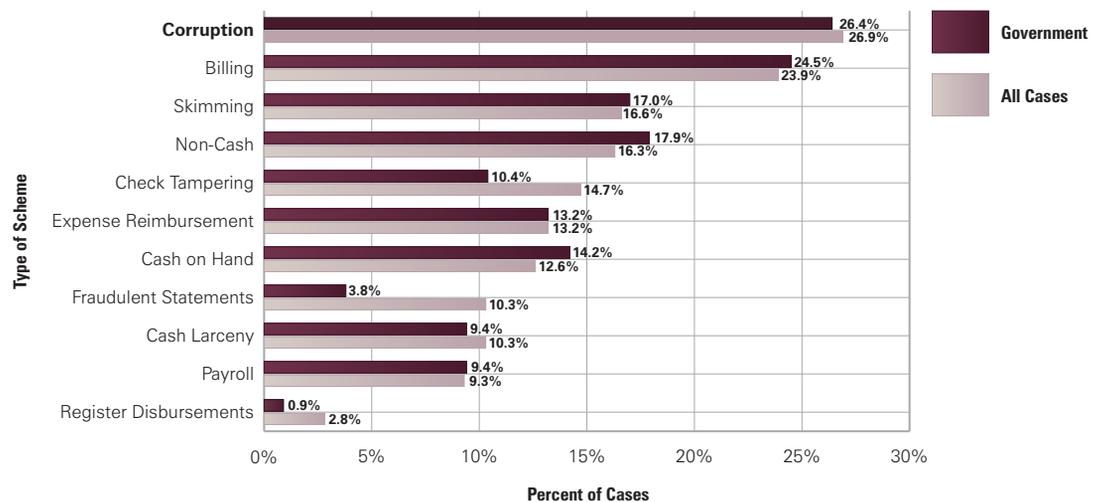


<sup>11</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

### Government and Public Administration

Generally speaking, the distribution of occupational frauds in government agencies closely approximated the distribution for all cases. The most significant deviation was found in the category of fraudulent statements, which made up 10% of all frauds in our study but only 4% of government frauds. There was no fraud category in which the rate for government agencies exceeded the general rate by more than two percent.

#### Occupational Fraud Schemes in Government and Public Administration (106 cases)<sup>12</sup>



<sup>12</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

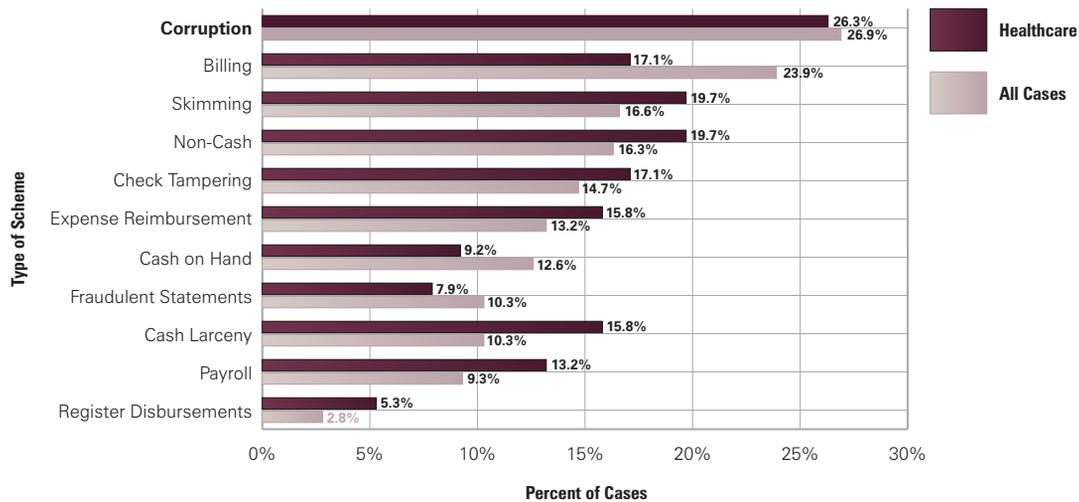
### Healthcare

Both schemes that target incoming revenue — skimming and cash larceny — were more common in the healthcare industry than among all cases. Cash larceny had the largest gap, making up 16% of the health care industry cases but only 10% in general. Non-cash misappropriations, check tampering, and payroll fraud were also slightly more common in the healthcare industry than among all cases reported.

### Manufacturing

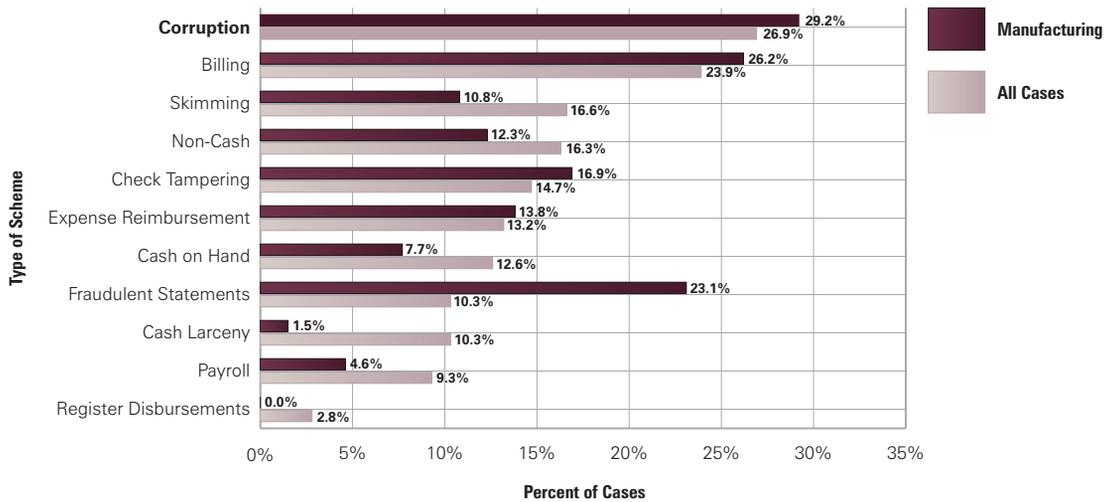
Sixty-five cases in our study dealt with the manufacturing industry, and nearly a quarter of these involved financial statement fraud. This was more than twice the rate of financial statement fraud in general. Somewhat surprisingly, non-cash schemes were less common in the manufacturing industry than among all cases. Non-cash schemes involve the misuse or misappropriation of inventory and equipment; in our 2006 Report non-cash schemes accounted for over one-fourth of all manufacturing industry frauds. In this survey, however, the rate was only 12%.

### Occupational Fraud Schemes in the Healthcare Industry (76 cases)<sup>13</sup>



<sup>13</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

### Occupational Fraud Schemes in the Manufacturing Industry (65 cases)<sup>14</sup>

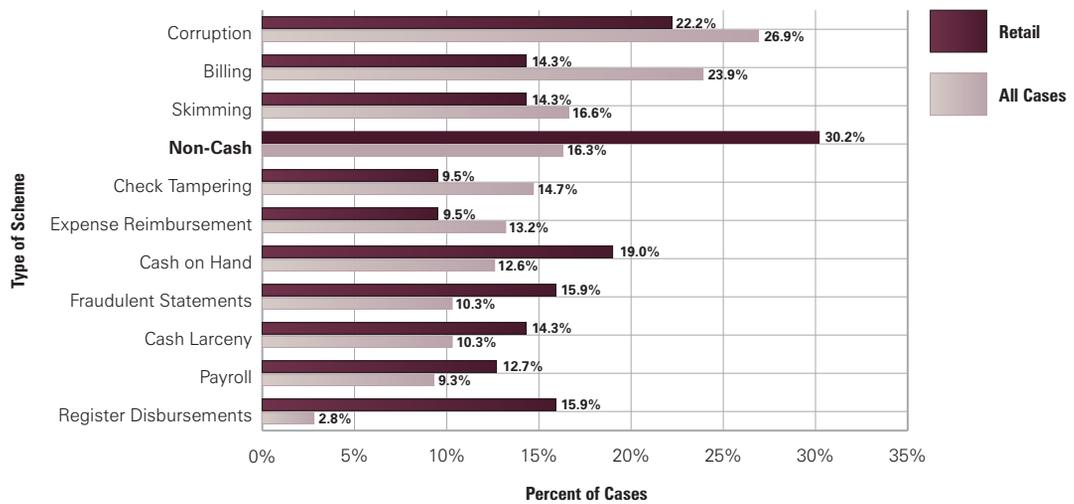


<sup>14</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

### Retail

The chart below shows the distribution of schemes among the 63 retail industry cases that were reported in our survey. Non-cash frauds were far more common in retail organizations than among all cases. The same is true for cash register disbursements, cash larceny, and misappropriations of cash on hand. Each of these categories of fraud are highly compatible with the retail industry, where inventory pilferage and theft from cash registers are known to be common.

**Occupational Fraud Schemes in the Retail Industry (63 cases)<sup>15</sup>**

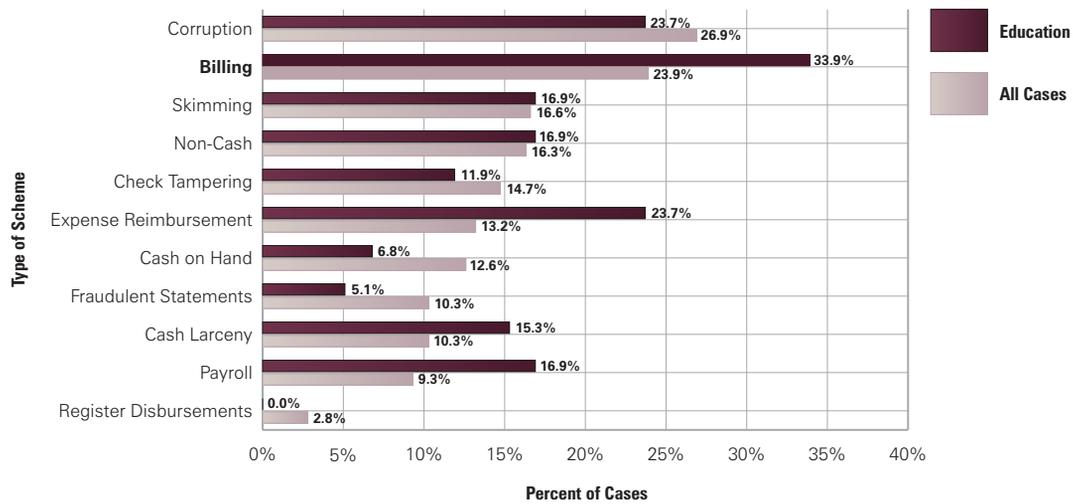


<sup>15</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

## Education

Billing schemes and expense reimbursement frauds were two of the most common schemes in the education industry, and both categories exceeded the overall rate of occurrence by approximately 10%. Cash larceny and payroll fraud were also more common in education organizations than in all cases.

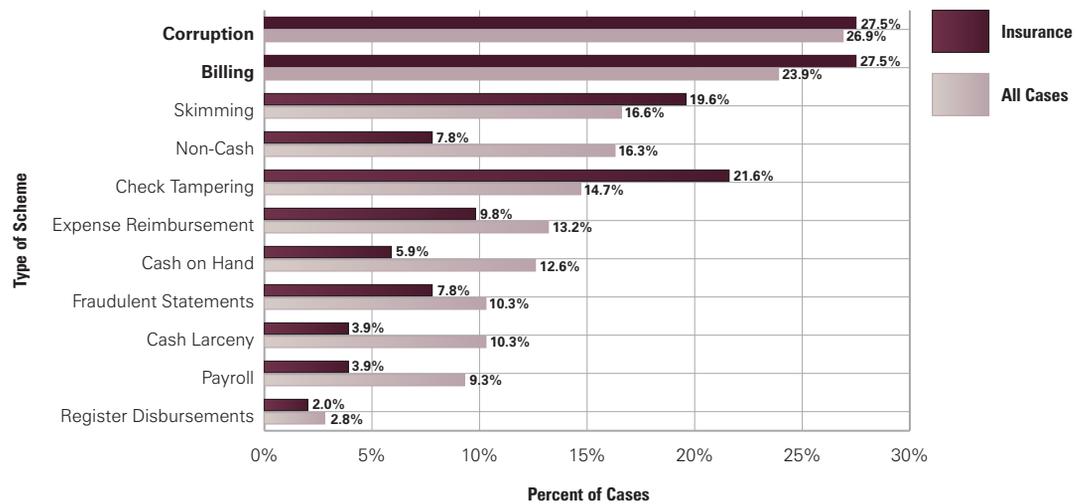
**Occupational Fraud Schemes in the Education Industry (59 cases)<sup>16</sup>**



### Insurance

The most common schemes in the insurance industry were billing frauds, corruption, check tampering, and skimming. Check tampering, in particular, was much more common in the insurance industry than in general. Insurance industry check tampering schemes often involve the theft of checks to legitimate insureds or the generating of checks to fictitious insureds.

#### Occupational Fraud Schemes in the Insurance Industry (51 cases)<sup>17</sup>



<sup>17</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

### Industries with the Most Corruption Cases

Certain industries, such as construction or government and public administration, are often thought to be associated with or susceptible to corruption. Yet surprisingly, of the 21 industry categories in our survey, organizations in the government and public administration sector ranked 11th in terms of the percent of cases involving corruption, and organizations in the construction industry ranked last with only 12%. The oil and gas industry had the greatest percentage of corruption cases at 47%, and one-third of the 132 banking sector cases also involved corruption.

### Industries with the Most Financial Statement Fraud Cases

Because losses associated with financial statement fraud were so much larger than any other type of scheme, we sought to determine which industries experienced the greatest relative percentage of financial statement frauds. In total, there were 99 financial statement fraud cases in our study, and these cases were spread broadly across the 21 industry categories in our study. At least one financial statement fraud case was reported in every industry except utilities, and only three industries — banking, manufacturing, and retail — had 10 or more financial fraud cases. In terms of percentages, the telecommunications industry had the highest rate of financial statement fraud at 25%.

Corruption Cases by Industry			
Industry	# of Cases	Corruption Cases	% Corruption Cases
Oil and Gas	17	8	47.1%
Arts, Entertainment, and Recreation	16	6	37.5%
Banking / Financial Services	132	44	33.3%
Technology	28	9	32.1%
Services — Other	35	11	31.4%
Real Estate	29	9	31.0%
Manufacturing	65	19	29.2%
Communications / Publishing	14	4	28.6%
Insurance	51	14	27.5%
Utilities	22	6	27.3%
Government and Public Administration	106	28	26.4%
Healthcare	76	20	26.3%
Transportation and Warehousing	31	8	25.8%
Education	59	14	23.7%
Religious, Charitable, or Social Services	39	9	23.1%
Agriculture, Forestry, Fishing, and Hunting	13	3	23.1%
Retail	63	14	22.2%
Services — Professional	34	7	20.6%
Telecommunications	16	3	18.8%
Wholesale Trade	17	3	17.6%
Construction	42	5	11.9%

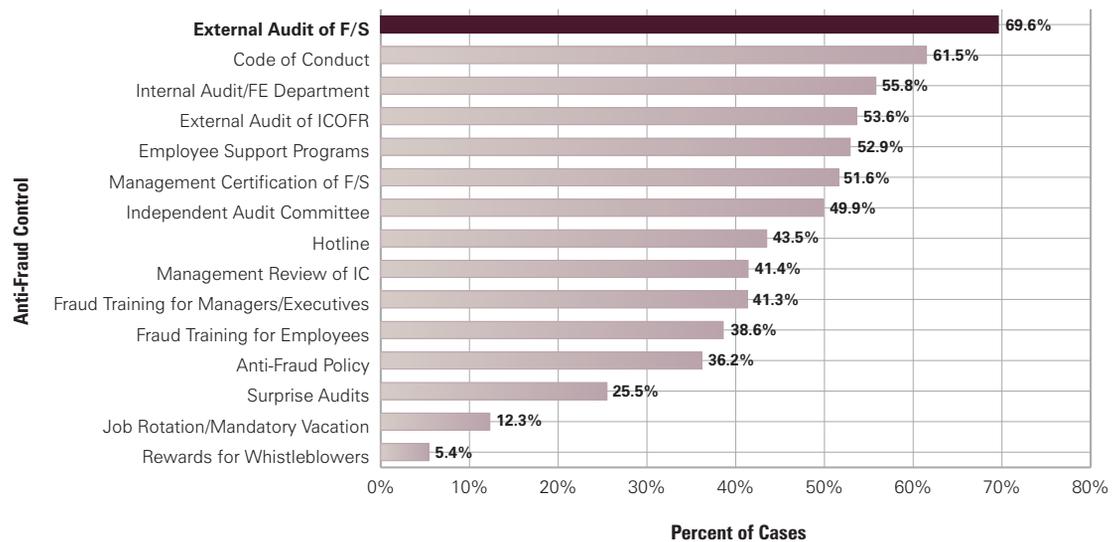
Financial Statement Fraud Cases by Industry			
Industry	# of Cases	FSF Cases	% FSF Cases
Telecommunications	16	4	25.0%
Manufacturing	65	15	23.1%
Agriculture, Forestry, Fishing, and Hunting	13	3	23.1%
Retail	63	10	15.9%
Technology	28	4	14.3%
Banking / Financial Services	132	17	12.9%
Oil and Gas	17	2	11.8%
Services — Professional	34	4	11.8%
Wholesale Trade	17	2	11.8%
Services — Other	35	4	11.4%
Transportation and Warehousing	31	3	9.7%
Healthcare	76	6	7.9%
Insurance	51	4	7.8%
Communications / Publishing	14	1	7.1%
Construction	42	3	7.1%
Arts, Entertainment, and Recreation	16	1	6.3%
Education	59	3	5.1%
Government and Public Administration	106	4	3.8%
Real Estate	29	1	3.4%
Religious, Charitable, or Social Services	39	1	2.6%
Utilities	22	0	0.0%

### Anti-Fraud Controls in Place at Time of Fraud

Respondents to our survey were asked to identify which, if any, of 15 common fraud-related controls had been implemented by the victim organization at the time the fraud occurred. External audits of financial statements were the most common anti-fraud control. Seventy percent of victims utilized independent external audits of their financial statements at the time of the fraud.

Over half of the victims also had a formal code of conduct, an internal audit or fraud examination department, one or more employee support programs, as well as two controls mandated by the Sarbanes-Oxley Act: an external audit of the entity's internal controls over financial reporting and certification of the financial statements by management. In addition, an independent audit committee, also required under Sarbanes-Oxley, was reportedly present in half of all victim organizations.

Frequency of Anti-Fraud Controls\*



\*\*External Audit of F/S" = independent external audits of the organization's financial statements  
 "Internal Audit / FE Department" = internal audit department or fraud examination department  
 "External Audit of ICOFR" = independent audits of the organization's internal controls over financial reporting  
 "Management Certification of F/S" = management certification of the organization's financial statements  
 "Management Review of IC" = regular management review of internal controls

## Effectiveness of Controls

We compared the median losses at organizations that had implemented each control with the median losses for those that had not. Interestingly, the two controls associated with the largest reduction in median losses — surprise audits and job rotation/mandatory vacations — were among the least commonly employed controls. Only a quarter of the victim organizations were reportedly conducting surprise audits at the time of the fraud; however, the median loss suffered by these organizations was 66% lower than the median loss incurred by organizations without this control in place.

Likewise, the median loss at the 12% of entities who implemented job rotation or mandatory vacation policies was \$64,000, compared to \$164,000 at the organizations lacking similar procedures. In contrast, the most commonly cited control method — independent financial statement audits — did appear to be associated with a lower median loss, but was not as effective at reducing fraud losses as some of the less commonly implemented controls.

Median Loss Based on Presence of Anti-fraud Controls				
Control	% of Cases Implemented	Yes	No	% Reduction
Surprise Audits	25.5%	\$70,000	\$207,000	66.2%
Job Rotation / Mandatory Vacation	12.3%	\$64,000	\$164,000	61.0%
Hotline	43.5%	\$100,000	\$250,000	60.0%
Employee Support Programs	52.9%	\$110,000	\$250,000	56.0%
Fraud Training for Managers / Executives	41.3%	\$100,000	\$227,000	55.9%
Internal Audit / FE Department	55.8%	\$118,000	\$250,000	52.8%
Fraud Training for Employees	38.6%	\$100,000	\$208,000	51.9%
Anti-Fraud Policy	36.2%	\$100,000	\$197,000	49.2%
External Audit of ICOFR	53.6%	\$121,000	\$232,000	47.8%
Code of Conduct	61.5%	\$126,000	\$232,000	45.7%
Management Review of IC	41.4%	\$110,000	\$200,000	45.0%
External Audit of F/S	69.6%	\$150,000	\$250,000	40.0%
Independent Audit Committee	49.9%	\$137,000	\$200,000	31.5%
Management Certification of F/S	51.6%	\$141,000	\$200,000	29.5%
Rewards for Whistleblowers	5.4%	\$107,000	\$150,000	28.7%

## Hotlines

Hotlines are frequently touted as an essential component of an effective system of anti-fraud controls. In fact, the Sarbanes-Oxley Act of 2002 mandated that all public companies implement a formal reporting mechanism, such as a hotline, so that employees and other parties can report fraudulent or inappropriate activity. But once a hotline is in place, how effective is it in detecting fraud? There were 417 cases in our study in which the victim organization had a hotline at the time of the fraud, and 216 of those cases (51.8%) were initially detected by a tip. Somewhat surprisingly, among these 216 cases, only 98 of the tips (45.4%) actually came through the hotline. We had anticipated that the utilization rate of the hotlines would be higher, but it is likely that a certain percentage of employees, customers, etc. are not necessarily concerned with making a confidential report of misconduct, which is one of the principal benefits of a hotline or other formal reporting mechanism.

Where confidentiality is not a consideration, it may be simpler for an employee to directly report fraudulent conduct to a manager or supervisor rather than utilize the anonymous reporting structure. However, it is still significant that approximately half of fraud tips came through a hotline when that mechanism was available, and we note that 63% of the hotline reports involved fraud by a manager or executive. These are cases in which confidentiality would more likely be a consideration of the whistleblower. This data indicates that hotlines are a very effective fraud detection tool.

## SOX-Related Controls

The Sarbanes-Oxley Act of 2002 was a landmark piece of legislation that widely impacted the way many organizations approach their anti-fraud efforts. As part of the law's requirements, organizations were instructed to implement several specific controls to help combat fraud. The vast majority of the Act's provisions were mandatory for public corporations in the U.S. However, many other organizations — whether private companies or not-for-profit entities — have followed suit and implemented similar procedures as best practices in the fight against fraud. The following tables show the relative effectiveness of five controls mandated by Sarbanes-Oxley broken down by organizational type.

## Publicly Traded Companies

Public companies were required to have the SOX-mandated controls in place during the period covered by our survey — with the exception of small public companies who were allowed extra time to have both management and auditors review the internal controls over financial reporting. The impact these controls had on the severity of the frauds that occurred in public companies is notable. Publicly traded organizations with SOX-related controls in place incurred median losses 70% to 96% lower than the corporations that had not yet implemented these controls. Interestingly, the control associated with the largest reduction in median loss — management certification of the financial statements — was also the only control associated with a negative impact on the length of the scheme. Corporations that had management certify the company's financial statements suffered fraud schemes that continued for a median 18 months before being detected, compared with a median of 15 months for public companies lacking this control.

Sox-Related Internal Controls in Public Companies (256 cases)										
Control	Control in Place?				Median Loss			Months to Detection		
	Yes		No		Yes	No	% Reduction	Yes	No	% Reduction
Independent Audit Committee	228	89.1%	13	5.1%	\$139,000	\$463,000	70.0%	18	24	25.0%
Management Certification of F/S	226	88.3%	8	3.1%	\$135,000	\$3,725,000	96.4%	18	15	-20.0%
External Audit of ICOFR	212	82.8%	16	6.3%	\$125,000	\$1,150,000	89.1%	18	27	33.3%
Hotline	197	77.0%	28	10.9%	\$100,000	\$784,000	87.2%	16	24	33.3%
Management Review of IC	188	73.4%	36	14.1%	\$110,000	\$425,000	74.1%	14	18	22.2%

### Privately Held Companies

Although privately held companies are not generally required to comply with the Sarbanes-Oxley Act, many have followed the lead of public companies in implementing SOX-mandated internal controls to help prevent and detect fraud. However, the private companies in our study had a lower rate of implementation of these controls than any other organization category. Hotlines, which were associated with the greatest reduction in median losses for private companies, were the least commonly cited SOX-related control. Less than 20% of private companies had an anonymous reporting mechanism in place at the time of the fraud.

Sox-Related Internal Controls in Private Companies (352 cases)										
Control	Control in Place?				Median Loss			Months to Detection		
	Yes		No		Yes	No	% Reduction	Yes	No	% Reduction
Management Certification of F/S	113	32.1%	182	51.7%	\$236,000	\$310,000	23.9%	18	24	25.0%
External Audit of ICOFR	106	30.1%	201	57.1%	\$250,000	\$300,000	16.7%	15	26	42.3%
Management Review of IC	87	24.7%	211	59.9%	\$150,000	\$266,000	43.6%	13	24	45.8%
Independent Audit Committee	87	24.7%	239	67.9%	\$264,000	\$295,000	10.5%	12	24	50.0%
Hotline	66	18.8%	254	72.2%	\$115,000	\$350,000	67.1%	12	24	50.0%

## Victim Organizations

### Not-For-Profit Organizations

Non-profit organizations face unique challenges in fighting occupational fraud; not least among these is striking the right balance between using funding for the stated mission of the organization and spending valuable resources on ensuring the protection of the entity's assets. Unfortunately, the results of our survey indicate that these entities may be focusing their resources on less effective controls, while missing some important opportunities to thwart fraudsters. The least common controls implemented by non-profits — hotlines and management review of the financial statements — were the controls associated with the largest reduction in median loss by far.

Sox-Related Internal Controls in Non-profits (129 cases)										
Control	Control in Place?				Median Loss			Months to Detection		
	Yes		No		Yes	No	% Reduction	Yes	No	% Reduction
Independent Audit Committee	69	53.5%	57	44.2%	\$115,000	\$109,000	-5.5%	19	24	20.8%
External Audit of ICOFR	68	52.7%	51	39.5%	\$90,000	\$100,000	10.0%	16	30	46.7%
Management Certification of F/S	56	43.4%	61	47.3%	\$110,000	\$109,000	-0.9%	24	24	0.0%
Hotline	41	31.8%	80	62.0%	\$50,000	\$124,000	59.7%	12	30	60.0%
Management Review of IC	35	27.1%	82	63.6%	\$50,000	\$115,000	56.5%	12	24	50.0%

### Government Agencies

As government organizations are funded primarily by citizens' tax dollars, it is encouraging to see that many governmental agencies are implementing the same types of controls required of large corporations in an effort to prevent and detect occupational fraud. Sixty-one percent of the government organizations in our study have undergone an external audit of the agency's internal controls over financial reporting, a control measure which is associated with a 69% drop in median loss for these entities — by far the largest reduction for any of the SOX-related controls.

Sox-Related Internal Controls in Government (163 cases)										
Control	Control in Place?				Median Loss			Months to Detection		
	Yes		No		Yes	No	% Reduction	Yes	No	% Reduction
External Audit of ICOFR	99	60.7%	39	23.9%	\$61,000	\$197,000	69.0%	24	36	33.3%
Hotline	90	55.2%	56	34.4%	\$100,000	\$121,000	17.4%	21	30	30.0%
Management Certification of F/S	77	47.2%	54	33.1%	\$82,000	\$113,000	27.4%	24	24	0.0%
Independent Audit Committee	64	39.3%	84	51.5%	\$74,000	\$118,000	37.3%	24	28	14.3%
Management Review of IC	62	38.0%	71	43.6%	\$100,000	\$150,000	33.3%	20	30	33.3%

### SOX-Related Controls for Financial Statement Fraud Cases

Sarbanes-Oxley was passed in response to several large financial statement fraud schemes, and, as such, the Act mandates the implementation of specific controls targeted toward preventing and detecting financial statement manipulation. Accordingly, we analyzed the impact of SOX-related controls in all reported cases of financial statement fraud in our study. We found that the presence of these controls was not correlated to a decrease in the median loss for financial statement fraud schemes; in fact, for all controls except hotlines, the converse was true. Organizations with these controls in place experienced greater fraudulent financial statement manipulations than organizations lacking these controls. Additionally, organizations that had independent audit committees and those whose management certified the financial statements actually took longer to detect the fraudulent financial misstatements than their counterparts without such controls.

Sox-Related Internal Controls in Financial Statement Fraud Cases (99 cases)										
Control	Control in Place?				Median Loss			Months to Detection		
	Yes		No		Yes	No	% Reduction	Yes	No	% Reduction
Management Certification of F/S	53	53.5%	32	32.3%	\$3,500,000	\$1,300,000	-169.2%	33	28	-17.9%
External Audit of ICOFR	41	41.4%	40	40.4%	\$3,250,000	\$1,868,000	-74.0%	24	30	20.0%
Independent Audit Committee	40	40.4%	47	47.5%	\$7,000,000	\$1,500,000	-366.7%	36	30	-20.0%
Management Review of IC	34	34.3%	43	43.4%	\$3,000,000	\$2,000,000	-50.0%	25	30	16.7%
Hotline	24	24.2%	53	53.5%	\$2,000,000	\$2,500,000	20.0%	26	30	13.3%

### Importance of Controls in Detecting or Limiting Fraud

We asked survey respondents to provide their opinions about how important a role each of several internal controls played in detecting or limiting the losses from the specific fraud scheme they investigated. Their responses were restricted to only those controls that were in place at the time of the fraud and were ranked on a scale of one (not at all important) to five (very important).

CFEs' Ranking of Controls' Importance in Detecting or Limiting Fraud Case	
Control	Average Score
Internal Audit / FE Department	3.81
Surprise Audits	3.51
Management Review of IC	3.17
Fraud Hotline	3.03
Mandatory Job Rotation / Vacations	3.02
Rewards for Whistleblowers	2.86
Audit of ICOFR	2.65
Audit of F/S	2.53

Ranking of Controls vs. Relative Effectiveness		
Control	Ranking*	Reduction in Median Losses
Internal Audit / FE Department	1	52.80%
Surprise Audits	2	66.20%
Management Review of IC	3	45.00%
Fraud Hotline	4	60.00%
Mandatory Job Rotation / Vacations	5	61.00%
Rewards for Whistleblowers	6	28.70%
Audit of ICOFR	7	47.80%
Audit of F/S	8	40.00%

\*Based on average score.

## By Fraud Type

Different types of fraud may be impacted by different controls, so we also analyzed how important various controls were at detecting fraud or limiting losses based on the category of fraud. Once again, the data in the following tables relate to how effective a control was in the specific case investigated by the respondent.

### Asset Misappropriations

For those schemes in which the perpetrator misappropriated his or her employer's assets, the CFEs who responded to our survey believed the victim organization's internal audit department played the most important role in uncovering or limiting the fraud. Independent audits of financial statements and of internal controls scored the lowest for asset misappropriation schemes. This is not surprising given that such audits generally only target frauds that materially affect the organization's financial statements, which may not be true of many asset misappropriation schemes.

CFEs' Ranking of Controls' Importance in Detecting or Limiting Asset Misappropriations	
Control	Average Score
Internal Audit / FE Department	3.86
Surprise Audits	3.55
Management Review of IC	3.17
Mandatory Job Rotation / Vacations	3.06
Fraud Hotline	2.99
Rewards for Whistleblowers	2.93
Audit of ICOFR	2.65
Audit of F/S	2.53

### Corruption

The ranking of controls for corruption schemes is very similar to that for asset misappropriations, with one notable exception. Fraud hotlines scored much higher for corruption schemes than for asset misappropriation schemes and for all cases in general. This may be because many corruption schemes involve collusion and internal control overrides that tend to diminish the effectiveness of traditional controls and reviews.

CFEs' Ranking of Controls' Importance in Detecting or Limiting Corruption Schemes	
Control	Average Score
Internal Audit / FE Department	3.83
Fraud Hotline	3.48
Surprise Audits	3.41
Management Review of IC	3.14
Rewards for Whistleblowers	3.11
Mandatory Job Rotation / Vacations	2.87
Audit of F/S	2.66
Audit of ICOFR	2.63

### Financial Statement Fraud

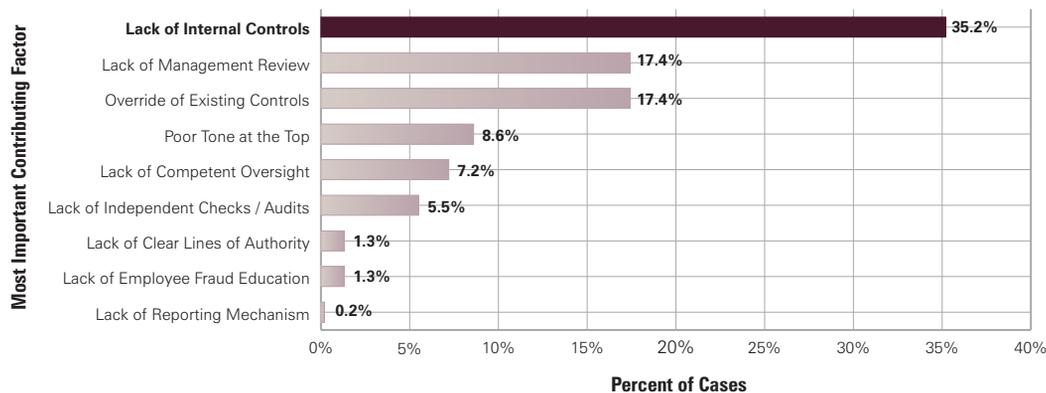
Certain controls, such as independent audits of the financial statements and of internal controls over financial reporting, are primarily targeted at detecting financial statement fraud schemes. However, when asked to provide an opinion on the importance of the eight internal control mechanisms in detecting and limiting the financial statement fraud that took place, the respondents ranked these controls well below other controls not specifically aimed at this type of scheme. Rewards for whistleblowers scored the highest, on average, followed by an internal audit or fraud examination department, and a formal fraud hotline.

CFEs' Ranking of Controls' Importance in Detecting or Limiting Financial Statement Fraud Schemes	
Control	Average Score
Rewards for Whistleblowers	4.00
Internal Audit / FE Department	3.78
Fraud Hotline	3.77
Surprise Audits	3.69
Mandatory Job Rotation / Vacations	3.17
Audit of F/S	2.93
Management Review of IC	2.84
Audit of ICOFR	2.68

### Control Weaknesses that Contributed to Fraud

We also asked survey participants which of several circumstances they believed was the most important contributing factor that allowed the fraud to occur. Lack of controls, absence of management review, and override of existing controls were the three most commonly cited factors that allowed fraud schemes to succeed.

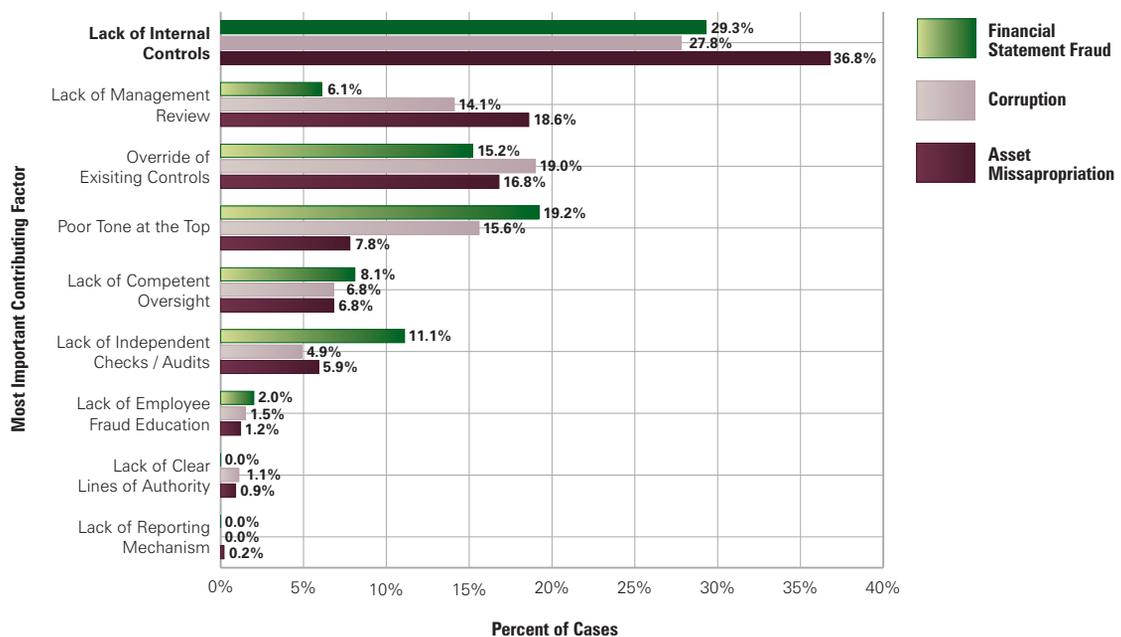
**Primary Internal Control Weakness Observed by CFE**



## Victim Organizations

When we broke occupational frauds down by the three major categories — asset misappropriations, corruption and fraudulent statements — we found that lack of internal controls was the most commonly cited control weakness in all three categories, but beyond that there were notable distinctions based on the form of fraud. For example, in financial statement fraud cases, poor tone at the top was cited as the most important contributing factor in 19.2% of cases — more than double the rate for asset misappropriations. This is not surprising considering that financial statement frauds are much more likely to be committed by owners and executive-level employees. We also found that lack of independent audits was considered the most important contributing factor much more often in financial statement frauds than in the other two categories. Among corruption schemes, override of controls was the second most commonly cited contributing factor after lack of controls. Corruption cases were also frequently related to organizations with a poor tone at the top.

**Breakdown of Primary Internal Control Weaknesses by Scheme Type**

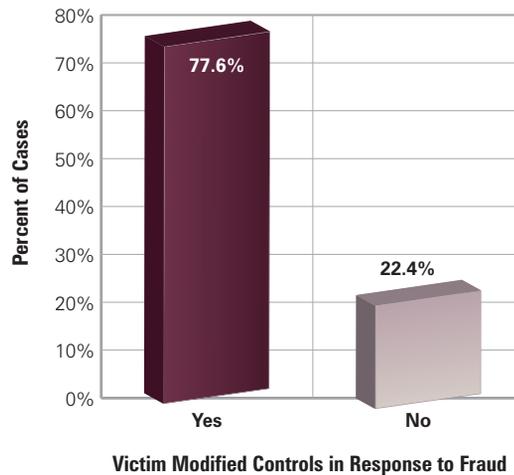


## Modification of Controls in Response to Fraud

Three-fourths of the victim organizations in our study altered their existing internal control system in direct response to the discovery of the fraud, which shows that most organizations perceived the fraud to have occurred or succeeded, at least in part, due to a control weakness.

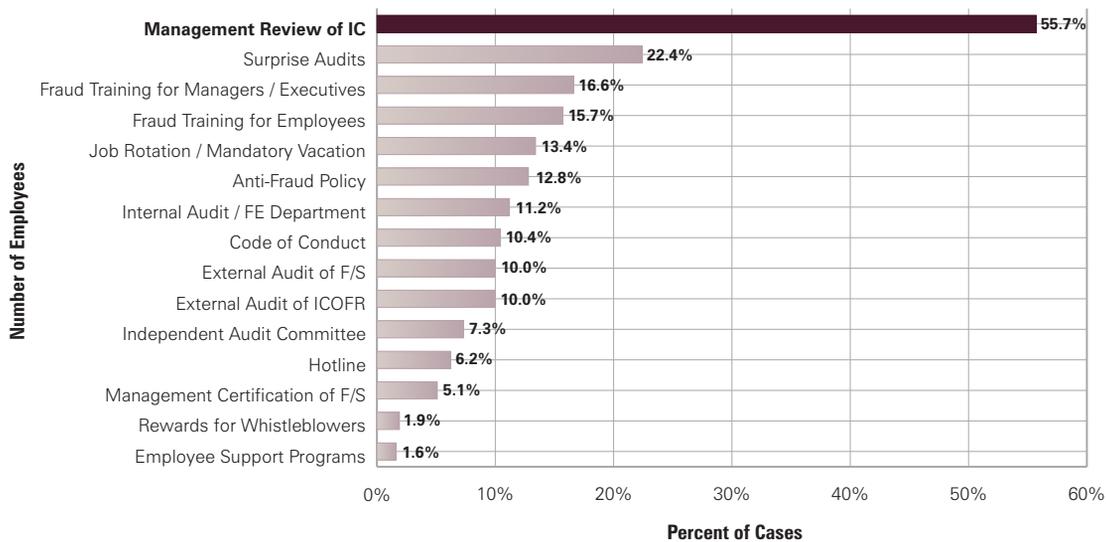
Among the entities that changed their control structure in response to the fraud, the most common change by far was to implement or modify management review of the internal control system. This change was implemented 56% of the time, more than twice the rate of any other modification. Surprise audits were the second most commonly implemented or modified control mechanism. This finding is quite encouraging, as surprise audits were associated with the greatest reduction in both me-

## Victim Organizations That Modified Controls After Discovery of Fraud



dian loss and median scheme length in our study, but were one of the least commonly implemented controls prior to the fraud.

## Internal Controls Modified or Implemented in Response to Fraud



We collected information about the individuals responsible for occupational fraud in order to better understand the characteristics of those who commit fraud and to see how certain types of fraud are related to different job types or positions of authority.



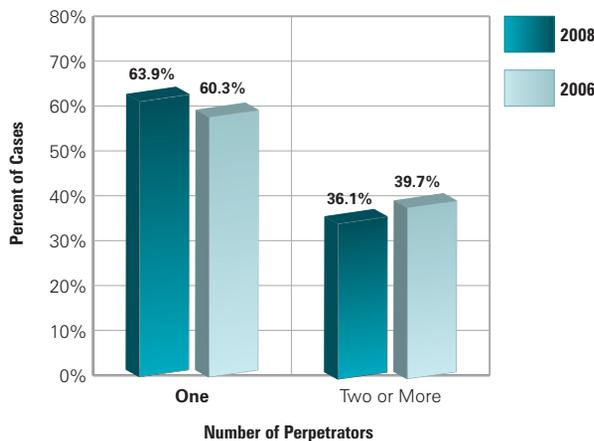
**Almost 50% of occupational frauds involved the accounting department or upper management.**

### Impact of Collusion

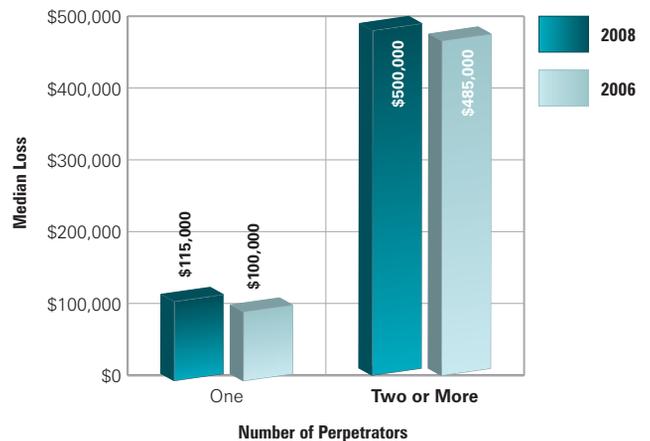
In nearly two-thirds of the fraud schemes covered by our study, the perpetrator acted alone, a proportion that was consistent with our 2006 study.

However, in both studies, schemes that involved two or more individuals resulted in a median loss over four times higher than the amount lost in schemes committed by a single perpetrator. This finding may reflect the fact that collusion often enables employees to circumvent specific controls that would otherwise detect or limit the impact of a fraud.

**Number of Perpetrators — Frequency**

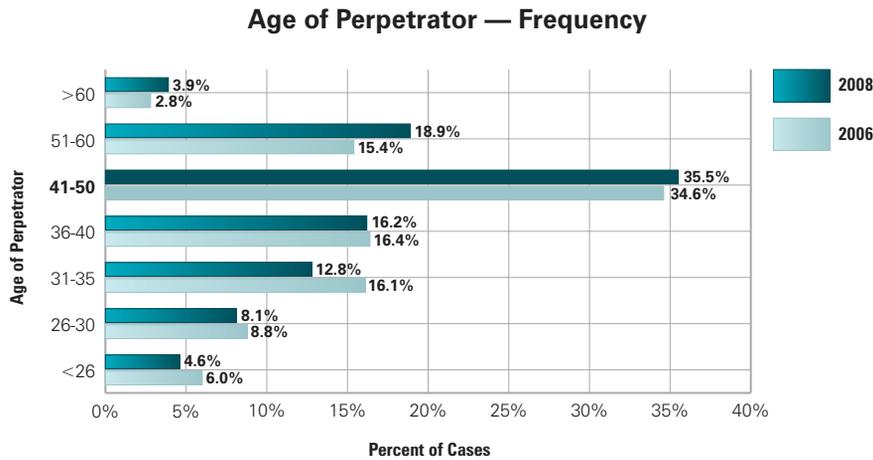


**Number of Perpetrators — Median Loss**

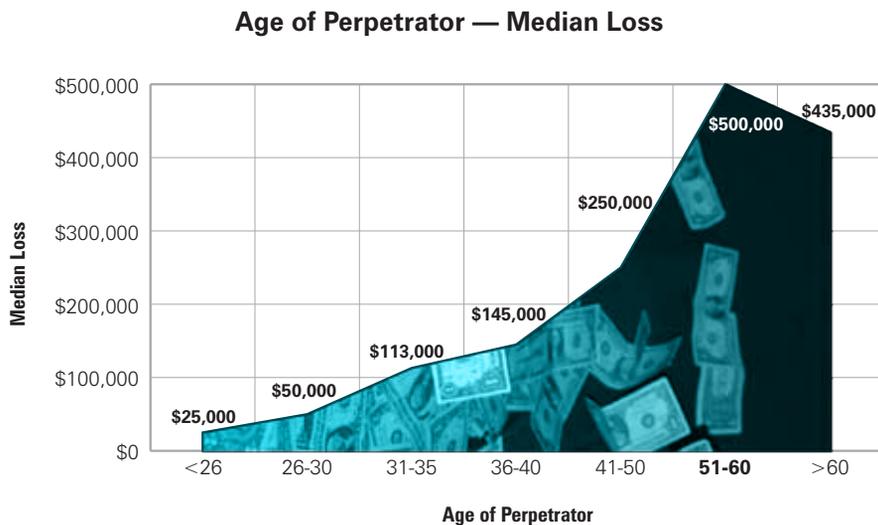


## Perpetrator's Age

More than half of the fraud cases we studied involved a fraudster over the age of 40, and over one-third of the schemes were perpetrated by individuals between the ages of 41 and 50. The distribution of ages was very similar to that from our 2006 study.



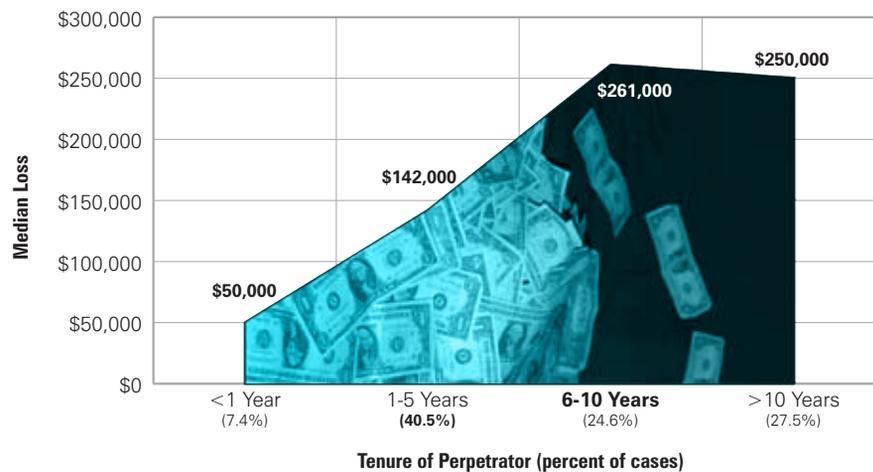
Generally speaking, higher-level positions within a company are occupied by more experienced employees, meaning that older individuals often hold positions with more authority over and access to company resources. This likely explains why the median loss from fraud in our study rose as the age of the perpetrator increased. Schemes perpetrated by individuals in their 50s resulted in a median loss of \$500,000, twice as high as any age bracket below them.



### Tenure of Perpetrator

There was no strong correlation in our study between the amount of time an individual had worked for an organization and when that person was likely to begin committing fraud. Approximately 48% of perpetrators had worked at the organization for five years or less, while about 52% had been with their organization for more than five years. However, we did find that, generally speaking, longer-term employees tend to commit much larger frauds. This is consistent with our findings from previous surveys.

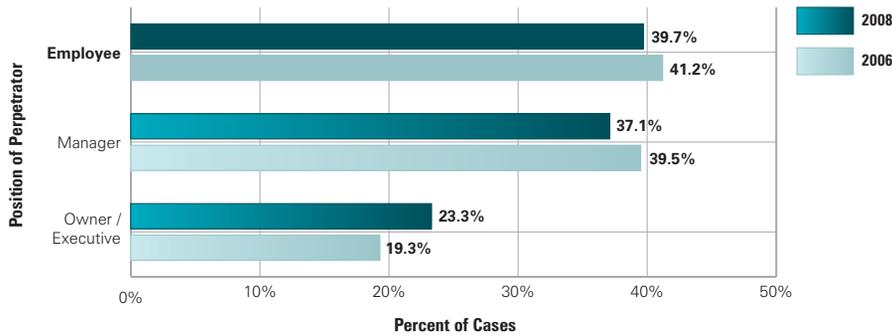
**Tenure of Perpetrator — Frequency and Median Loss**



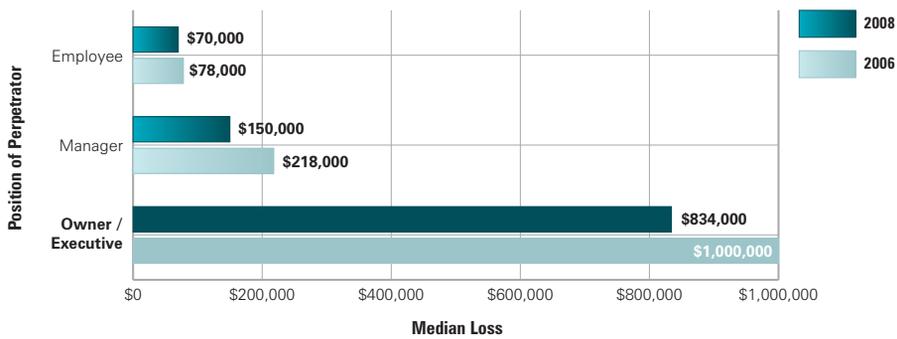
### Perpetrator's Position

We examined the fraudsters in our study based on their positions within the victim organization and found that the majority of occupational frauds are committed by employees and managers. Owners and executives are involved less often (just under one-quarter of all cases), but the median loss in their frauds was \$834,000, which is over five times greater than the losses caused by managers and more than 11 times higher than the median loss caused by employees.

### Position of Perpetrator — Frequency



### Position of Perpetrator — Median Loss

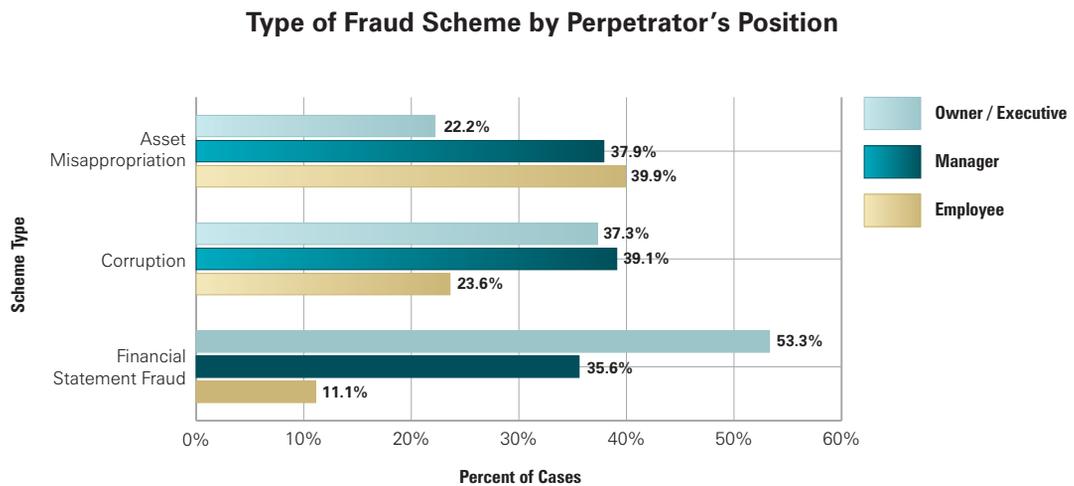


Frauds committed by employees were also discovered much sooner than those involving their superiors. In fact, frauds in which the primary perpetrator was a manager, owner, or executive lasted a median duration of two years — twice as long as those cases involving lower-level employees. This discrepancy is likely due to the fact that most managers, executives, and owners have greater authority to circumvent or override controls, which makes it much harder to detect a fraud.

Median Duration of Frauds by Position of Perpetrator	
Position	Median Months to Detection
Employee	12
Manager / Supervisor	24
Owner / Executive / Officer	24

## Scheme Type by Position

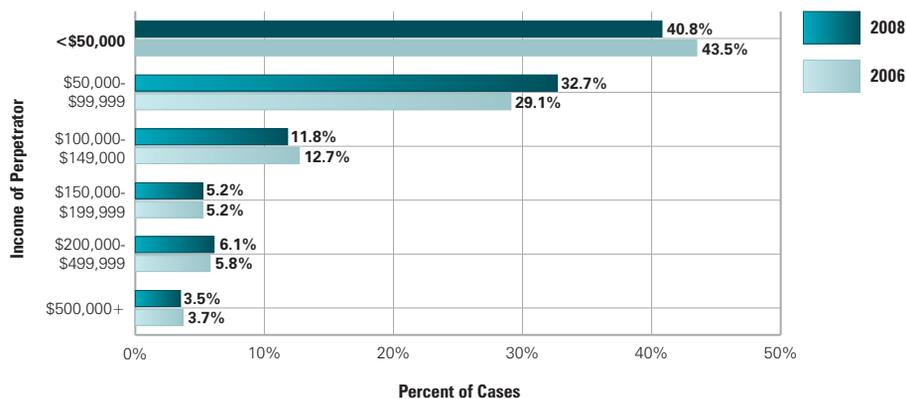
The following chart presents a breakdown of the three major categories of occupational fraud based on the position of the perpetrator. Less than one-fourth of the fraudsters in our study were owner/executives, but they were responsible for over half of all financial statement frauds and almost 40% of all corruption cases.



## Perpetrator's Annual Income

Over 40% of all frauds in our study were perpetrated by employees who earned less than \$50,000 per year at the time of the fraud. Further, the percentage of perpetrators in each income bracket decreased as his or her reported annual salary increased. This information likely reflects the typical salary structure at most organizations (i.e., there are generally more low-paid employees than high-paid employees). It is also possible that lower-income individuals have more motivation to engage in fraud. We know that intense financial pressure is a key contributing factor to many occupational fraud schemes. Lower-income individuals may be more susceptible to financial pressures and this may contribute to the high rate of fraud schemes committed by those with under \$50,000 in annual income.

### Annual Income of Perpetrator — Frequency



While the number of fraudsters decreased as income brackets rose, the median loss for the fraud schemes in our study increased directly with the annual income of the perpetrator. Those perpetrators earning less than \$50,000 per year caused a median loss of \$75,000, while on the other end of the pay scale, employees with the highest annual salaries caused the greatest median losses. The 29 schemes perpetrated by individuals who earned over \$500,000 were associated with a median loss of \$50 million dollars — 50 times that of any other income bracket.

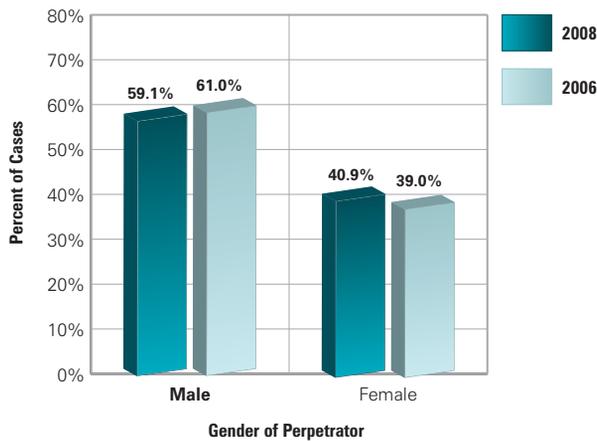
### Median Loss Based on Perpetrator’s Annual Income



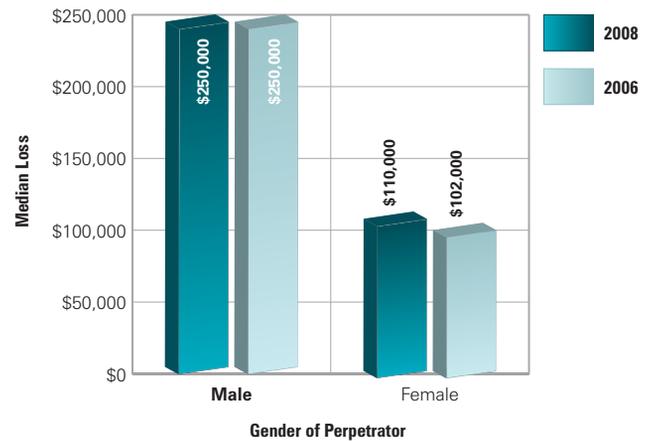
## Perpetrator's Gender

As in our past studies, the majority of fraud cases were perpetrated by males. Men are also associated with a median loss more than twice as great as that caused by women. We have previously hypothesized that these disparities between the genders are reflective of the remaining “glass ceiling” phenomenon, which results in males holding more management and executive-level positions in many organizations and thus having greater opportunity to commit larger-dollar frauds.

**Gender of Perpetrator — Frequency**



**Gender of Perpetrator — Median Loss**

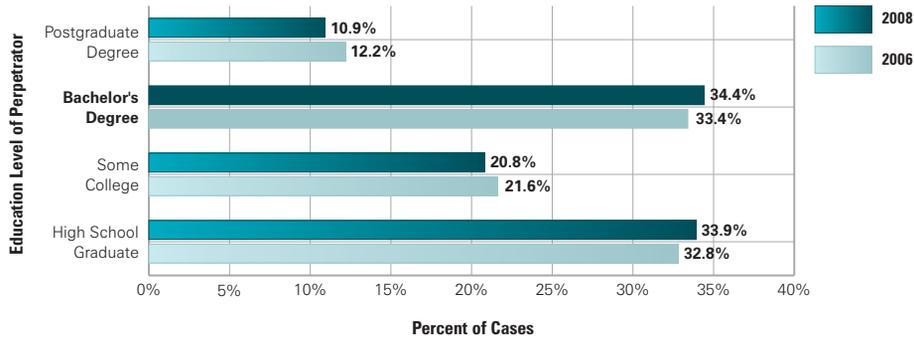


## Perpetrator's Education Level

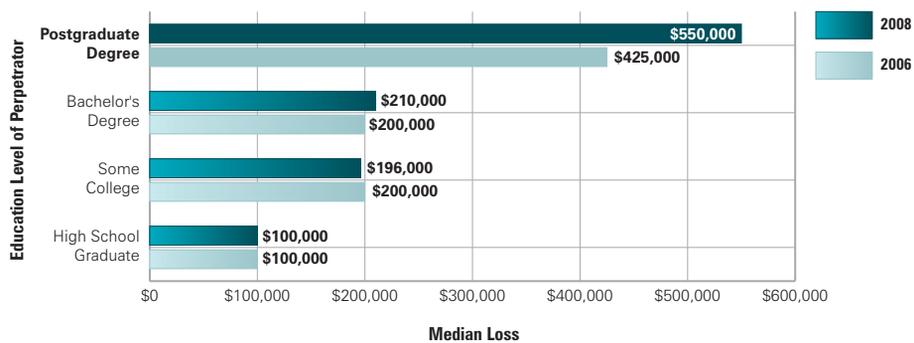
The education level of the perpetrators in this study was very similar to the breakdown observed in our 2006 study. Only 11% of the perpetrators had obtained a post-graduate degree, while over half of the criminals had attended or graduated from college. Thirty-four percent of the fraudsters were high school graduates with no subsequent education.

As the perpetrator's education level rose, so did the median loss caused by the fraud scheme. Employees with a college degree stole a median amount of \$210,000 — more than twice as much as individuals with only a high school education. Fraudsters who had a graduate-level education caused a much greater median loss, at \$550,000. This trend is consistent with the results of our 2006 study.

### Education of Perpetrator — Frequency



### Education of Perpetrator — Median Loss



## Perpetrator’s Department

We also examined the perpetrators based on the department they worked in at the time of the fraud. Of the 800 cases in which information about the perpetrator’s department was provided, the highest percentage of schemes involved those in the accounting department. Because these employees are responsible for processing and recording the organization’s financial transactions, accounting staff generally have the greatest access to its fiscal assets, as well as the most opportunity to conceal a fraud scheme. Executives and upper management were the second-most common category of fraudsters. Internal auditors, who are charged with ensuring the effectiveness of the organization’s internal controls, were the least common perpetrators of the fraud schemes in our study.

## The Perpetrators

Although only eight cases were perpetrated by employees in the legal department, these schemes resulted in the greatest median loss of \$1.1 million. Frauds undertaken by executives and upper management-level employees were the second most costly, causing a median loss of \$853,000. Perpetrators who worked in customer service did the least damage with their schemes. The median loss for cases involving a fraudster in customer service was \$45,000, well below the median loss of \$175,000 for all cases in our study.

Number of Cases Based on Perpetrator's Department			
Department	# of Cases	Pct. of Cases	Median Loss
Accounting	231	28.9%	\$200,000
Executive / Upper Management	142	17.8%	\$853,000
Operations	129	16.1%	\$80,000
Sales	93	11.6%	\$106,000
Customer Service	49	6.1%	\$45,000
Finance	31	3.9%	\$252,000
Warehousing / Inventory	24	3.0%	\$100,000
Purchasing	22	2.8%	\$600,000
Manufacturing and Production	19	2.4%	\$100,000
Information Technology	16	2.0%	\$93,000
Marketing / Public Relations	8	1.0%	\$80,000
Legal	8	1.0%	\$1,100,000
Board of Directors	8	1.0%	\$93,000
Human Resources	7	0.9%	\$325,000
Research and Development	7	0.9%	\$562,000
Internal Audit	6	0.8%	\$93,000

Median Loss Based on Perpetrator's Department			
Department	# of Cases	Pct. of Cases	Median Loss
Legal	8	1.0%	\$1,100,000
Executive / Upper Management	142	17.8%	\$853,000
Purchasing	22	2.8%	\$600,000
Research and Development	7	0.9%	\$562,000
Human Resources	7	0.9%	\$325,000
Finance	31	3.9%	\$252,000
Accounting	231	28.9%	\$200,000
Sales	93	11.6%	\$106,000
Warehousing / Inventory	24	3.0%	\$100,000
Manufacturing and Production	19	2.4%	\$100,000
Information Technology	16	2.0%	\$93,000
Board of Directors	8	1.0%	\$93,000
Internal Audit	6	0.8%	\$93,000
Operations	129	16.1%	\$80,000
Marketing / Public Relations	8	1.0%	\$80,000
Customer Service	49	6.1%	\$45,000

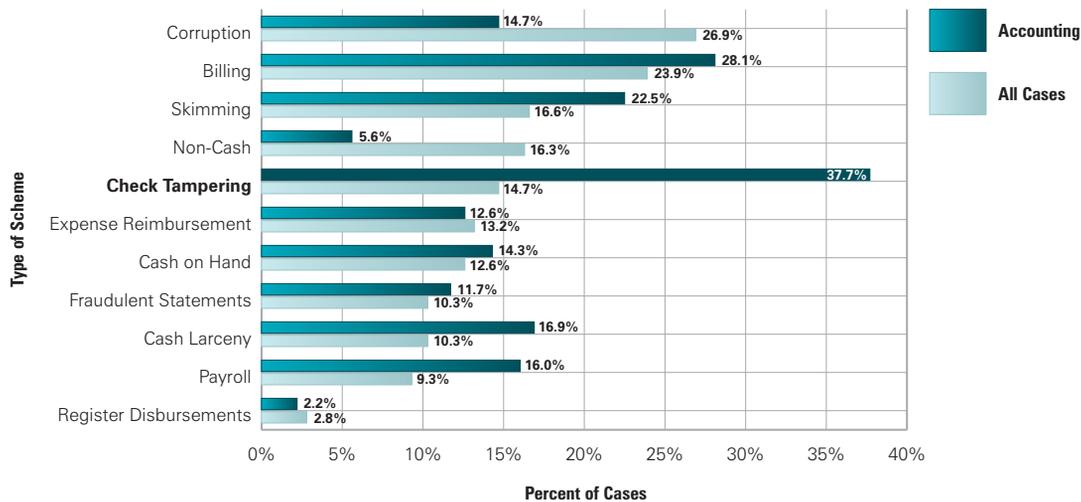
### Scheme Types by Department

The methods implemented by fraudsters generally depend on the opportunities that are available to commit fraud; i.e., the access they have to organizational assets or financial records. Therefore, it stands to reason that the department in which an employee works will determine, to a certain degree, the fraud scheme that he or she undertakes. We sought to determine which types of fraud were most frequently committed by employees in various departments. We limited this analysis to the four departments for which there were more than 50 cases — accounting, executive and upper management, operations, and sales — so that we would have sufficient samples from which to draw this information.

## Accounting

Our study included 231 cases that involved an employee in the accounting department. Over one-third of these cases involved check tampering, a much higher rate than in any other department. The accounting department is typically responsible for the cash disbursements function, which in many cases gives accounting employees the opportunity to produce fraudulent checks. Accounting personnel were also more likely than other employees to engage in cash larceny, payroll fraud, and billing schemes. They were significantly less likely to engage in corruption, possibly because the accounting department tends to have less contact with outside vendors and customers than other departments. Accounting employees also had a very low rate of non-cash misappropriations.

**Occupational Fraud Schemes by Accounting Personnel (231 Cases)<sup>18</sup>**

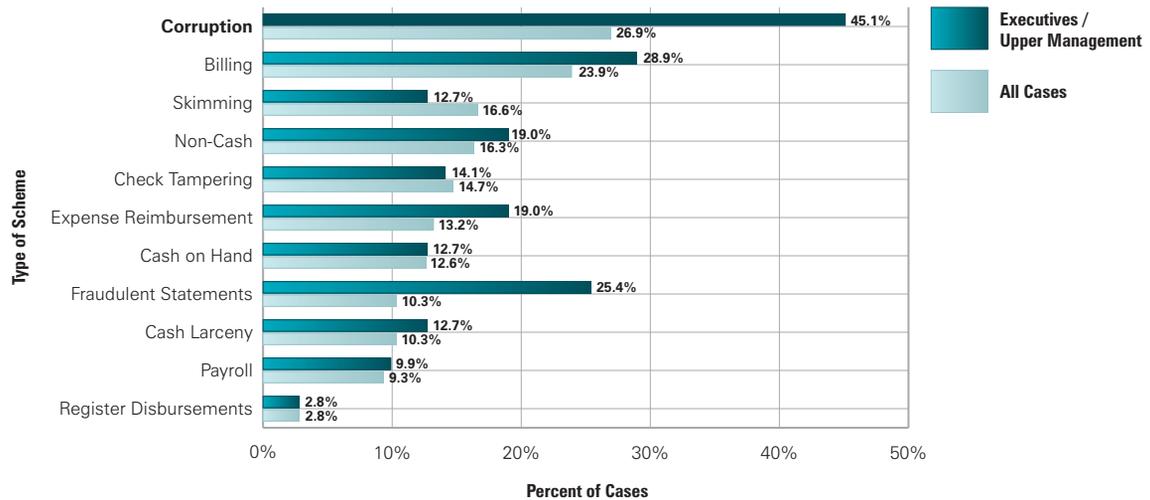


<sup>18</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

## Executive and Upper Management

Executives and upper management-level employees were much more likely to engage in corruption and fraudulent statement schemes than their counterparts in other departments. We reviewed 142 frauds by executives and over 45% of them involved corruption, whereas corruption cases only made up 27% of cases overall. Similarly, over one-fourth of all executive-level cases involved fraudulent financial statements, which was more than twice the rate for our survey in general. As discussed previously, executives and upper management employees generally have the most incentive to falsify financial statements, so it is not surprising that that type of scheme would be more common in the executive suite than in other areas of an organization.

### Occupational Fraud Schemes by Executives and Upper Management (142 Cases)<sup>19</sup>



<sup>19</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

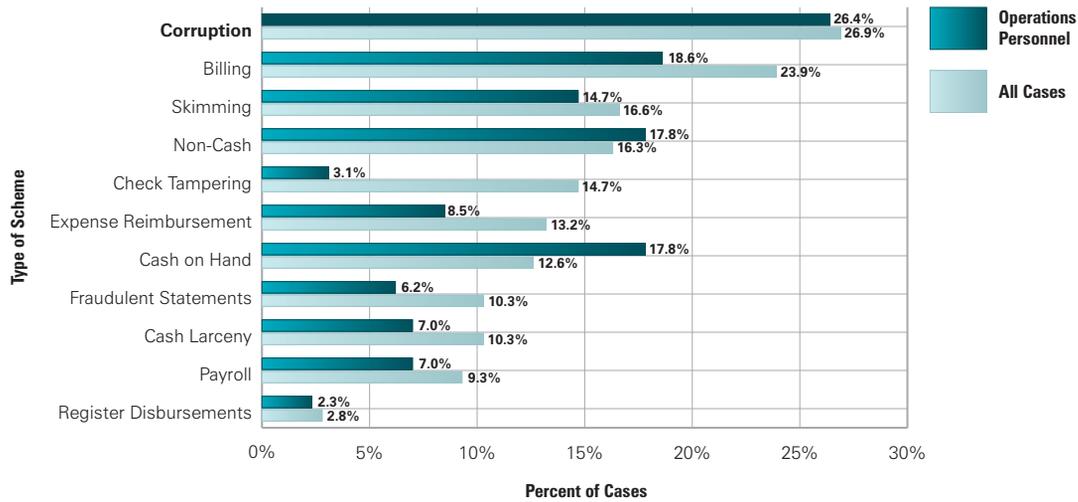
#### Operations

Employees who performed the primary operations of the victim organization were responsible for 129 of the 959 cases in our study. The rates for all forms of fraudulent disbursements (billing schemes, expense reimbursements, check tampering, payroll, and register disbursements) were lower among operations employees than in all cases. Check tampering, in particular, was very uncommon in the operations-staff schemes we received. Only four of 129 cases in this category involved check tampering. On the other hand, operations personnel misappropriated cash on hand at a higher rate than other departments.

#### Sales

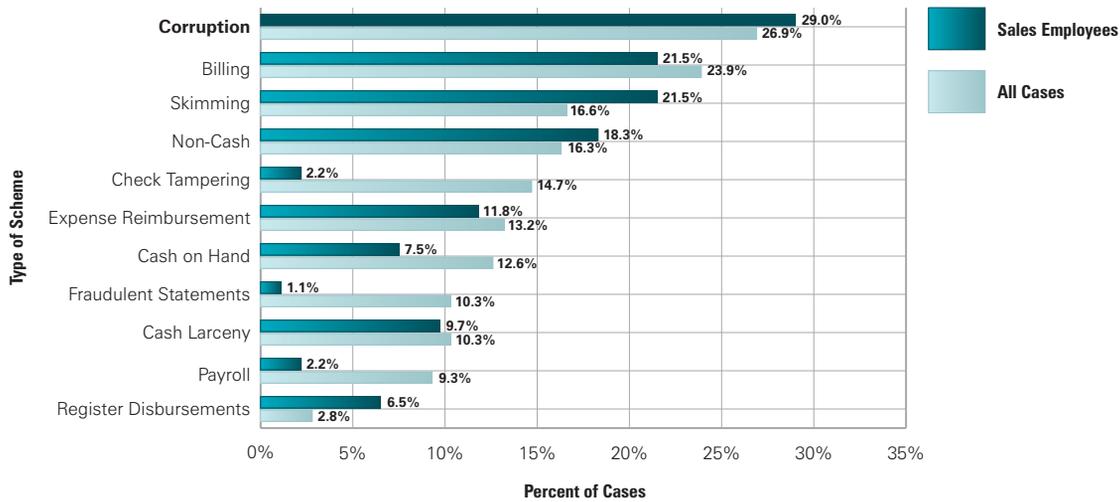
As in other departments, fraudsters who work in sales will typically undertake schemes that relate to their daily activities. In the 93 cases in our study that were perpetrated by sales personnel, 29% included some form of corruption, which was slightly higher than the overall rate. These schemes often involve collusion with an outside party, such as accepting a bribe from a customer for selling merchandise at a reduced price. Sales personnel were also more likely to engage in skimming, which involves the theft of incoming customer payments before they are recorded by the victim organization. These schemes occurred in 22% of sales department frauds, as opposed to 17% overall. Conversely, sales personnel were very unlikely to engage in check tampering (sales staff typically has very little if any contact with the cash disbursements function), and we found only one financial statement fraud case perpetrated by an employee from the sales department.

### Occupational Fraud Schemes by Operations Personnel (129 Cases)<sup>20</sup>



<sup>20</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

### Occupational Fraud Schemes by Sales Employees (93 Cases)<sup>21</sup>



<sup>21</sup>The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

## Departments with the Most Financial Statement Fraud

Although they occurred in only 10% of all cases in our study, financial statement fraud schemes were by far the most costly form of fraud. As part of our analysis, we examined which employees are most frequently responsible for financial statement schemes.

Over 70% of the financial statement frauds in our study were perpetrated by individuals in either the executive suite or the accounting department. Employees in these two roles are charged with the primary responsibility for the financial statements — accountants with correctly processing the financial information that comprises the reported numbers, and executives with ensuring the completeness and accuracy of the official statements.

Financial Statement Fraud		
Department	# of Cases	Pct. of Cases
Executive / Upper Management	36	40.9%
Accounting	27	30.7%
Operations	8	9.1%
Finance	5	5.7%
Purchasing	3	3.4%
Manufacturing and Production	2	2.3%
Warehousing / Inventory	2	2.3%
Board of Directors	1	1.1%
Customer Service	1	1.1%
Internal Audit	1	1.1%
Legal	1	1.1%
Sales	1	1.1%

## Departments with the Most Corruption Cases

Corruption schemes, such as bribery and conflicts of interest, characteristically involve the exertion of the perpetrator's influence in a way that unfairly influences a business transaction. Consequently, it is those individuals with the most authority over the organization's operational and financial activities who are most likely to engage in these types of schemes. As would be expected, executives and upper management-level employees — individuals who typically hold the most power within the organization — were most often cited as the perpetrators in the corruption schemes in our study. Employees involved in the daily business operations of the organization and those in the accounting department were each involved in 16% of the corruption cases.

Corruption		
Department	# of Cases	Pct. of Cases
Executive / Upper Management	64	29.1%
Operations	34	15.5%
Accounting	34	15.5%
Sales	27	12.3%
Finance	10	4.5%
Purchasing	9	4.1%
Customer Service	8	3.6%
Warehousing / Inventory	8	3.6%
Manufacturing and Production	5	2.3%
Board of Directors	3	1.4%
Human Resources	3	1.4%
Information Technology	3	1.4%
Legal	3	1.4%
Research and Development	3	1.4%
Internal Audit	1	0.5%
Marketing / Public Relations	1	0.5%

## Asset Misappropriation Schemes by Department

We also examined each subcategory of asset misappropriation to determine what departments were most commonly associated with each given form of fraud. The results of this analysis are shown in the following tables. The goal is to help organizations better understand where risks of particular forms of fraud are likely to exist, which will in turn help them develop more targeted anti-fraud controls.

Skimming		
Department	# of Cases	Pct. of Cases
Accounting	52	39.1%
Sales	20	15.0%
Operations	19	14.3%
Executive / Upper Management	18	13.5%
Customer Service	13	9.8%
Finance	5	3.8%
Legal	3	2.3%
Board of Directors	1	0.8%
Information Technology	1	0.8%
Internal Audit	1	0.8%

Cash Larceny		
Department	# of Cases	Pct. of Cases
Accounting	39	44.8%
Executive / Upper Management	18	20.7%
Operations	9	10.3%
Sales	9	10.3%
Customer Service	4	4.6%
Finance	3	3.4%
Legal	2	2.3%
Board of Directors	1	1.1%
Information Technology	1	1.1%
Internal Audit	1	1.1%

Billing		
Department	# of Cases	Pct. of Cases
Accounting	65	33.2%
Executive / Upper Management	41	20.9%
Operations	24	12.2%
Sales	20	10.2%
Purchasing	11	5.6%
Finance	8	4.1%
Manufacturing and Production	8	4.1%
Information Technology	5	2.6%
Customer Service	4	2.0%
Marketing / Public Relations	3	1.5%
Board of Directors	2	1.0%
Research and Development	2	1.0%
Human Resources	1	0.5%
Internal Audit	1	0.5%
Legal	1	0.5%

Payroll		
Department	# of Cases	Pct. of Cases
Accounting	37	47.4%
Executive / Upper Management	14	17.9%
Operations	9	11.5%
Finance	4	5.1%
Human Resources	3	3.8%
Internal Audit	2	2.6%
Manufacturing and Production	2	2.6%
Sales	2	2.6%
Board of Directors	1	1.3%
Customer Service	1	1.3%
Information Technology	1	1.3%
Research and Development	1	1.3%
Warehousing / Inventory	1	1.3%

Check Tampering		
Department	# of Cases	Pct. of Cases
Accounting	87	67.4%
Executive / Upper Management	20	15.5%
Finance	7	5.4%
Operations	4	3.1%
Board of Directors	2	1.6%
Legal	2	1.6%
Manufacturing and Production	2	1.6%
Sales	2	1.6%
Customer Service	1	0.8%
Human Resources	1	0.8%
Internal Audit	1	0.8%

Register Disbursement		
Department	# of Cases	Pct. of Cases
Sales	6	27.3%
Accounting	5	22.7%
Executive / Upper Management	4	18.2%
Customer Service	3	13.6%
Operations	3	13.6%
Internal Audit	1	4.5%

Expense Reimbursement		
Department	# of Cases	Pct. of Cases
Accounting	29	26.9%
Executive / Upper Management	27	25.0%
Operations	11	10.2%
Sales	11	10.2%
Finance	5	4.6%
Manufacturing and Production	4	3.7%
Marketing / Public Relations	4	3.7%
Purchasing	4	3.7%
Customer Service	3	2.8%
Information Technology	3	2.8%
Internal Audit	3	2.8%
Research and Development	2	1.9%
Board of Directors	1	0.9%
Legal	1	0.9%

Cash on Hand		
Department	# of Cases	Pct. of Cases
Accounting	33	32.4%
Operations	23	22.5%
Executive / Upper Management	18	17.6%
Customer Service	11	10.8%
Sales	7	6.9%
Finance	4	3.9%
Board of Directors	2	2.0%
Information Technology	1	1.0%
Internal Audit	1	1.0%
Legal	1	1.0%
Manufacturing and Production	1	1.0%

Non-Cash		
Department	# of Cases	%
Executive / Upper Management	27	22.1%
Operations	23	18.9%
Sales	17	13.9%
Warehousing / Inventory	17	13.9%
Accounting	13	10.7%
Information Technology	7	5.7%
Manufacturing and Production	6	4.9%
Research and Development	4	3.3%
Customer Service	3	2.5%
Purchasing	2	1.6%
Finance	1	0.8%
Internal Audit	1	0.8%
Legal	1	0.8%

## Background Checks and Perpetrator’s Criminal and Employment History

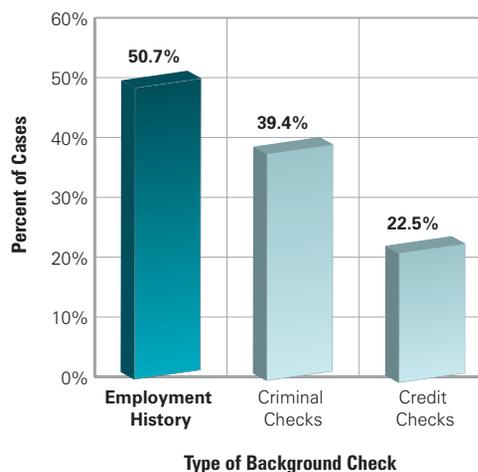
Background checks are frequently used as part of the hiring process in order to ensure the reliability of an organization’s workforce. More than half of the victim organizations in our study conducted a background check on the employment history of the fraudster, and 40% ran a criminal background check on the employee prior to hiring.

Unfortunately the effectiveness of background checks in preventing fraud is limited. As we found in our previous studies, the vast majority of employees who commit occupational fraud are first-time offenders. In 87% of the cases in our survey, the perpetrator had never been charged with or convicted of a fraud-related offense prior to the discovery of his or her scheme. Additionally, 83% of the fraudsters had never previously been punished or terminated by an employer for fraud or abuse.

In addition, there is evidence that employment background checks are ineffective at identifying potential fraudsters even when those persons have had previous employment-related issues involving fraud. In over half of the cases we reviewed where the employee had been punished or terminated by a previous employer for a fraud-related offense, the victim organization had checked the individual’s employment history as part of the hiring process. Assuming the majority of these organizations did not knowingly hire past fraudsters, it seems likely that the past misconduct did not turn up on these background checks.

While it is impossible to say why the employment background checks failed in these circumstances, we do know that many employers are reluctant to share negative information about past employees for fear

### Types of Background Checks Conducted<sup>22</sup>



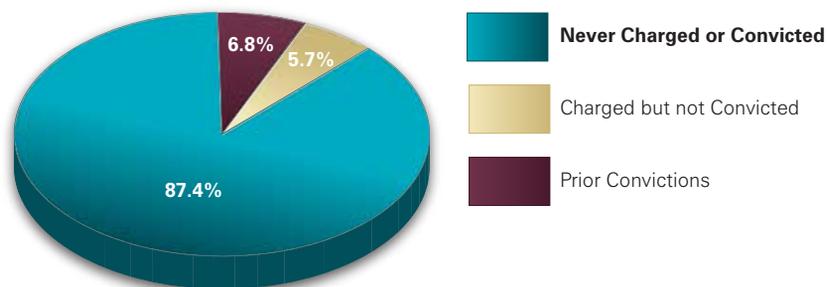
<sup>22</sup>The sum of percentages in this chart exceeds 100 percent because some organizations conducted more than one type of background check.

of potential legal liability. In other cases, organizations simply ask a new hire for references and fail to conduct an independent check on their own. This is an ineffective method of checking an applicant’s employment background and is unlikely to turn up any evidence of past misconduct. While we do

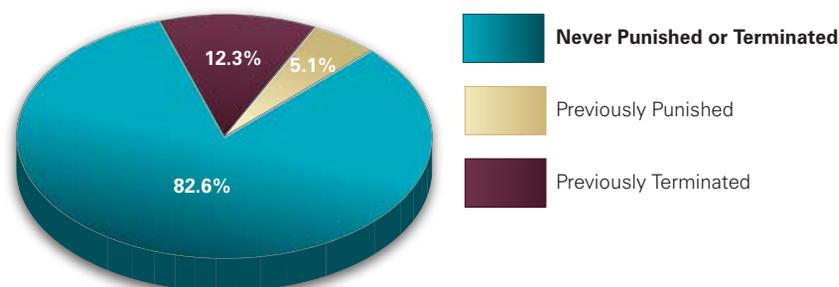
believe that employment background checks are an important fraud prevention measure, our limited data on this point indicate that many organizations need to implement better methods for ensuring the accuracy of background information they receive.

Finally, we note that credit checks were by far the least common form of background check performed by victim organizations. Past research indicates that financial pressures are one of the key motivating factors of occupational fraud, and indeed, in our survey we found that the two most commonly cited behavioral red flags among fraudsters were “financial difficulties” and “living beyond one’s means” (see following page). Given that financial difficulties are often associated with fraudulent behavior, it would seem advisable for organizations to devote more efforts to conducting credit background checks on new applicants.

### Perpetrator’s Criminal History



### Perpetrator’s Employment History



## Behavioral Red Flags Displayed by Perpetrators

Fraudsters often display certain behaviors or characteristics that may serve as warning signs to co-workers, superiors, and other daily contacts. For example, some perpetrators act unusually irritable, some suddenly start spending lavishly, and some become increasingly secretive about their professional activities. It is important to note that the presence of these symptoms does not in and of itself signify that a fraud is occurring or will occur in the future. However, these red flags are often indicators of employee misconduct and an organization's management and anti-fraud personnel should be trained to understand and identify the potential warning signs of fraudulent conduct.

We presented survey respondents with a list of common warning signs and asked which, if any, were displayed by the perpetrator prior to the discovery of the fraud. The most frequently cited behavioral red flag in the cases reported to us involved the fraudster living beyond his or her financial means. This warning sign was present in 39% of all cases in our study. Other common warning signs included financial difficulties and a general "wheeler-dealer" mentality.

Behavioral Red Flags Present During Fraud Scheme — Sorted by Frequency			
Behavioral Red Flag	# of Cases	Pct. of Cases <sup>23</sup>	Median Loss
Living beyond means	370	38.6%	\$250,000
Financial difficulties	327	34.1%	\$111,000
Wheeler-dealer attitude	195	20.3%	\$405,000
Control issues, unwillingness to share duties	179	18.7%	\$250,000
Divorce / family problems	164	17.1%	\$118,000
Unusually close association with vendor / customer	146	15.2%	\$410,000
Irritability, suspiciousness, or defensiveness	130	13.6%	\$180,000
Addiction problems	128	13.3%	\$225,000
Past legal problems	83	8.7%	\$184,000
Past employment-related problems	76	7.9%	\$163,000
Complaining about inadequate pay	70	7.3%	\$132,000
Refusal to take vacations	65	6.8%	\$250,000
Excessive pressure from within organization	62	6.5%	\$388,000
Instability in life circumstances	47	4.9%	\$58,000
Excessive family / peer pressure for success	40	4.2%	\$90,000
Complaining about lack of authority	35	3.6%	\$120,000

<sup>23</sup>The sum of percentages in this table exceeds 100 percent because in several cases the perpetrator exhibited more than one behavioral red flag.

Schemes in which the perpetrator held an unusually close relationship with a vendor or customer caused the greatest median loss to the victim organization (\$410,000). The median loss for cases where the fraudster displayed a wheeler-dealer attitude was only slightly less at \$405,000. As seen in the chart on page 65, these two warning signs were commonly associated with the corruption schemes reported in our survey.

<b>Behavioral Red Flags Present During Fraud Scheme — Sorted by Median Loss</b>			
<b>Behavioral Red Flag</b>	<b># of Cases</b>	<b>Pct. of Cases<sup>24</sup></b>	<b>Median Loss</b>
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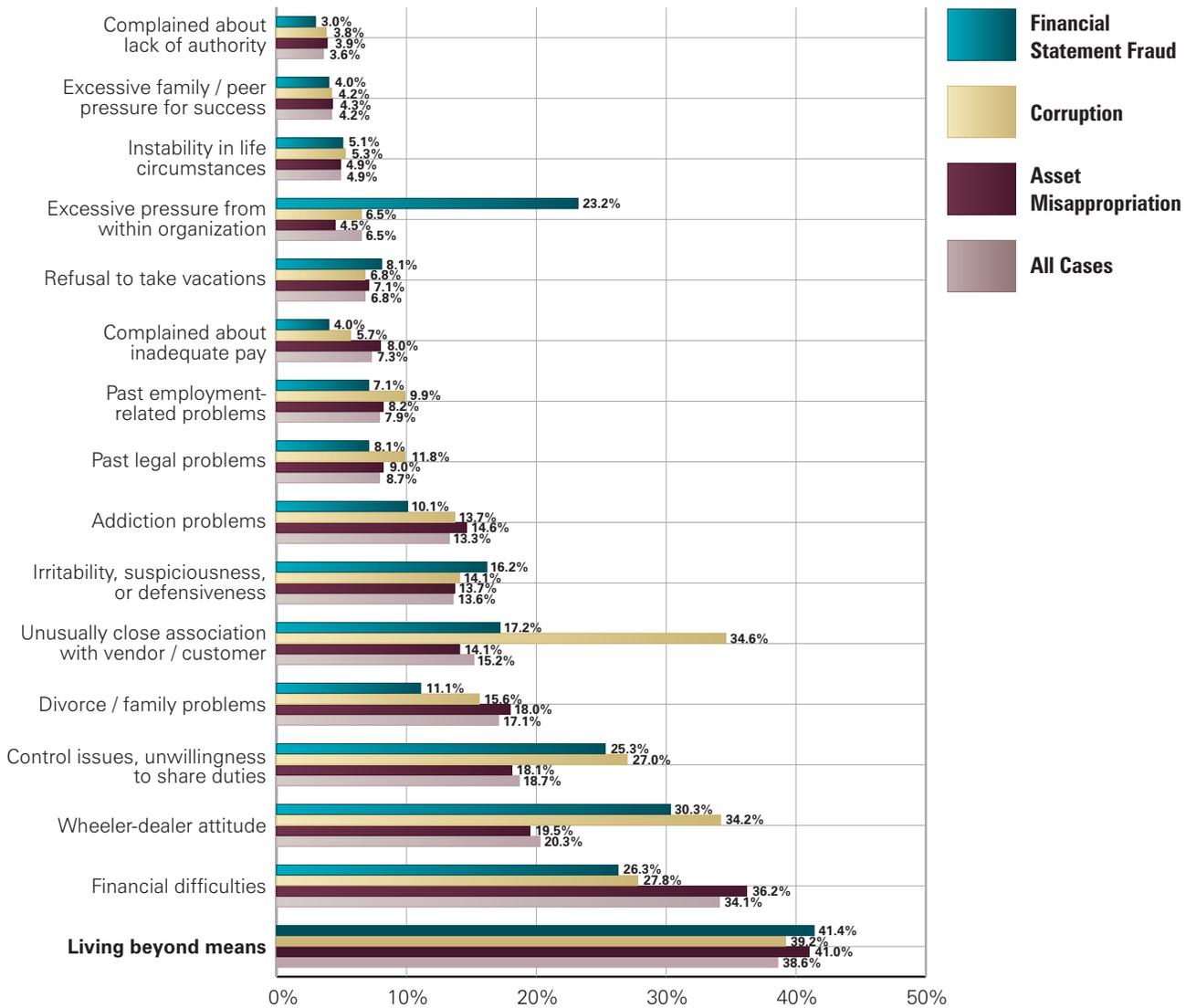
## Behavioral Red Flags Based on Scheme Type

We analyzed the specific warning signs of fraud based on the types of schemes that were committed to see if there were any notable correlations. As the chart on the following page illustrates, the frequency of various behavioral red flags followed a fairly uniform curve regardless of the type of fraud the perpetrator committed; however, there were some obvious outliers. For example, in 23% of financial statement fraud cases, the perpetrator was under excessive pressure to perform from within the organization. This red flag was present in less than 7% of all other forms of fraud. Excessive pressure to perform appears to be a key motivator for financial statement fraud, as is often seen in cases where fictitious revenues are created or liabilities concealed in the name of “earnings management.”

Similarly, we see a significant spike in the red flag of “unusually close association with a vendor” that is tied to corruption schemes. This red flag occurred in over one-third of all corruption cases, but in less than 18% of all others. This result makes sense given the fact that corruption schemes typically involve bribery or conflicts of interest, both schemes that often rely on an improper relationship between an employee and a third party. Control issues and a wheeler-dealer attitude were also both commonly identified in corruption and financial statement fraud cases.

Asset misappropriation red flags tended to follow the overall distribution more closely, but we did find that “financial difficulties” were much more commonly associated with asset misappropriations than with corruption or financial statement frauds.

### Behavioral Red Flags Present During Fraud Scheme<sup>24</sup>



<sup>24</sup>The sum of percentages for each scheme type exceeds 100 percent because in several cases the perpetrator exhibited more than one behavioral red flag.

*The 2008 Report to the Nation on Occupational Fraud and Abuse* is based on the results of an online survey distributed to 16,606 Certified Fraud Examiners (CFEs) in late 2007 and early 2008.

Respondents were asked to provide a narrative of the single largest fraud case they had investigated that met four explicit criteria:

1. The case must have involved occupational fraud (defined as internal fraud, or fraud committed by a person against the organization for which he or she works);
2. The investigation must have occurred between January 2006 and the time of survey participation;

3. The investigation must have been completed; and
4. The CFE must have been reasonably sure the perpetrator(s) was/were identified.

Respondents were also presented with 96 questions to answer. These questions covered particular details of the scheme, including information about the perpetrator, the victim organization, and the methods of fraud employed, as well as fraud trends in general. Overall, we received 1,117 responses to the survey, 959 of which were usable for purposes of this Report. The data contained herein is based solely on the information provided in these 959 cases.



**The data in this study is based on 959 cases of occupational fraud that were reported by CFEs.**

## Who Provided the Data?

To ensure comparability of the data received, we limited potential survey participants to Certified Fraud Examiners located in the United States and U.S. Territories. We asked respondents to provide certain information about their professional experience and qualifications so that we could gather a fuller understanding of who was involved in investigating the frauds reported to us as part of our survey.

### Primary Occupation

Over half of the CFEs who participated in our study identified themselves as either internal auditors or fraud examiners. Another 17% stated that they were accountants, and roughly 10% indicated they worked as law enforcement officers.

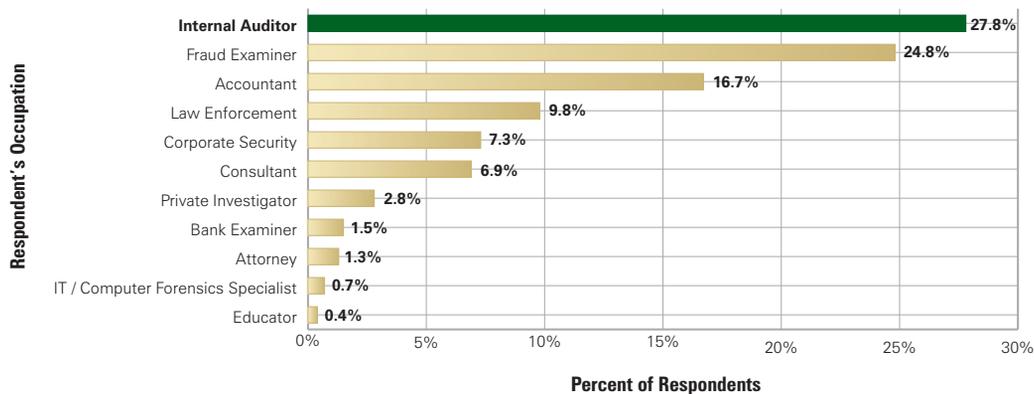
## Experience

The professionals who took part in our study had a median of 15 years of experience in the fraud examination field. As is seen in the chart below, over 60% of the participants have worked in fraud examination, either directly or indirectly, for more than ten years.

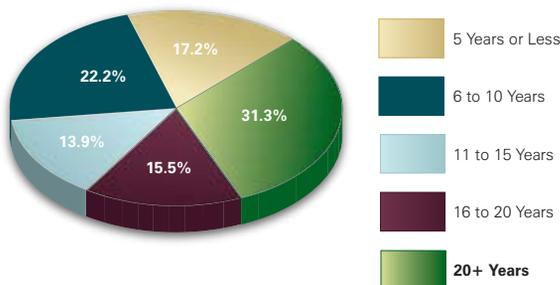
## Nature of Fraud Examinations

Nearly half of the respondents to our survey stated that they work in-house at an organization for which they conduct internal fraud examinations. This category typically includes professionals such as internal auditors and fraud examiners. Thirty-seven percent of the survey participants identified themselves as working for a professional services firm that conducts fraud examinations on behalf of other companies or agencies, while just under 15% of respondents worked for a law enforcement agency.

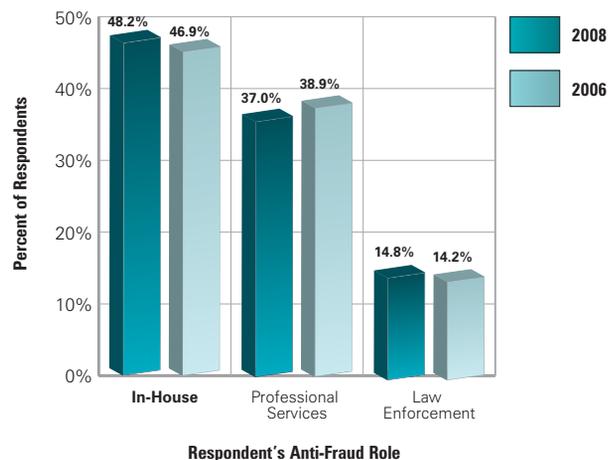
### Primary Occupations of Survey Participants



### Experience of Survey Participants



### Nature of Survey Participants' Fraud Examination Work



## About the ACFE

The ACFE is the world's premier provider of anti-fraud training and education. Together with more than 45,000 members in more than 125 countries, the ACFE is reducing business fraud worldwide and providing the training and resources to fight fraud more effectively. Founded in 1988 by Joseph T. Wells, CFE, CPA, the ACFE proudly celebrates its 20<sup>th</sup> anniversary as the leader in the global fight against fraud.

### The ACFE provides educational tools and practical solutions for anti-fraud professionals through initiatives including:

- Global conferences and seminars led by anti-fraud experts
- Instructor-led, interactive professional training
- Comprehensive resources for fighting fraud, including books, self-study courses and articles
- Leading anti-fraud periodicals including *Fraud Magazine*®, *The Fraud Examiner*, and *FraudInfo*
- Local networking and support through ACFE chapters worldwide
- Anti-fraud curriculum and educational tools for colleges and universities

### Certified Fraud Examiners

CFEs are anti-fraud experts who have demonstrated knowledge in four critical areas: Fraudulent financial transactions, fraud investigation, legal elements of fraud, and criminology and ethics. In support of CFEs and the CFE credential, the ACFE:

- Provides bona fide qualifications for CFEs through administration of the CFE Examination
- Requires CFEs to adhere to a strict code of professional conduct and ethics
- Serves as the global representative for CFEs to business, government, and academic institutions
- Provides leadership to inspire public confidence in the integrity, objectivity, and professionalism of CFEs

For more information about the ACFE, visit [www.ACFE.com](http://www.ACFE.com)

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