

REPORT TO THE NATIONS[®]

2020 GLOBAL STUDY ON OCCUPATIONAL FRAUD AND ABUSE





FOREWORD

The 2020 *Report to the Nations*—the ACFE’s 11th study on the costs and effects of occupational fraud—represents the latest in a series of reports dating back to the first edition published in 1996. Collectively, these studies represent countless hours of work by our staff spent gathering, analyzing, and interpreting the data from thousands of cases of fraud committed against organizations of all types and sizes. We have invested so much time and effort into this research because we recognize two simple truths: (1) occupational fraud imposes tremendous costs upon businesses and government agencies throughout the world; and (2) in order to deal with such a problem, we must first understand it. In the 24 years since it was first published, the *Report to the Nations* has arguably contributed more to our understanding of occupational fraud than any other source of information.

The first *Report to the Nation* was launched in 1996 by ACFE Founder, Dr. Joseph T. Wells, CFE, CPA, because he recognized that there was a glaring lack of information about occupational fraud. More importantly, he also recognized that the ACFE was uniquely situated to address this problem because we were sitting on what was probably the greatest source of fraud information in the world—the collective knowledge and experiences of the Certified Fraud Examiners who make up our association.

Over the years, the ACFE has received a great deal of praise and credit for publishing the *Report to the Nations*, which is the most widely quoted source of occupational fraud data in the world. But none of this would be possible without the work of thousands of CFEs who have taken the time to share with us very detailed information about the cases they have investigated and the lessons they have learned. I am reminded that this is why we have an association like the ACFE in the first place—so that our members can share information, contribute to the common body of knowledge, and learn from one another. The ACFE is proud to be the conduit helping to broadcast and transmit that information, but make no mistake: It is our members who are the source of every piece of data contained in these pages. This study is a tribute to the important work they do and their willingness to give back to the profession.

On behalf of the ACFE and all of the CFEs who have contributed to this study, I am proud to present the 2020 edition of the *Report to the Nations*.

A handwritten signature in blue ink that reads "Bruce Dorris". The signature is stylized and cursive.

Bruce Dorris, J.D., CFE, CPA
President and CEO, Association of Certified Fraud Examiners

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KEY FINDINGS

OUR STUDY COVERED



2,504 CASES

from



125 COUNTRIES

Causing total losses of more than
\$3.6 BILLION



TYPICAL FRAUD CASE

lasts
14 MONTHS
before
detection

causes a
loss of
\$8,300
per month

CFEs ESTIMATE THAT ORGANIZATIONS LOSE

5% OF REVENUE TO FRAUD EACH YEAR

MEDIAN LOSS PER CASE:
\$125,000

AVERAGE LOSS PER CASE:
\$1,509,000

CORRUPTION

WAS THE MOST COMMON SCHEME IN EVERY GLOBAL REGION

ASSET MISAPPROPRIATION SCHEMES are the most common and least costly

86%
OF CASES

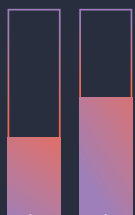
\$100,000
median loss

FINANCIAL STATEMENT FRAUD SCHEMES are the least common and most costly

10%
OF CASES

\$954,000
median loss

Organizations with **FRAUD AWARENESS TRAINING** for employees were **more likely** to gather tips through



FORMAL REPORTING MECHANISMS

56% of tips with training

37% of tips without training



43% OF SCHEMES WERE DETECTED BY TIP,

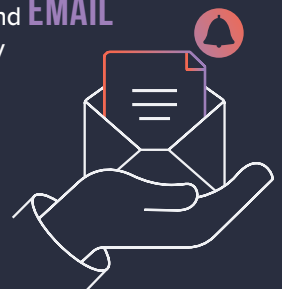
and half of those tips came from employees



TELEPHONE HOTLINE and EMAIL

were each used by whistleblowers in

33%
OF CASES





USE OF TARGETED ANTI-FRAUD CONTROLS HAS INCREASED OVER LAST DECADE

HOTLINE	↑ 13%
ANTI-FRAUD POLICY	↑ 13%
FRAUD TRAINING FOR EMPLOYEES	↑ 11%
FRAUD TRAINING FOR MANAGERS/EXECUTIVES	↑ 9%

A lack of internal controls contributed to nearly



1/3 OF FRAUDS

THE PRESENCE OF ANTI-FRAUD CONTROLS IS ASSOCIATED WITH LOWER FRAUD LOSSES AND QUICKER DETECTION



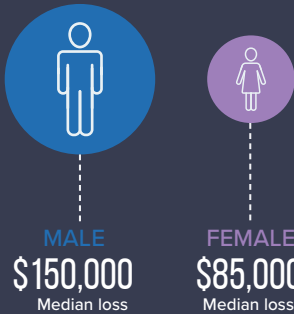
CERTAIN FRAUD RISKS WERE MORE LIKELY IN SMALL BUSINESSES THAN IN LARGE ORGANIZATIONS:



Billing fraud	2X HIGHER
Payroll	2X HIGHER
Check and payment tampering	4X HIGHER

MORE THAN HALF of all occupational frauds came from these four departments:

- OPERATIONS 15%
- ACCOUNTING 14%
- EXECUTIVE/UPPER MANAGEMENT 12%
- SALES 11%



Men committed **72%** of all occupational fraud, and also caused larger losses than women

Owners/executives committed only 20% of occupational frauds, but they caused the **largest losses**



80% OF FRAUDSTERS

FACED SOME FORM OF INTERNAL DISCIPLINE FROM THE VICTIM ORGANIZATION

46% of victim organizations declined to refer cases to law enforcement because

INTERNAL DISCIPLINE WAS SUFFICIENT



INTRODUCTION

This study represents the most comprehensive examination available of the costs, methods, victims, and perpetrators of occupational fraud.



The Association of Certified Fraud Examiners is pleased to present the 2020 edition of the *Report to the Nations*, our 11th study of the impact occupational fraud has on organizations throughout the world. Occupational fraud¹—fraud committed by individuals against the organizations that employ them—is among the costliest forms of financial crime in existence. There are more than 3.3 billion people in the global workforce,² and nearly all of them have access to or control over some portion of their employers' cash or assets. For the ones who decide to seek illegal gains, their workplace is, in many cases, the most logical and convenient target. While the vast majority of those 3.3 billion people will never abuse the trust placed in them by their employers, the small percentage who do can cause enormous damage. As this report illustrates, that damage could amount to trillions of dollars in losses each year.

This study contains an analysis of 2,504 cases of occupational fraud that were investigated between January 2018 and September 2019. This is a tiny fraction of the number of frauds committed each year against millions of businesses, government

¹ *Occupational fraud* is formally 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.

² United Nations Department of Economic and Social Affairs, *World Economic Situation and Prospects Monthly Briefing*, April 1, 2019.

The goal of the *Report to the Nations* is to compile detailed information about occupational fraud cases in five critical areas:

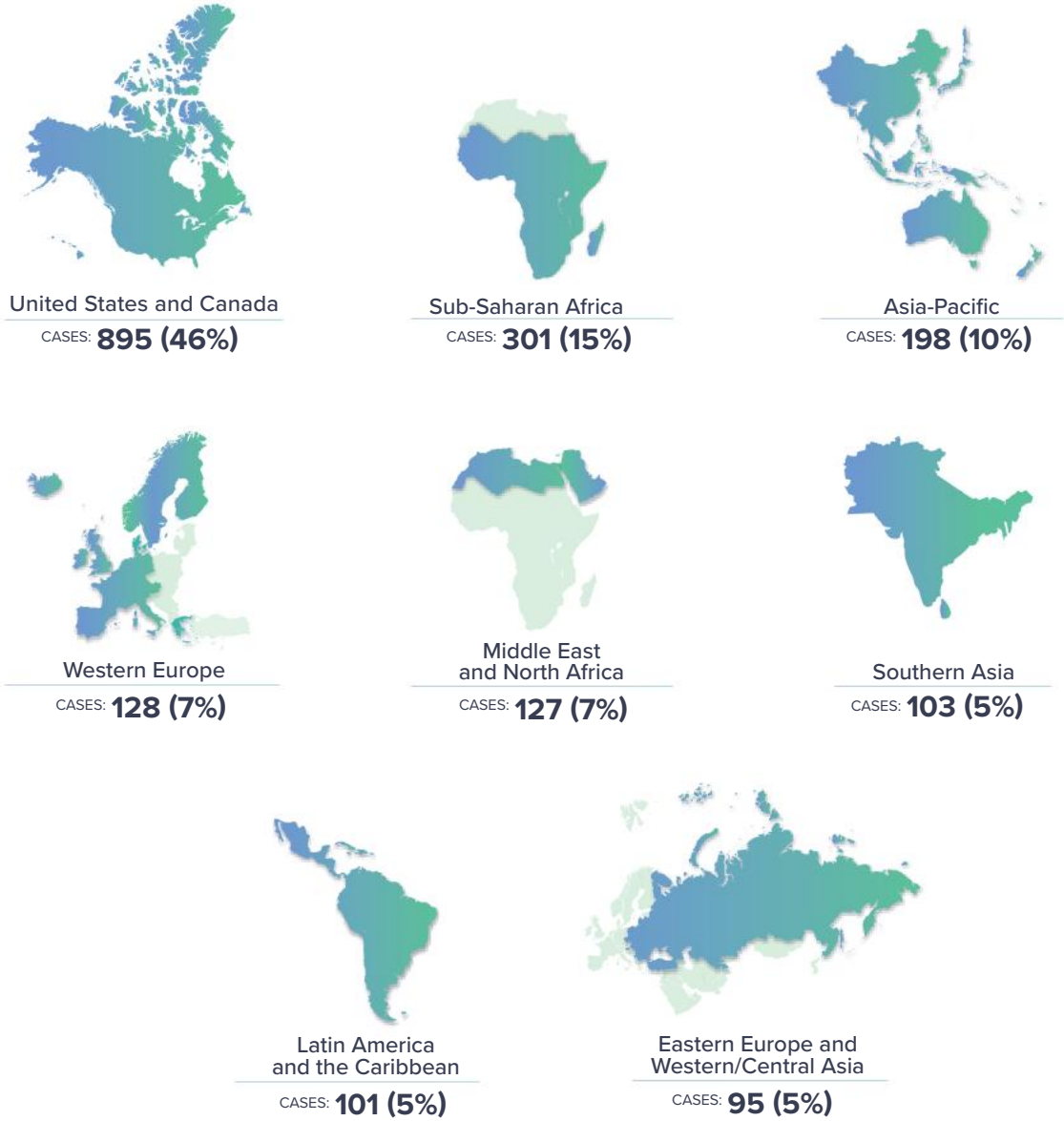
- **The methods** by which occupational fraud is committed
- **The means** by which occupational frauds are detected
- **The characteristics of the organizations** that are victimized by occupational fraud
- **The characteristics of the people** who commit occupational fraud
- **The results of the cases** after the frauds have been detected and the perpetrators identified

organizations, and nonprofits throughout the world. Yet this study represents the most comprehensive examination available of the costs, methods, victims, and perpetrators of occupational fraud. The data presented here was gathered through our 2019 *Global Fraud Survey*. Each Certified Fraud Examiner (CFE) who took part in the survey was presented with

a detailed questionnaire consisting of 77 questions about a specific case of fraud they had investigated. These CFEs provided information on the method of fraud employed, the loss, the victim organization, the perpetrator, the means of detection, and the response by the victim organization after the fraud had been detected. We are deeply indebted to the CFEs who shared their knowledge and experiences to help us prepare this report.

The information presented in this study is drawn from cases that occurred in 23 different industry categories. These frauds affected large multinational organizations, small nonprofits, and every size and type of business or government agency in between. The fraudsters in these cases ranged from C-suite executives to entry-level employees. The lesson of this and our previous studies is clear: No organization is immune from occupational fraud, and these crimes can originate from anywhere within the organization.

FIG. 1 Reported cases by region



The cases in our study occurred in 125 countries throughout the world, which also helps underscore the global nature of the threat posed by occupational fraud. Figure 1 on page 7 shows the number and percentage of cases from eight major geographical regions. (Because data in our study was gathered through a survey of CFEs, the number of cases in each region largely reflects the geographical make-up of ACFE membership. It should not be read to indicate that fraud is more or less prevalent in any particular region.)

We present this report with the hope that it will be of use to anti-fraud practitioners, organizational leaders, academic researchers, and the public at large. We have compiled a great deal of data about the methods, costs, and indicators of occupational fraud, along with valuable information on how these crimes are detected and how they might be prevented or mitigated. The amount of money lost to occupational fraud each year represents a staggering drain on the global economy. It directly impacts organizations' abilities to create jobs, produce goods and services, and provide public services. The better we can understand how and why these crimes occur and how to fight them, the better we will be at directing the proceeds of commerce and state action toward the goals for which they were intended, rather than into the pockets of the fraudsters who prey on the system. We hope this study will contribute to the public understanding of these crimes; advance the common body of anti-fraud knowledge; and contribute to improved detection, deterrence, and investigation of occupational fraud.

The Global Cost of Fraud

Fraud is a global problem affecting all organizations worldwide. Because occupational fraud is frequently undetected and often never reported, it is difficult to determine the full scope of global losses. But our data provides insight into the enormity of this issue.

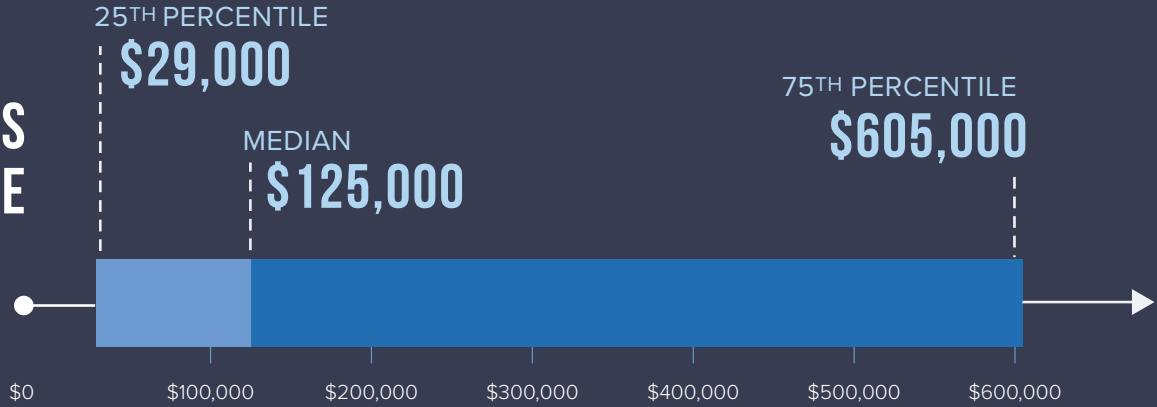


AVERAGE LOSS
PER CASE:
\$1,509,000

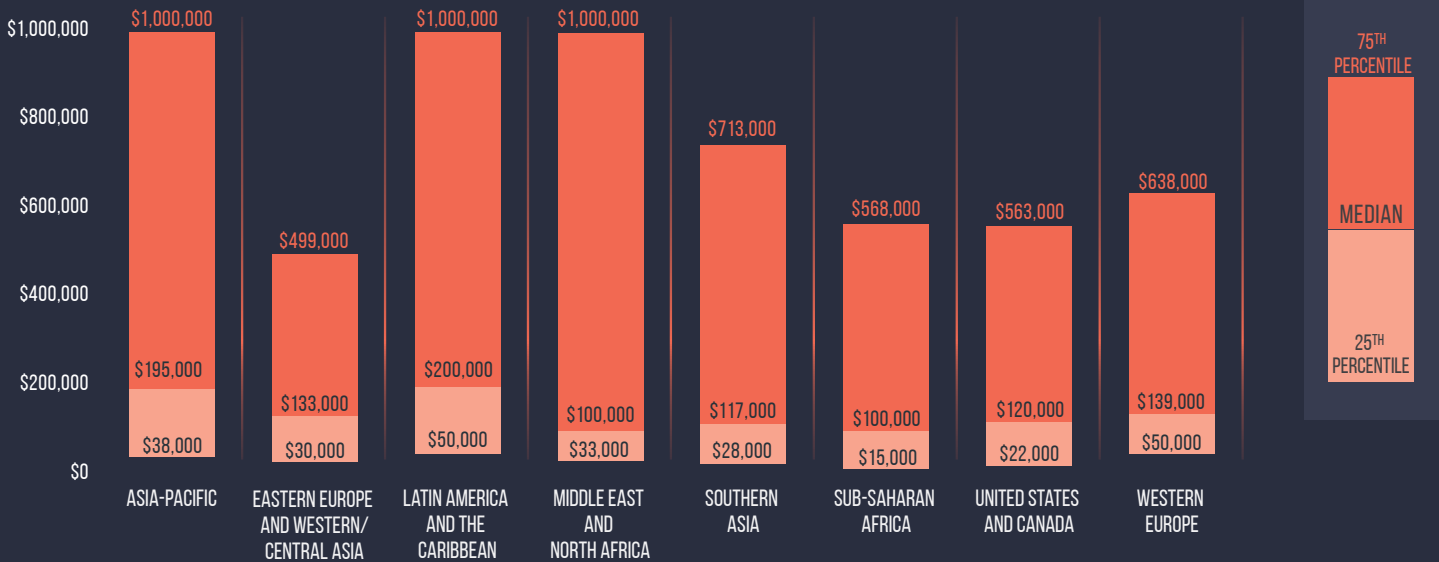




LOSS PER CASE



THE TYPICAL LOSS VARIES BY REGION



CFEs ESTIMATE THAT ORGANIZATIONS LOSE



PROJECTED AGAINST 2019 GWP (\$90.52 TRILLION),

THAT'S MORE THAN **\$4.5 TRILLION** LOST TO FRAUD GLOBALLY EACH YEAR

HOW IS OCCUPATIONAL FRAUD COMMITTED?

Since the inception of the *Report to the Nations* in 1996, we have analyzed more than 18,000 cases of occupational fraud reported to us by CFEs. In each of the 11 studies we have conducted, we have explored the mechanisms used by perpetrators to defraud their employers. In general, we have found that the schemes used by occupational fraudsters have stayed remarkably consistent. Even with the move toward digital payments and technology-based businesses, the means fraudsters use to acquire their ill-gotten gains stand the test of time. A taxonomy of these schemes is provided in the *Occupational Fraud and Abuse Classification System*, also called the *Fraud Tree* (see Figure 3).

Categories of Occupational Fraud

At the highest level, there are three primary categories of occupational fraud. Asset misappropriation, which involves an employee stealing or misusing the employing organization's resources, occurs in the vast majority of fraud schemes (86% of cases); however, these schemes also tend to cause the lowest median loss at USD 100,000 per case (see Figure 2). In contrast, financial statement fraud schemes, in which the perpetrator intentionally causes a material misstatement or omission in the organization's financial statements, are the least common (10% of schemes) but costliest category of occupational fraud. The third category, corruption—which includes offenses such as bribery, conflicts of interest, and extortion—falls in the middle in terms of both frequency and financial damage. These schemes occur in 43% of cases and cause a median loss of USD 200,000.

FIG. 2 How is occupational fraud committed?

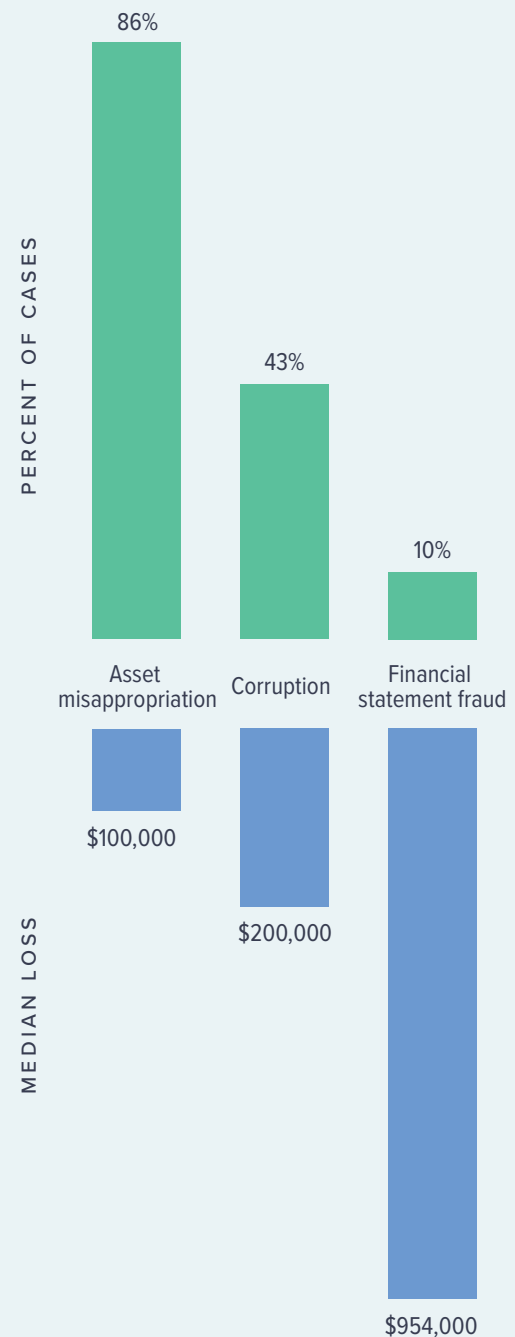
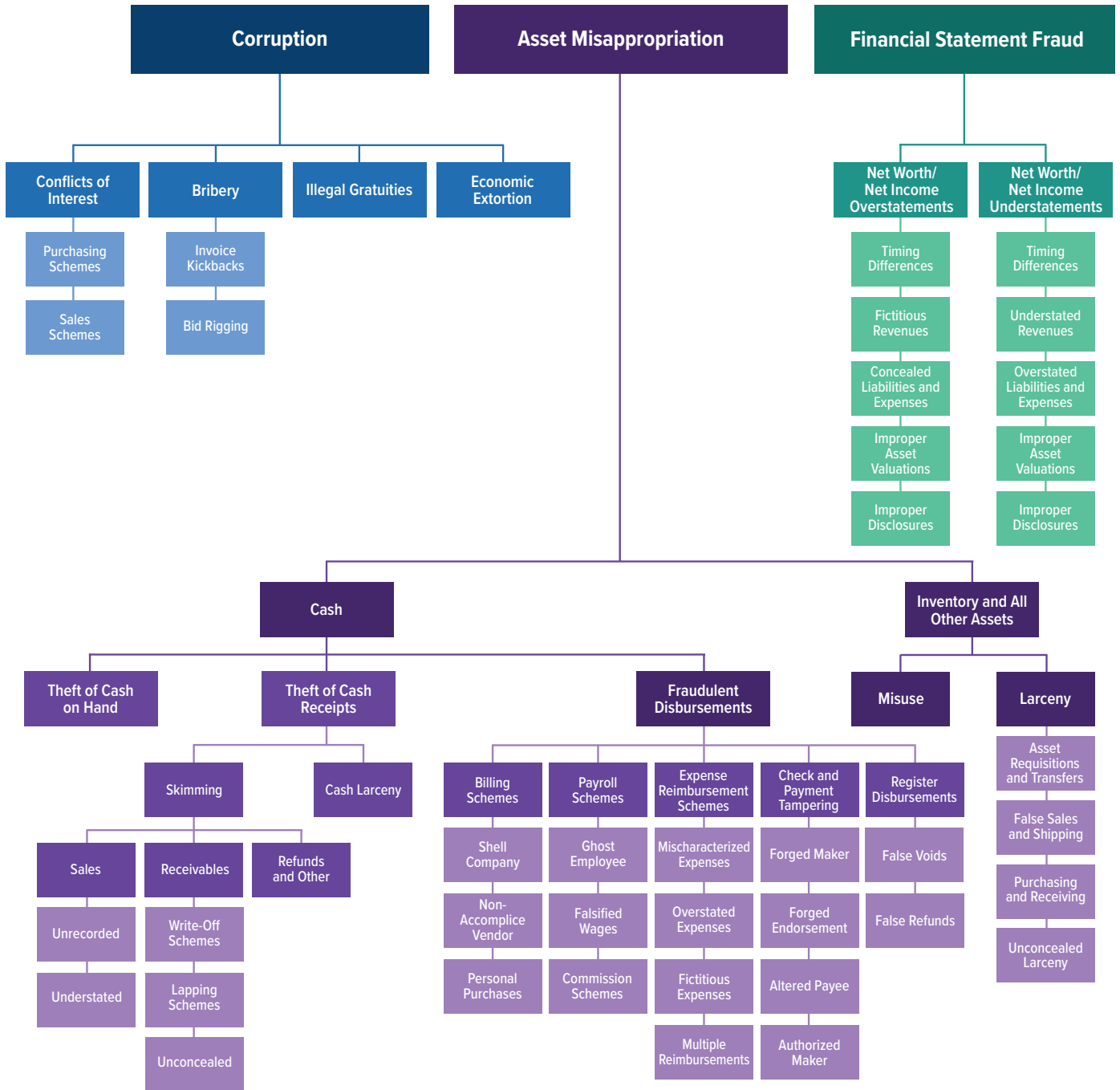


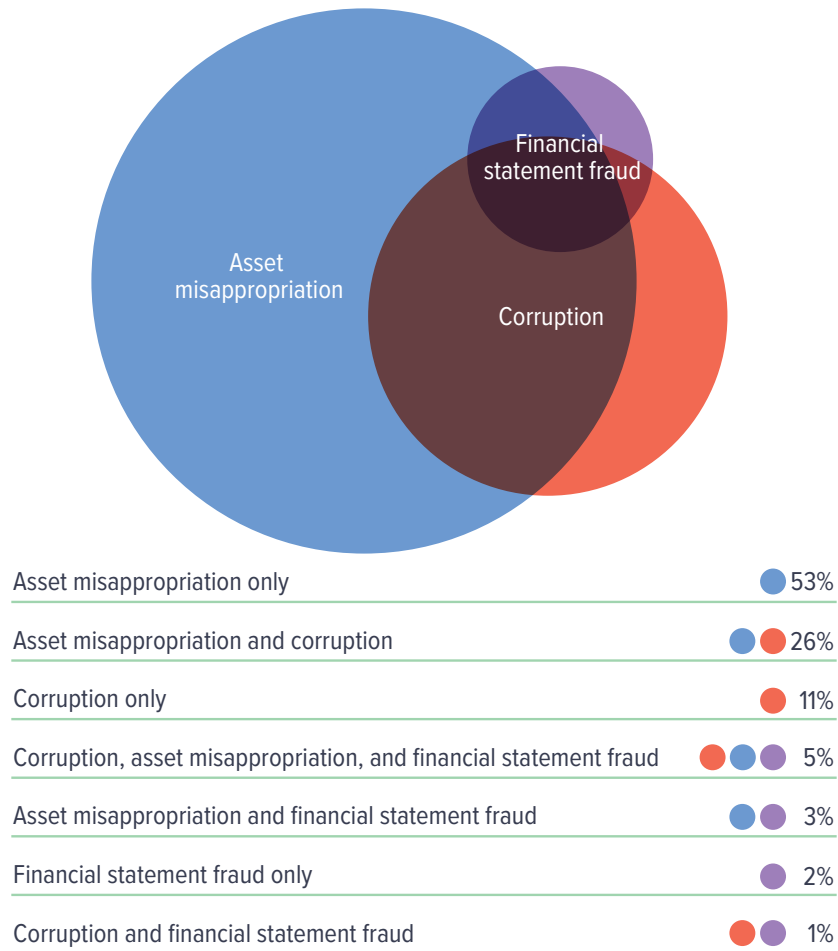
FIG. 3 Occupational Fraud and Abuse Classification System (the Fraud Tree)³



³ The definitions for many of the categories of fraud schemes in the *Fraud Tree* are found in the Glossary of Terminology on pg. 86.

In one-third of the cases in our study, the fraudster committed more than one of the three primary categories of occupational fraud. As noted in Figure 4, 26% of fraudsters undertook both asset misappropriation and corruption schemes, 3% misappropriated assets and committed financial statement fraud, 1% engaged in both corruption and financial statement fraud, and 5% participated in all three categories.

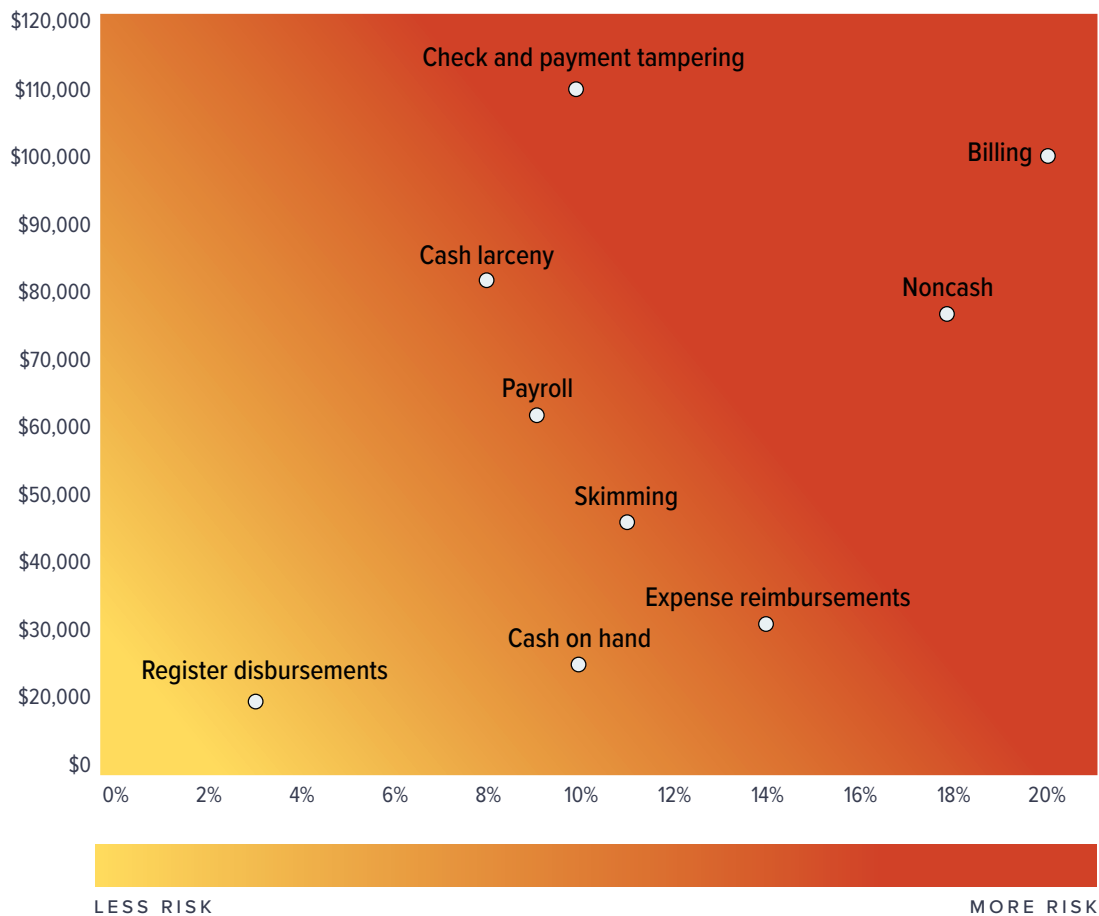
FIG. 4 How often do fraudsters commit more than one type of occupational fraud?



Asset Misappropriation Sub-Schemes

Within the broad category of asset misappropriation, fraudsters use several methods to steal funds and other resources from their employers. Figure 5 is a heat map that shows the frequency and median loss of each category of asset misappropriation sub-scheme (see Glossary on page 86 for definitions of each of these sub-scheme categories). Billing schemes are the most common form of asset misappropriation and also cause a high median loss, making this type of fraud a particularly significant risk. Other high-risk frauds based on the combination of frequency and impact are check and payment tampering, as well as schemes involving the theft of noncash assets.

FIG. 5 What asset misappropriation schemes present the greatest risk?



Category	Number of Cases	Percent of All Cases	Median Loss
Billing	430	20%	\$100,000
Noncash	395	18%	\$78,000
Expense reimbursements	310	14%	\$33,000
Skimming	230	11%	\$47,000
Cash on hand	224	10%	\$26,000
Check and payment tampering	206	10%	\$110,000
Payroll	199	9%	\$62,000
Cash larceny	169	8%	\$83,000
Register disbursements	55	3%	\$20,000

Duration of Fraud Schemes

Not all fraud can be prevented. Even in the most secure organizations, it is likely that some type of employee fraud will eventually occur. Consequently, quick detection of fraud is vital to protecting an organization from potential damage. Our research indicates that the median duration of a fraud—that is, the typical time between when a fraud begins and when it is detected—is 14 months. Additionally, as Figure 6 indicates, the longer a fraud remains undetected, the greater the financial losses.

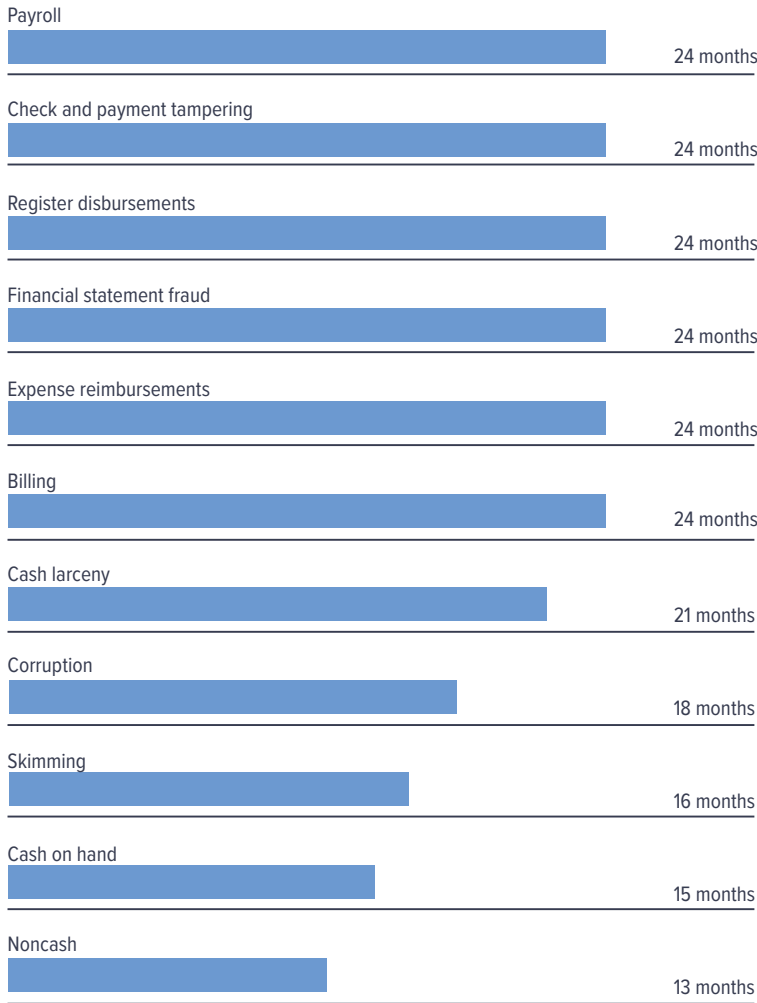


FIG. 6 How does the duration of a fraud relate to median loss?



When designing anti-fraud controls, assessing fraud risks, and enacting proactive detection measures, it is helpful to understand the potential impact of different types of fraud schemes. In addition to analyzing the median loss and frequency of the categories of occupational fraud (see Figures 2 and 5 on pages 10 and 13, respectively), we examined how long cases in each of these categories tend to last. As noted in Figure 7, companies tend to catch noncash schemes the quickest (13 months), while several scheme categories typically last 2 years before being uncovered.

FIG. 7 How long do different occupational fraud schemes last?



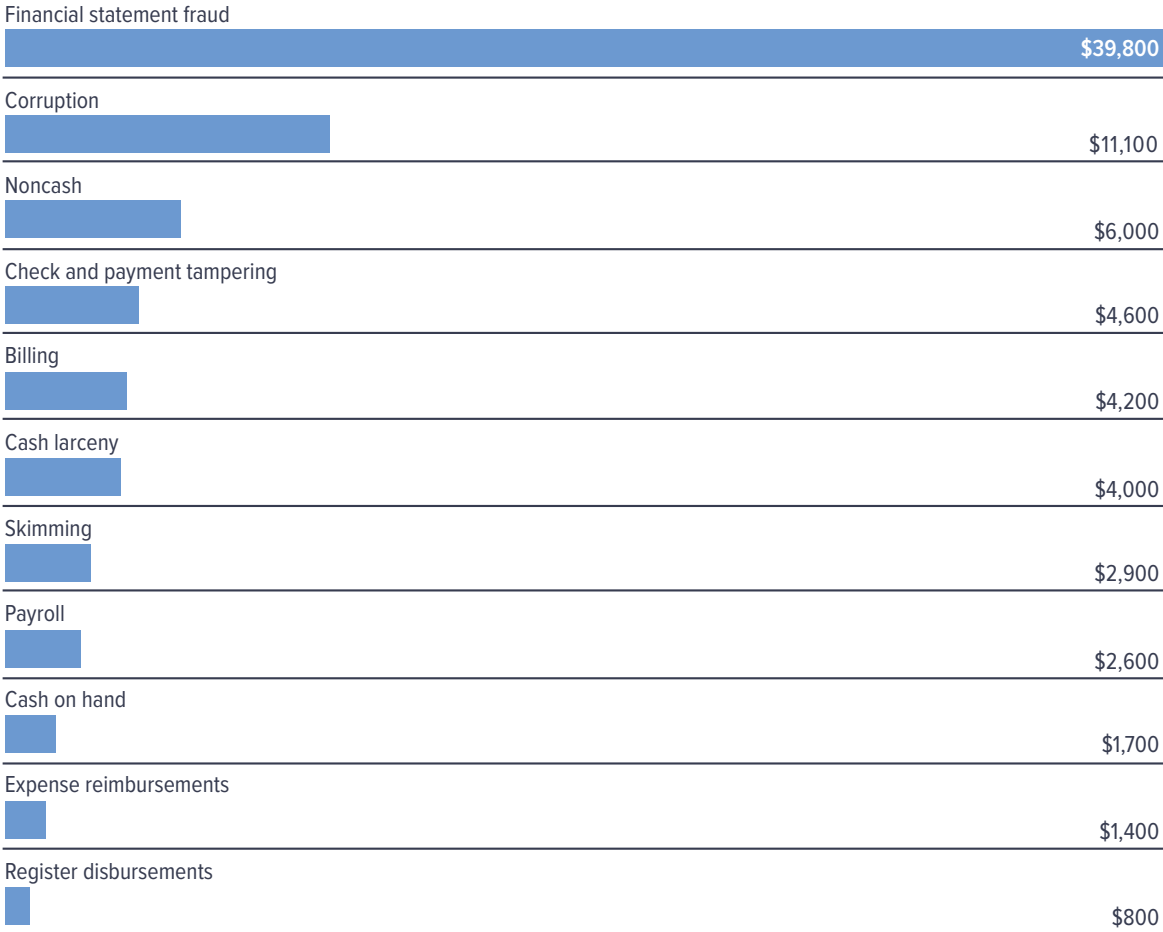
Velocity of Fraud Schemes

Recognizing that not all fraud schemes affect companies equally and that organizations must make decisions in how and where to direct their anti-fraud efforts, we wanted to know how quickly occupational frauds tend to cause harm. For each case reported to us, we divided the loss amount by the number of months the scheme lasted to determine what we refer to as the scheme's *velocity*. The median velocity for all cases in our study was a loss of USD 8,300 per month.

Analyzing the velocity by scheme type revealed that certain types of occupational fraud schemes cause damage much more quickly than others. As Figure 8

shows, financial statement fraud schemes have the greatest velocity of USD 39,800 per month, followed by corruption schemes, with a velocity of USD 11,100 per month. Because these schemes tend to result in larger losses very quickly, organizations might use this data to prioritize their investments in mechanisms to prevent and quickly detect these types of fraud. On the other end of the spectrum, register disbursement schemes and expense reimbursement schemes tend to grow more slowly, with a velocity of USD 800 and USD 1,400 per month, respectively, meaning organizations typically have more time to uncover these schemes before losses become significant.

FIG. 8 What is the typical velocity (median loss per month) of different occupational fraud schemes?



We also found differences in scheme velocity based on how many perpetrators are involved in a fraud and based on the perpetrator’s level of authority. Schemes with three or more perpetrators escalate much more quickly than those with just one or two perpetrators. Schemes committed by an owner/executive have a velocity over three times that of schemes committed by an employee or manager, highlighting how those in the highest positions have the ability to damage the company much more quickly than lower-level personnel.

	Median loss	Median duration	Scheme velocity (loss per month)
One perpetrator	\$90,000	14 months	\$6,400
Two perpetrators	\$105,000	14 months	\$7,500
Three or more perpetrators	\$350,000	15 months	\$23,300
Employee	\$60,000	12 months	\$5,000
Manager	\$150,000	18 months	\$8,300
Owner/executive	\$600,000	24 months	\$25,000

How Occupational Fraud Is Concealed

Understanding the methods fraudsters use to conceal their crimes can assist organizations in more effectively detecting and preventing similar schemes in the future.

TOP 4 CONCEALMENT METHODS USED BY FRAUDSTERS



40%

Created fraudulent physical documents



36%

Altered physical documents



27%

Altered electronic documents or files



26%

Created fraudulent electronic documents or files



12% did not involve any attempts to conceal the fraud



DETECTION

Detection is an important concept in fraud investigation because the speed with which fraud is detected—as well as the way it is detected—can have a significant impact on the size of the fraud. It is also key to fraud prevention because organizations can take steps to improve how they detect fraud, which in turn increases the staff’s perception that fraud will be detected and might help deter future misconduct. Our data revealed several notable trends relating to how fraud is initially detected, when it is detected, and who detects it, all of which can help fraud examiners improve the effectiveness of fraud detection and prevention at their organizations.

Initial Detection of Occupational Fraud

The foundation to effective detection of occupational fraud is knowing the most common methods by which fraud is discovered. Despite the increasingly sophisticated fraud detection techniques available to organizations, tips were the most common way occupational frauds were discovered in our study by a wide margin, as they have been in every one of our previous reports. As shown in Figure 9, more than 40% of cases in our study were uncovered by tips, which is almost three times as many cases as the next-most-common detection method. Therefore, processes to cultivate and thoroughly evaluate tips should be a priority for fraud examiners.



Tip Sources

Figure 10 breaks down the sources of tips that led to fraud detection. Half of all tips came from employees, while a substantial number of tips came from outside parties, including customers, vendors, and competitors. These findings demonstrate that anti-fraud education and the communication of designated reporting mechanisms should target not only internal staff, but external parties as well.

FIG. 9 How is occupational fraud initially detected?

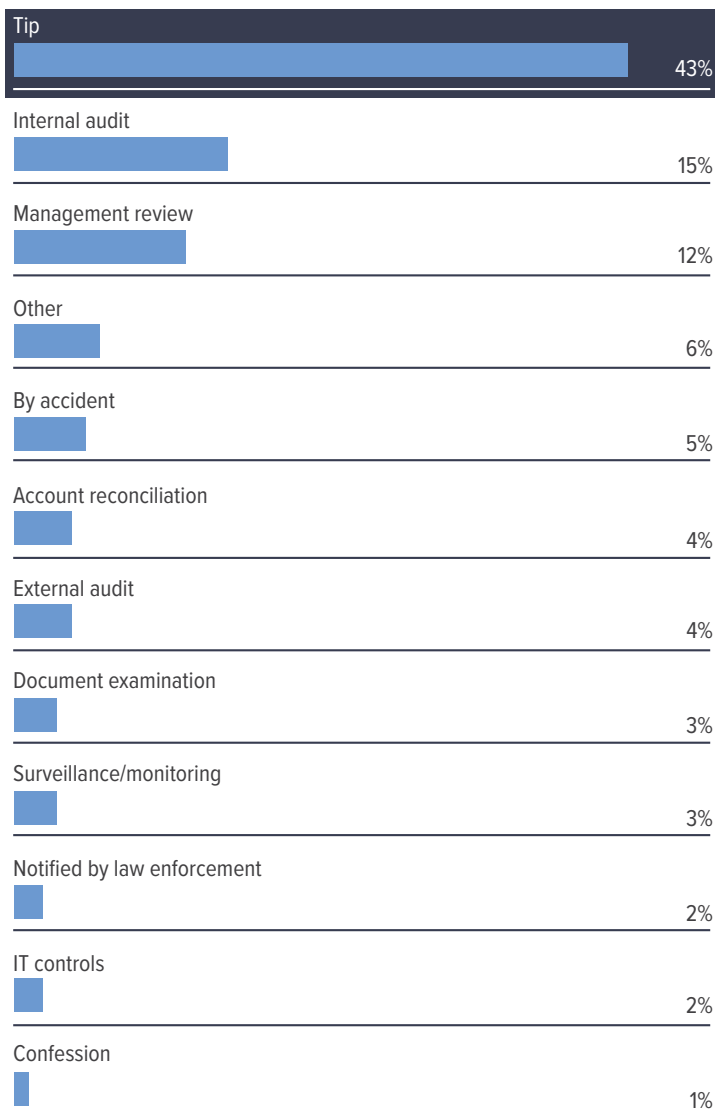
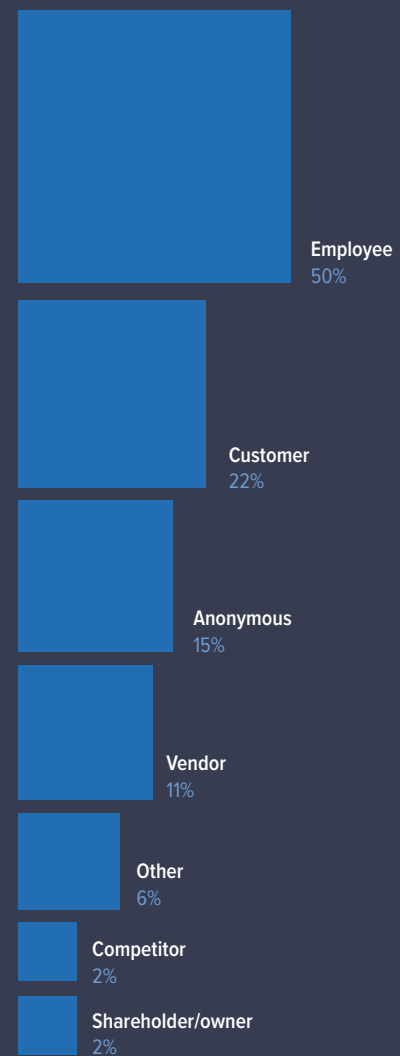


FIG. 10 Who reports occupational fraud?



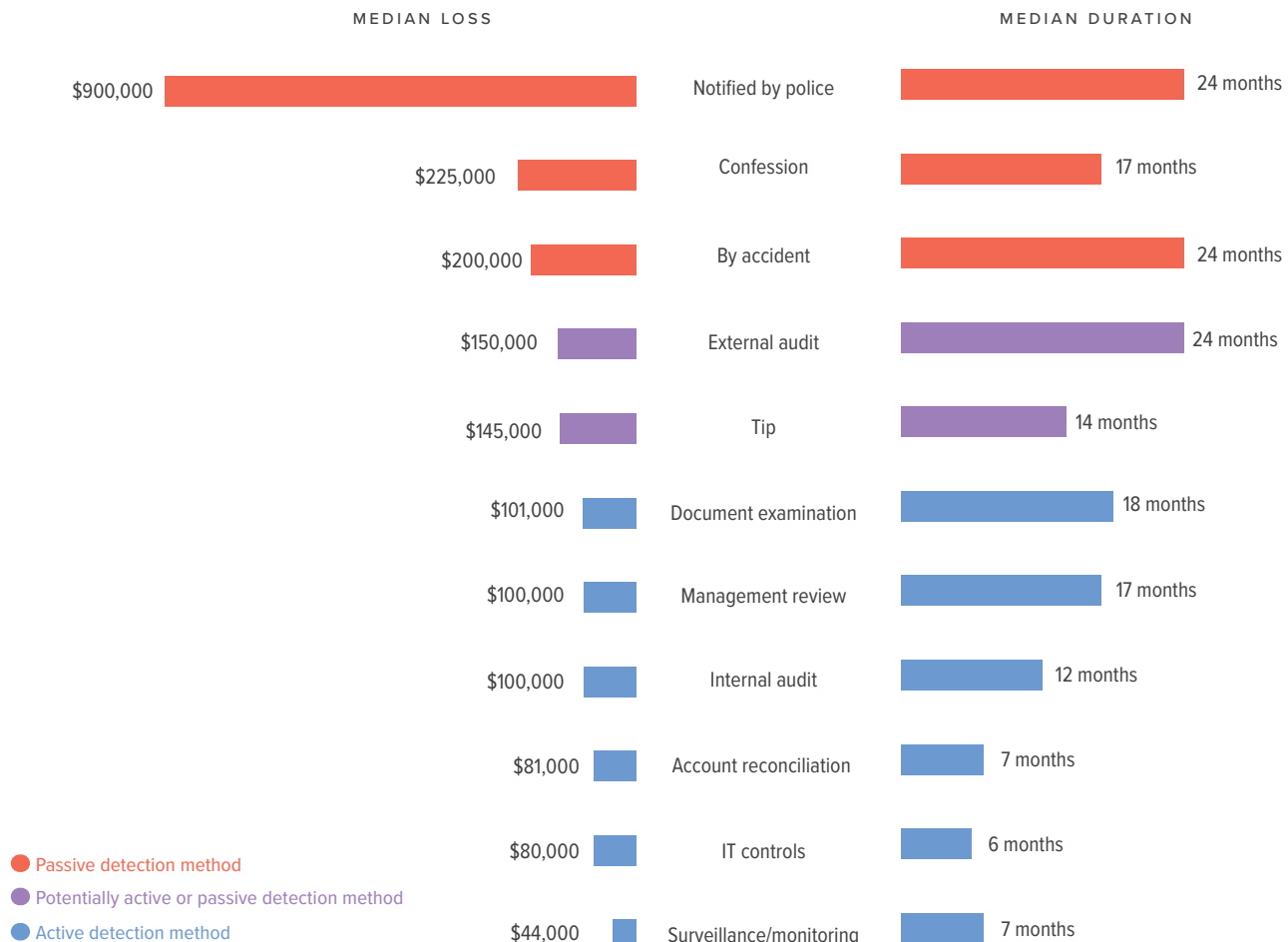
Median Loss and Duration by Detection Method

Our data also shows that some fraud detection methods are more effective than others in the sense that they correlate with lower fraud losses. Figure 11 shows the relationship between detection method and the associated fraud scheme duration and loss. In this chart, the red bars indicate schemes that were detected by passive methods, meaning the fraud came to the victim's attention through no effort of their own, including notification by police, by accident, or confession. Passively detected schemes tended to last longer and were associated with the highest median losses relative to all other detection methods. The blue bars indicate detection methods that are active, meaning they involved a process or effort designed (at least in part) to proactively detect fraud, such as document ex-

amination or surveillance/monitoring. Our data shows that schemes discovered through one of these active methods were shorter and had lower median losses than those detected passively. The purple bars could potentially be passive or active, including tips and external audit.

What we can learn from this data is that when fraud is detected proactively, it tends to be detected more quickly and thus causes lower losses, while passive detection results in lengthier schemes and increased financial harm to the victim. Anti-fraud controls such as account reconciliation, internal audit departments, involved management review, and active cultivation of tips are all tools that can lead to more effective detection of occupational fraud.

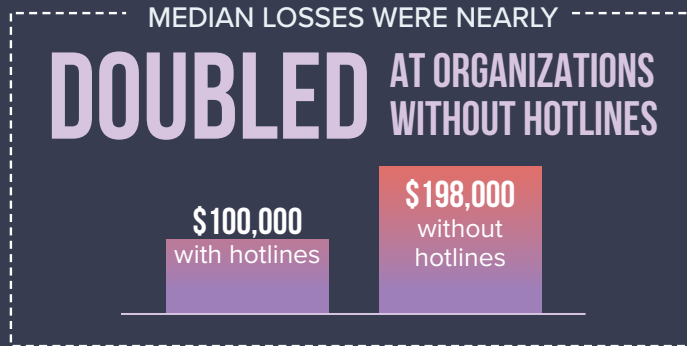
FIG. 11 How does detection method relate to fraud loss and duration?



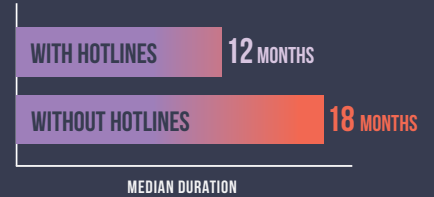
Hotline and Reporting Mechanism Effectiveness

Maintaining a hotline or reporting mechanism speeds up fraud detection and reduces losses. Fraud awareness training further improves cultivation of tips through reporting mechanisms.

 **64%** OF VICTIM ORGANIZATIONS had hotlines



Organizations with hotlines detect frauds **MORE QUICKLY** than those without hotlines



Effect of EMPLOYEE FRAUD AWARENESS TRAINING on hotlines and reporting

Training increases the likelihood of detection by tip

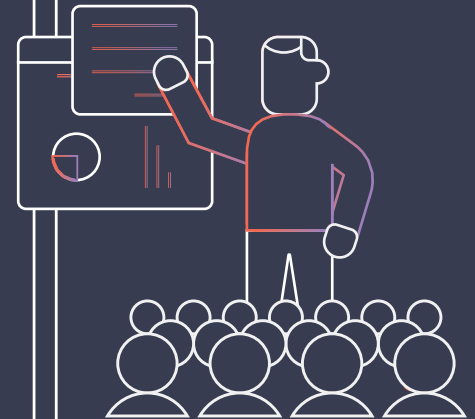
48% of cases detected by tip with training

36% of cases detected by tip without training

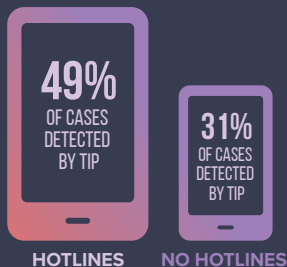
Tips are more likely to be submitted through reporting mechanisms with training

tips with training **56%**

tips without training **37%**



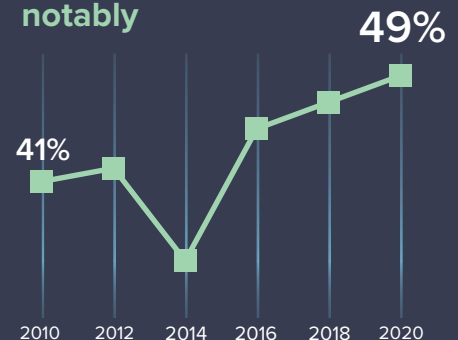
Organizations with hotlines detected fraud by **tip** more often



Small organizations are especially likely to detect occupational fraud by tip



Since 2010, the use of hotlines or reporting mechanisms **has increased notably**

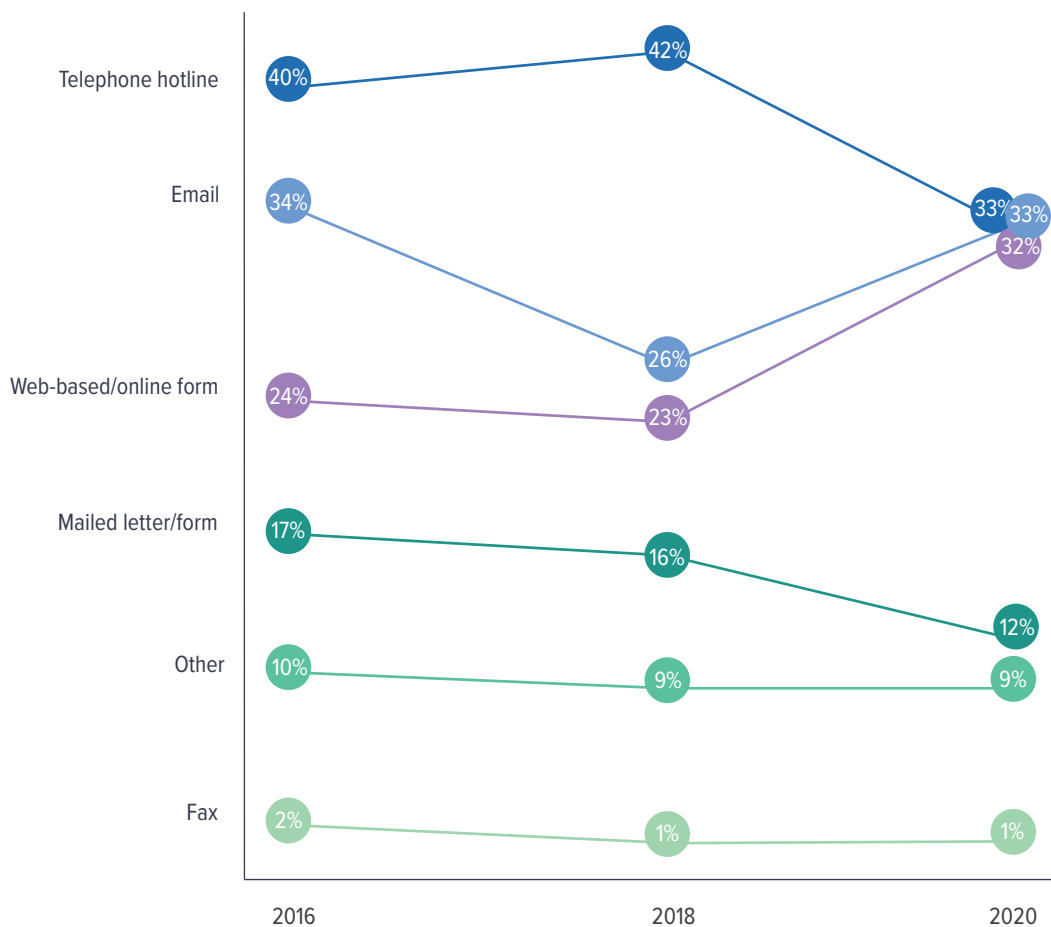


Reporting Mechanisms

In cases where a reporting mechanism was used to report fraud, we asked respondents to indicate how the tip came in. In our two previous reports, telephone hotlines were the most common mechanism whistleblowers used by a substantial margin. As shown in Figure 12, telephone hotline use declined substantially in this report, while email and web-based/online reporting each rose to become nearly

equal to telephone hotlines. The use of mailed forms has also dropped from 17% to 12% since 2016. These findings indicate that whistleblowers' preferred methods of reporting fraud may be shifting, particularly toward online and in electronic written form. Consequently, organizations should consider maintaining multiple reporting channels to fit the needs of those who submit tips.

FIG. 12 What formal reporting mechanisms did whistleblowers use?



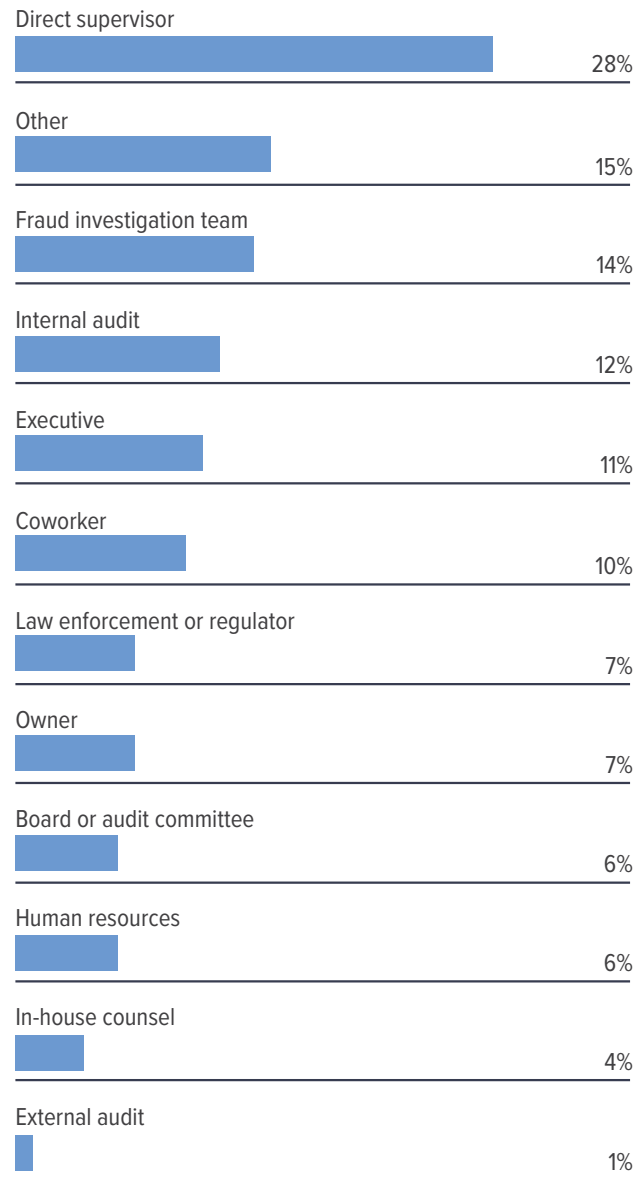
Parties to Whom Whistleblowers Report

In approximately 33% of cases where a tip was made, the whistleblowers did not use a formal reporting mechanism. Instead, they reported their suspicions directly to supervisors, investigators, or other interested persons. Identifying how often whistleblowers tend to report fraud to various parties can help organizations answer several important questions. Who should be trained to handle a complaint if they receive one? How likely are whistleblowers to report outside of the organization? How should complaints lodged outside a formal reporting mechanism be recorded and escalated? Figure 13 indicates that whistleblowers are most likely to report fraud to their direct supervisors, yet many will go to other parties, such as fraud investigation teams, human resources, or their coworkers. Therefore, it is important to provide all staff with guidance on how fraud allegations should be responded to and escalated.

It is also noteworthy that 7% of reports were made directly to law enforcement or regulators, instead of internally, which is something most organizations would hope to avoid. This illustrates the importance of training staff on how and why they should report fraud internally.



FIG. 13 To whom did whistleblowers initially report?



VICTIM ORGANIZATIONS

To better understand the victim organizations in our study, we questioned participants about the organizations' type, size, and industry, as well as the mechanisms that the organizations had in place to prevent and detect fraud at the time the schemes occurred.



Type of Organization

As shown in Figure 14, 70% of frauds occurred in for-profit organizations, with 44% of the victim organizations being private companies and 26% being public companies. Private and public organizations each suffered a median loss of USD 150,000. Nonprofit organizations only reported 9% of fraud cases and suffered the smallest median loss of USD 75,000; however, many nonprofits have limited financial resources to begin with, so a loss of this amount can be particularly devastating to these entities (see “Fraud in Non-profits” infographic on page 28).

Level of Government Organization

Resources and operations vary at different levels of government, which can influence how fraud affects these organizations. To illustrate this, we analyzed the government organizations in our study by level. National-level government entities experienced the greatest number of frauds (45%) and had the highest median loss of USD 200,000, which is more than twice as much as the median loss at state/provincial government entities (USD 91,000). While local governments reported the second-highest number of cases (32%), they suffered a relatively lower median loss of USD 75,000.

FIG. 14 What types of organizations are victimized by occupational fraud?

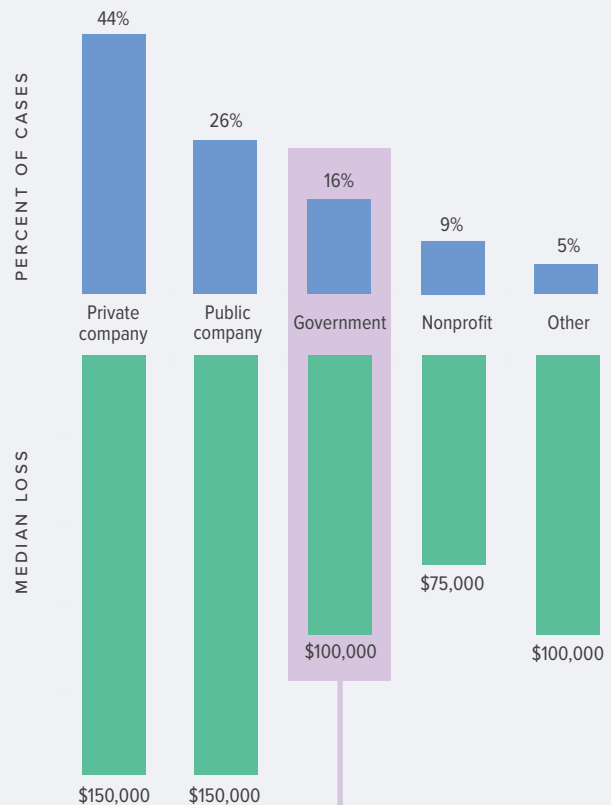
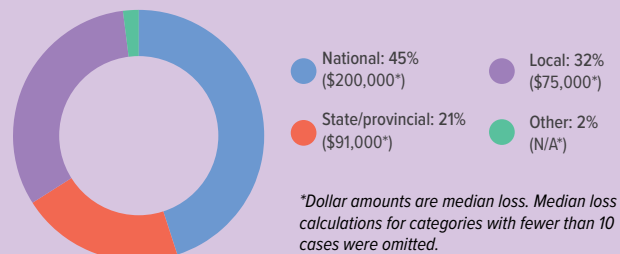


FIG. 15 What levels of government are victimized by occupational fraud?



Size of Organization

In Figure 16, the size of the victim organizations in our study is shown based on the number of employees. The cases reported to us were evenly distributed, with about a quarter in each size category. Small businesses (those with fewer than 100 employees) had the highest median loss of USD 150,000, while large organizations (those with more than 10,000 employees) had a median loss of USD 140,000. It is important to note, however, that a small business likely will feel the impact of a loss this size much more than its larger counterparts.

Figure 17 shows the distribution of victim organizations by annual revenue, with median losses ranging from USD 114,000 in the smallest organizations to USD 150,000 in the largest.

FIG. 16 How does an organization's size relate to its occupational fraud risk?

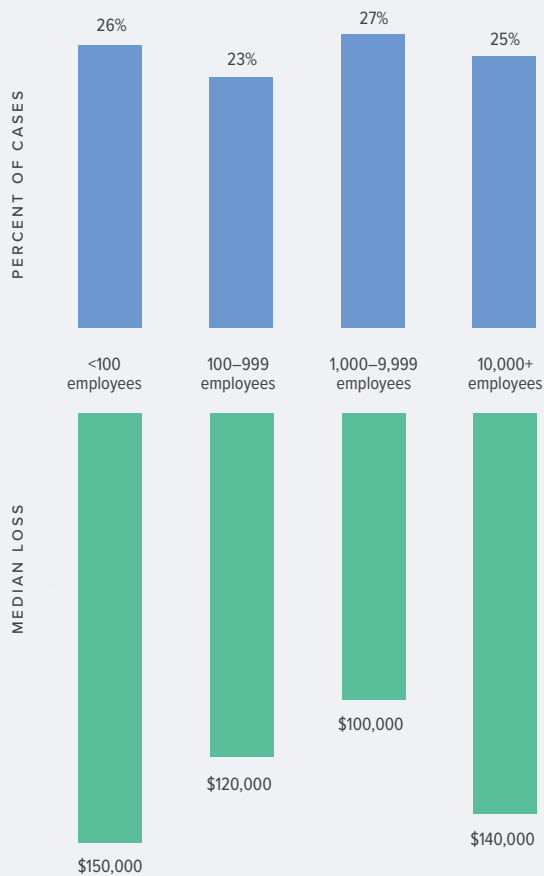
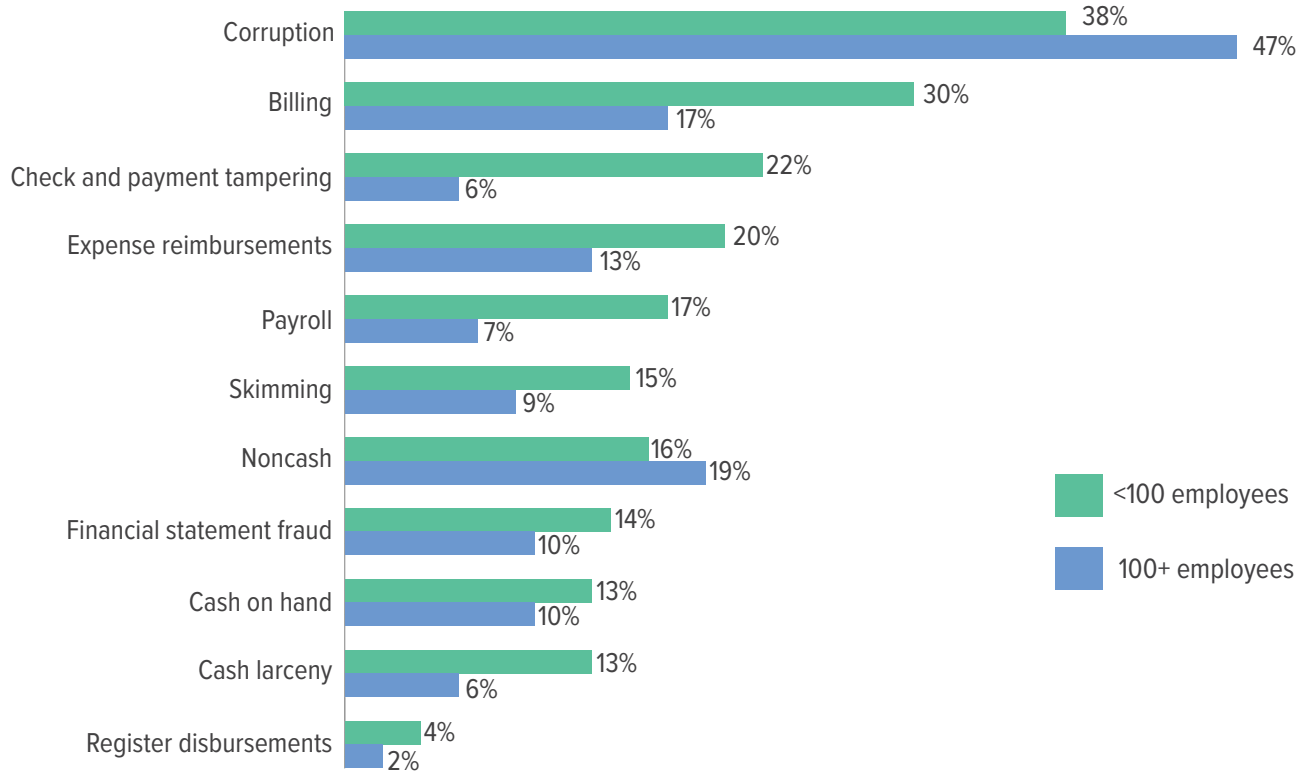


FIG. 17 How does an organization's gross annual revenue relate to its occupational fraud risk?



Figure 18 shows the frequency of different types of fraud schemes in small businesses (those with fewer than 100 employees) and larger organizations. Billing schemes occurred at almost twice the rate in small businesses compared to larger organizations, while check and payment tampering was nearly four times more common at small companies. In contrast, corruption and noncash schemes occurred more frequently in larger organizations.

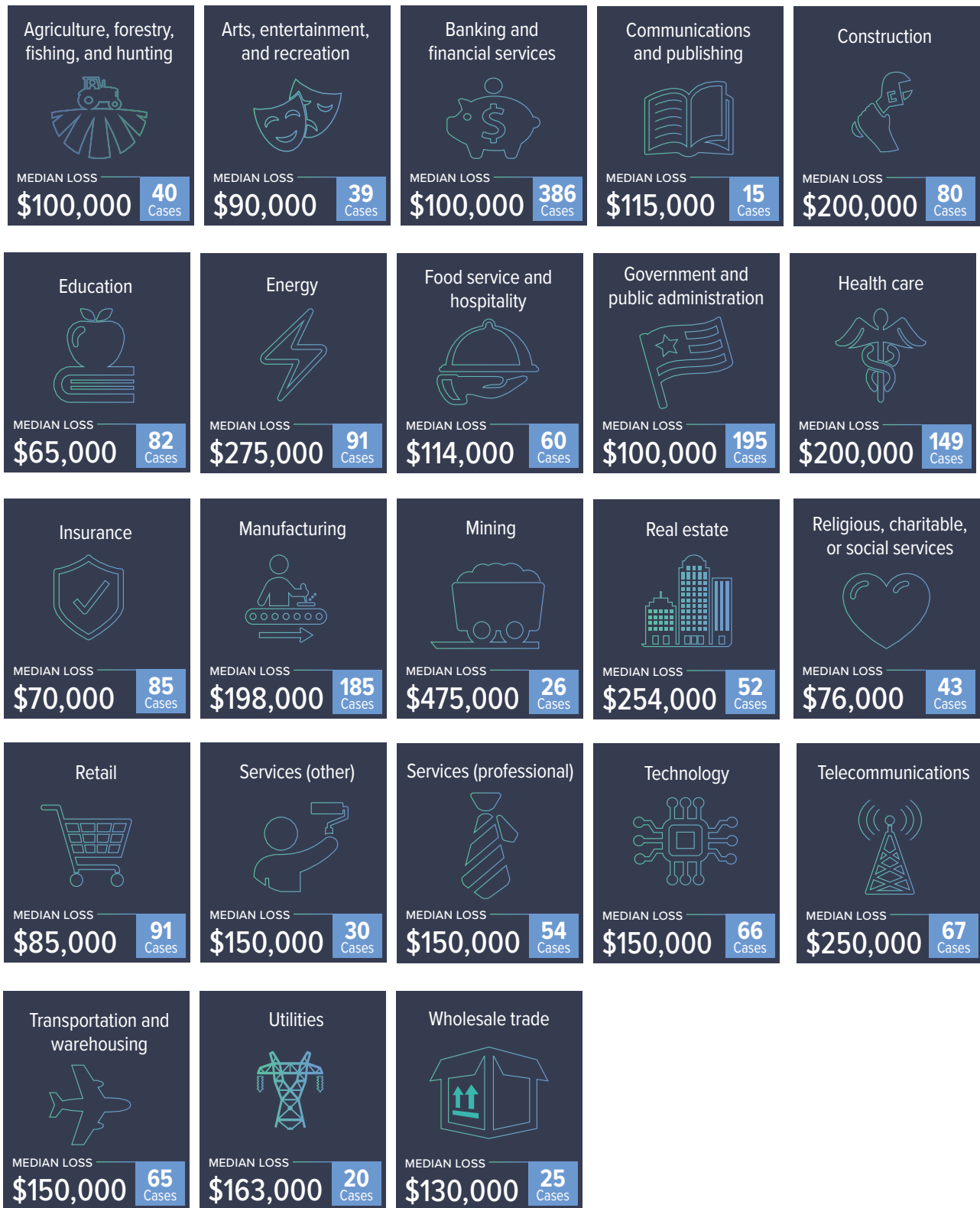
FIG. 18 How do fraud schemes vary by organization size?



Industry of Organization

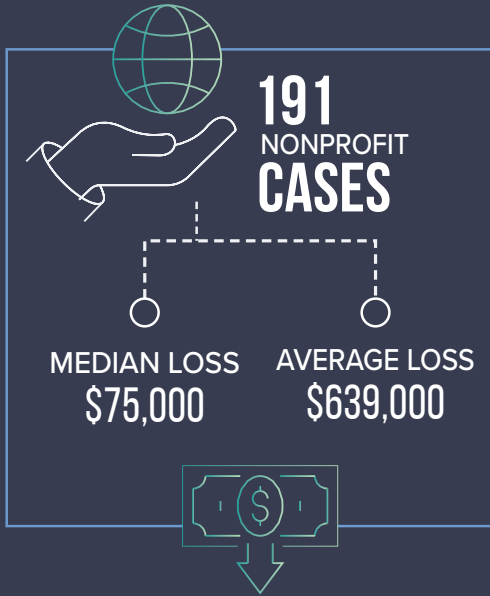
Participants were asked to identify the industry of the victim organization. The most common industries reported to us were banking and financial services, government and public administration, and manufacturing. (It is important to note that this does not necessarily mean that more fraud occurs in these sectors; it might simply indicate that organizations in these industries employ more CFEs than others.) The mining industry suffered the highest median loss of USD 475,000, while frauds in the energy sector had the next-highest median loss of USD 275,000.

FIG. 19 How does occupational fraud affect organizations in different industries?



Fraud in Nonprofits

Nonprofit organizations can be more susceptible to fraud due to having **fewer resources** available to help prevent and recover from a fraud loss. This sector is particularly vulnerable because of **less oversight** and **lack of certain internal controls**.



Nonprofit schemes

Percent of cases

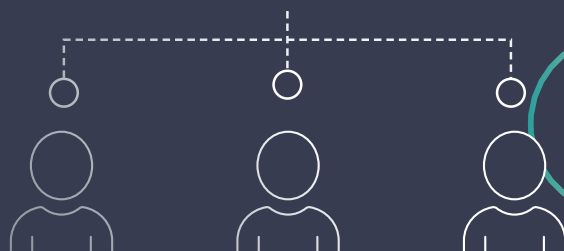
Nonprofit schemes	Percent of cases
Corruption	41%
Billing	30%
Expense reimbursements	23%
Cash on hand	17%
Noncash	16%
Skimming	15%
Check and payment tampering	14%
Cash larceny	12%
Payroll	12%
Financial statement fraud	11%
Register disbursements	3%

Perpetrators AT NONPROFITS



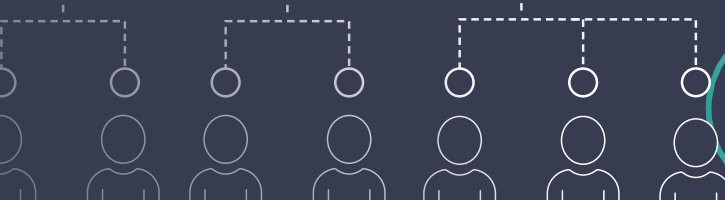
39%
of cases

Owner/executive
MEDIAN
LOSS **\$250,000**



35%
of cases

Manager/supervisor
MEDIAN
LOSS **\$95,000**



23%
of cases

Employee
MEDIAN
LOSS **\$21,000**

Nonprofit organizations have **FEWER ANTI-FRAUD CONTROLS** in place, leaving them



MORE VULNERABLE TO FRAUD

TOP 3 CONTROL WEAKNESSES

35%

LACK OF INTERNAL CONTROLS

19%

LACK OF MANAGEMENT REVIEW

14%

OVERRIDE OF EXISTING INTERNAL CONTROLS



Detection AT NONPROFITS

TIP OR COMPLAINT

40%



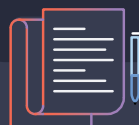
INTERNAL AUDIT

17%



MANAGEMENT REVIEW

13%



BY ACCIDENT

7%



EXAMINATION OF DOCUMENTS

6%



Most Common Schemes by Industry

Identifying the most common fraud schemes within industries can help organizations design controls to guard against their most significant threats. In Figure 20, we show the most common occupational fraud schemes in industries with at least 50 reported cases. The risks are shaded from yellow to red, with darker variants representing higher-risk areas. For example, in the health care industry, corruption represents the highest risk (40% of cases), followed by billing schemes (33% of cases).

FIG. 20 What are the most common occupational fraud schemes in various industries?

INDUSTRY	Cases	Billing	Cash larceny	Cash on hand	Check and payment tampering	Corruption	Expense reimbursements	Financial statement fraud	Noncash	Payroll	Register disbursements	Skimming
Banking and financial services	364	8%	10%	18%	9%	40%	8%	10%	10%	2%	2%	10%
Government and public administration	189	18%	5%	9%	4%	48%	17%	4%	17%	17%	0%	7%
Manufacturing	177	23%	5%	6%	8%	50%	20%	18%	23%	10%	2%	8%
Health care	145	33%	10%	10%	14%	40%	22%	14%	24%	15%	6%	10%
Energy	89	24%	6%	7%	6%	66%	11%	9%	25%	6%	1%	9%
Retail	89	22%	15%	15%	11%	37%	17%	6%	20%	11%	7%	15%
Insurance	82	24%	2%	5%	9%	43%	16%	11%	9%	5%	2%	6%
Education	82	30%	9%	13%	18%	30%	22%	7%	17%	13%	1%	22%
Construction	77	22%	13%	12%	17%	47%	9%	25%	13%	13%	4%	13%
Transportation and warehousing	64	13%	5%	9%	5%	52%	9%	3%	23%	6%	0%	19%
Technology	63	24%	0%	5%	6%	46%	13%	13%	22%	11%	0%	0%
Telecommunications	62	5%	2%	3%	2%	56%	5%	6%	31%	2%	0%	5%
Food service and hospitality	59	22%	20%	10%	12%	39%	8%	8%	25%	12%	10%	14%
Services (professional)	54	37%	0%	9%	20%	26%	24%	15%	11%	22%	2%	11%
Real estate	52	25%	13%	12%	21%	48%	17%	15%	12%	8%	4%	27%



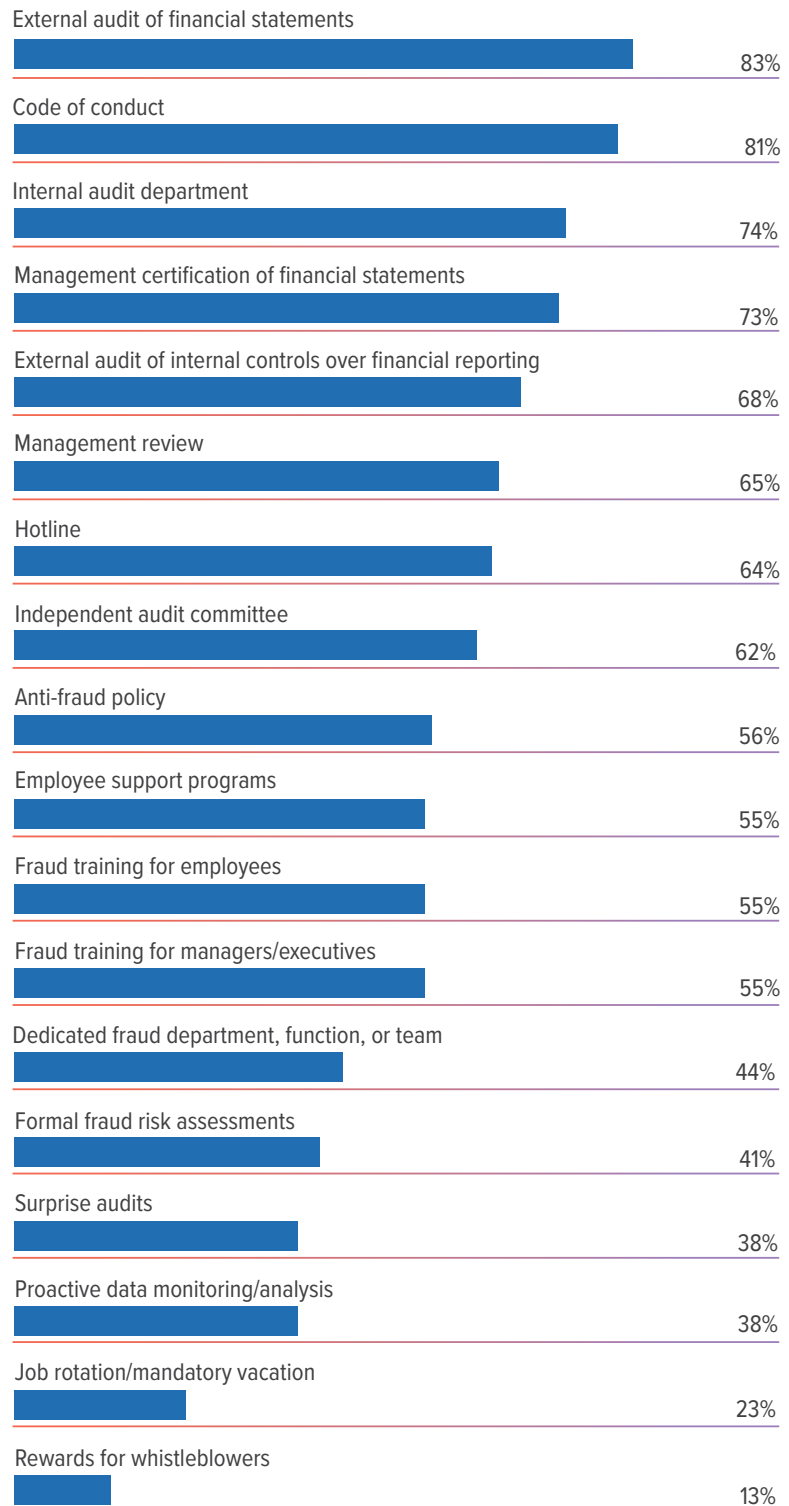
Anti-Fraud Controls at Victim Organizations

Proactive anti-fraud controls play a key role in an organization’s fight against fraud. While the presence of these mechanisms alone does not ensure that all fraud will be prevented, management’s commitment to and investment in targeted prevention and detection measures send a clear message to employees, vendors, customers, and others about the organization’s anti-fraud stance.

We asked survey respondents which of 18 common anti-fraud controls the victim organization had in place at the time of the fraud. Figure 21 shows that independent external audits of the organization’s financial statements are the most common of the controls examined in our study; 83% of the victim organizations had their financial statements audited by an outside auditor. While we classify such audits as an anti-fraud control for purposes of our study, it is important to note that this mechanism is not primarily designed to detect or prevent all frauds. As noted in Figure 9 on page 19, only 4% of the frauds in our study were uncovered through an external audit.

Other common anti-fraud controls include a code of conduct (present in 81% of victim organizations), an internal audit department (74%), and management’s certification of the financial statements (73%).

FIG. 21 What anti-fraud controls are most common?



Effectiveness of Anti-Fraud Controls

While implementing controls to prevent and detect fraud is a necessary part of managing fraud risk, not all anti-fraud controls are created equally. To help organizations understand the potential impact of various controls, we compared the median losses and median durations of the frauds in our study based on whether each specific control was present at the victim organization during the fraud's occurrence.

For every control we examined, organizations that had the control in place experienced smaller fraud losses and detected frauds more quickly than organizations lacking that control. As seen in Figures 22 and 23, four anti-fraud controls in particular were associated

with a 50% or greater reduction in both fraud losses and duration: a code of conduct; an internal audit department; management's certification of financial statements; and regular management review of internal controls, processes, accounts, or transactions. Internal audits and management reviews are both mechanisms that can be used to actively look for fraud, so their correlation with reduced fraud losses and duration stands to reason. In contrast, codes of conduct and management certifications of financial statements are less directly tied to fraud detection, but both mechanisms likely help increase the perception of detection and form the foundation for a holistic anti-fraud culture.

How has the use of anti-fraud controls changed over the last decade?

Over the last ten years of our studies, four of the controls we've analyzed have seen a consistent and notable increase in implementation rates. These controls are among those most commonly associated with a robust anti-fraud program, which indicates that increasing numbers of organizations are taking the threat of fraud seriously and implementing measures specifically designed to help them mitigate these risks.





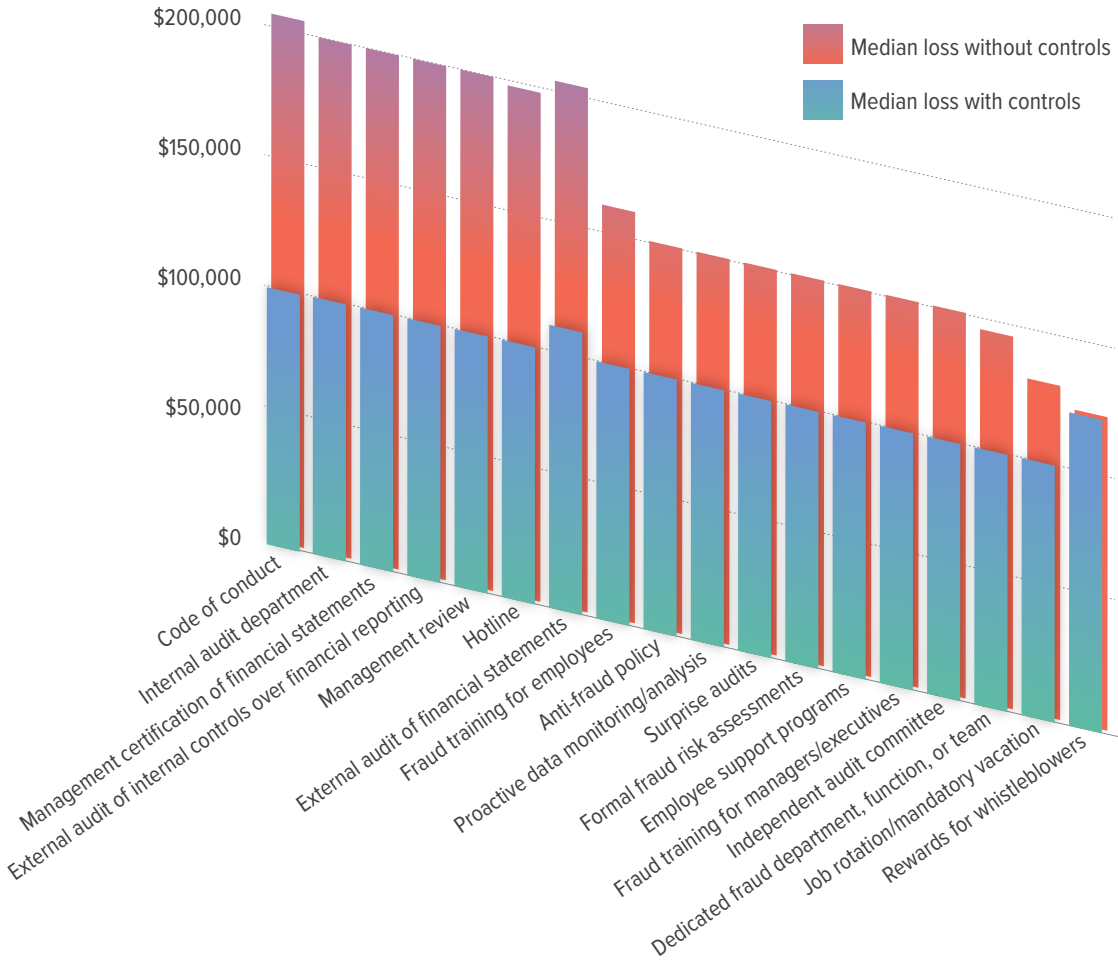
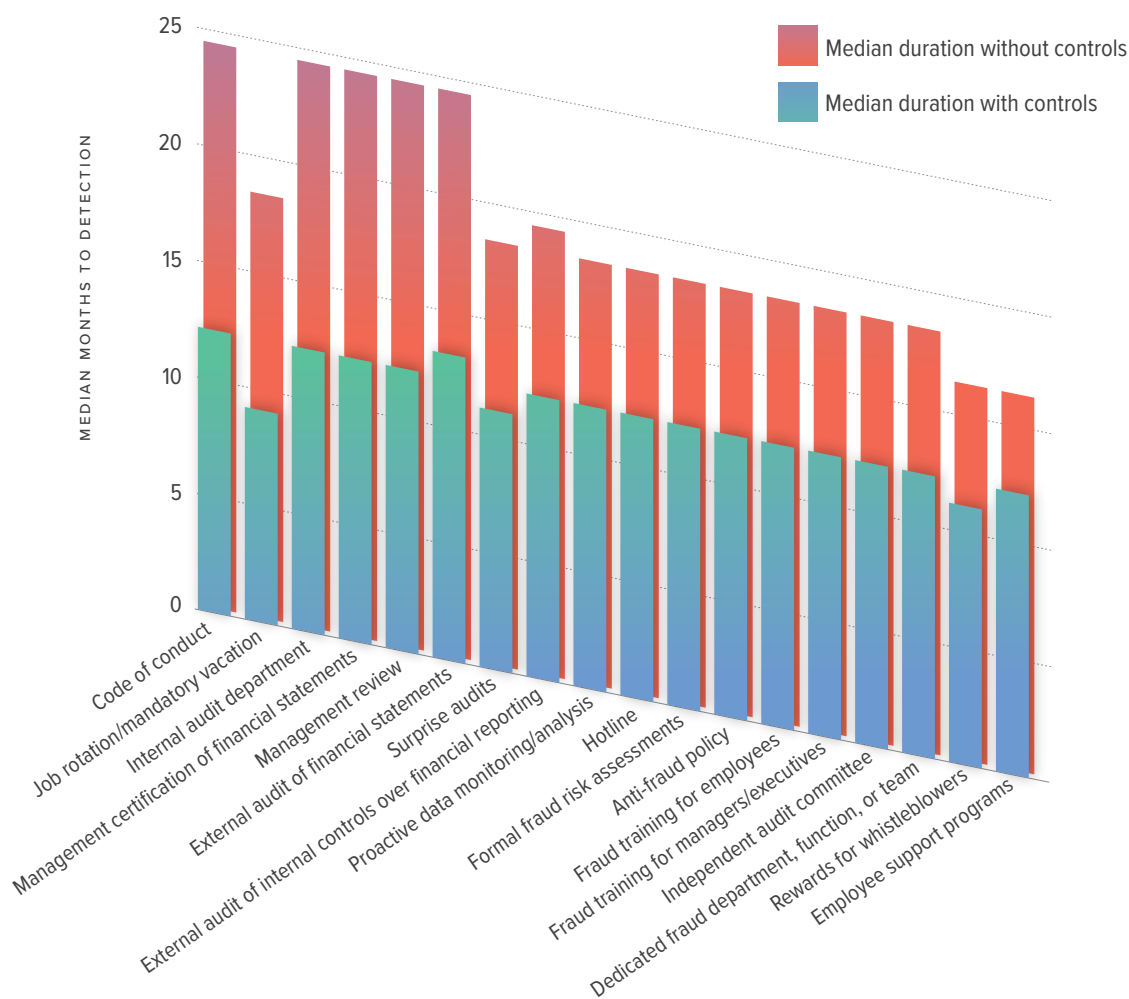
	2010	2020	Increase
 HOTLINE	51%	64%	13%
 ANTI-FRAUD POLICY	43%	56%	13%
 FRAUD TRAINING FOR EMPLOYEES	44%	55%	11%
 FRAUD TRAINING FOR MANAGERS/EXECUTIVES	46%	55%	9%

FIG. 22 How does the presence of anti-fraud controls relate to median loss?



Control	Percent of cases	Control in place	Control not in place	Percent reduction
Code of conduct	81%	\$100,000	\$205,000	51%
Internal audit department	74%	\$100,000	\$200,000	50%
Management certification of financial statements	73%	\$100,000	\$200,000	50%
External audit of internal controls over financial reporting	68%	\$100,000	\$200,000	50%
Management review	65%	\$100,000	\$200,000	50%
Hotline	64%	\$100,000	\$198,000	49%
External audit of financial statements	83%	\$110,000	\$204,000	46%
Fraud training for employees	55%	\$100,000	\$160,000	38%
Anti-fraud policy	56%	\$100,000	\$150,000	33%
Proactive data monitoring/analysis	38%	\$100,000	\$150,000	33%
Surprise audits	38%	\$100,000	\$150,000	33%
Formal fraud risk assessments	41%	\$100,000	\$150,000	33%
Employee support programs	55%	\$100,000	\$150,000	33%
Fraud training for managers/executives	55%	\$100,000	\$150,000	33%
Independent audit committee	62%	\$100,000	\$150,000	33%
Dedicated fraud department, function, or team	44%	\$100,000	\$145,000	31%
Job rotation/mandatory vacation	23%	\$100,000	\$130,000	23%
Rewards for whistleblowers	13%	\$120,000	\$122,000	2%

FIG. 23 How does the presence of anti-fraud controls relate to the duration of fraud?



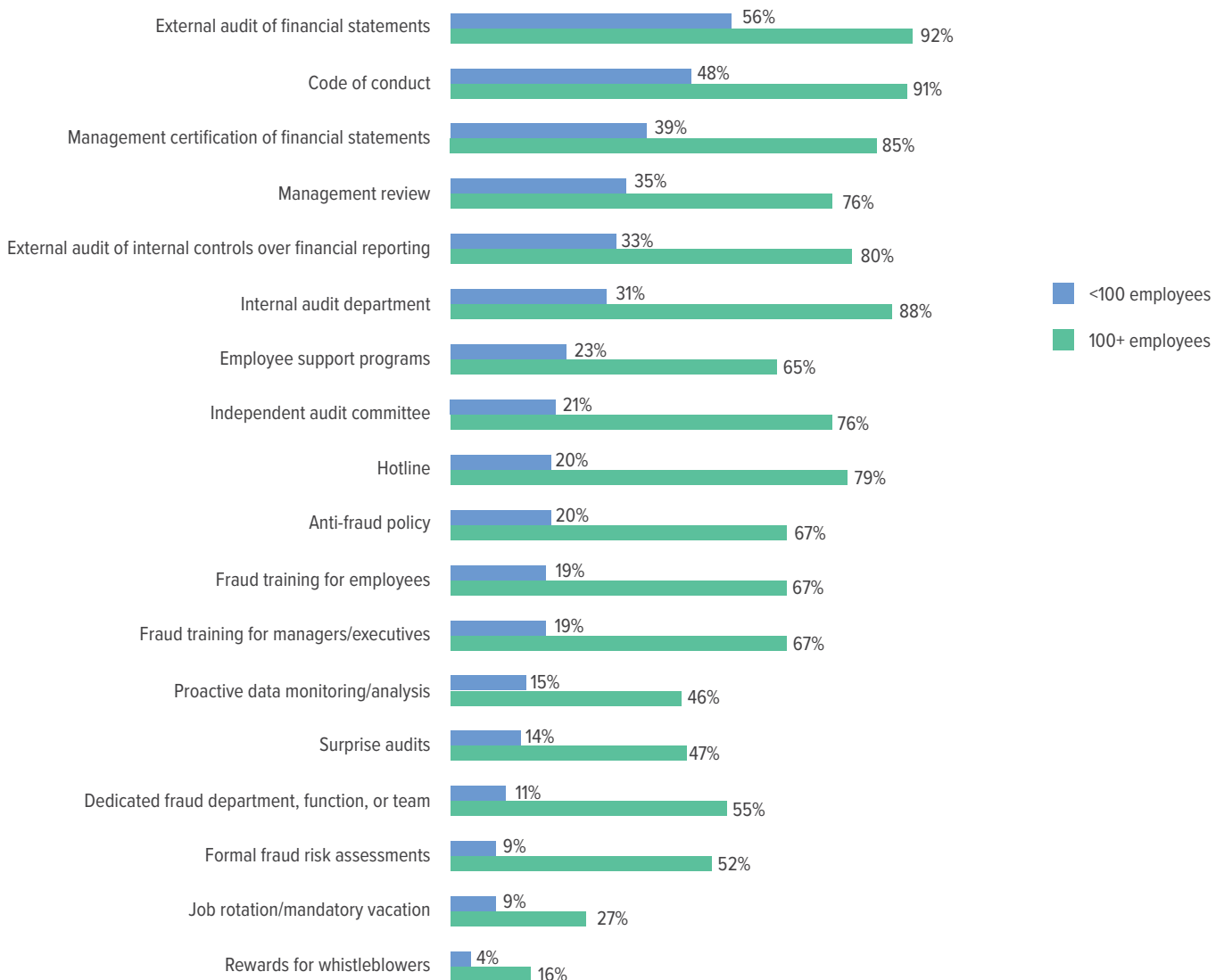
Control	Percent of cases	Control in place	Control not in place	Percent reduction
Code of conduct	81%	12 months	24 months	50%
Job rotation/mandatory vacation	23%	9 months	18 months	50%
Internal audit department	74%	12 months	24 months	50%
Management certification of financial statements	73%	12 months	24 months	50%
Management review	65%	12 months	24 months	50%
External audit of financial statements	83%	13 months	24 months	46%
Surprise audits	38%	11 months	18 months	39%
External audit of internal controls over financial reporting	68%	12 months	19 months	37%
Proactive data monitoring/analysis	38%	12 months	18 months	33%
Hotline	64%	12 months	18 months	33%
Formal fraud risk assessments	41%	12 months	18 months	33%
Anti-fraud policy	56%	12 months	18 months	33%
Fraud training for employees	55%	12 months	18 months	33%
Fraud training for managers/executives	55%	12 months	18 months	33%
Independent audit committee	62%	12 months	18 months	33%
Dedicated fraud department, function, or team	44%	12 months	18 months	33%
Rewards for whistleblowers	13%	11 months	16 months	31%
Employee support programs	55%	12 months	16 months	25%

Anti-Fraud Controls in Small Businesses

Small businesses face different types of fraud risks than larger organizations (see Figure 18 on page 26), and they also experience unique challenges in combating occupational fraud. Whether it's due to resource limitations, a lack of awareness, or a tendency to place too much trust in their employees, small businesses implement anti-fraud controls at a much lower rate than their larger counterparts. The most common anti-fraud control—external audits of financial statements—was only in place at 56% of small businesses, and only 48% of these companies had a code of conduct, compared to 92% and 91%, respectively, of organizations with more than 100 employees.

Our data shows that there are clear opportunities for small businesses to increase their protection against fraud. Adopting a code of conduct and an anti-fraud policy, having managers review the work of their subordinates, and conducting targeted anti-fraud training for employees and managers are all measures that are correlated with significant reductions in fraud losses (see Figure 22 on page 33), yet each was implemented by fewer than half of the small businesses in our study. Each of these measures can typically be implemented without requiring a significant investment of resources and could help improve the anti-fraud environment of a small organization.

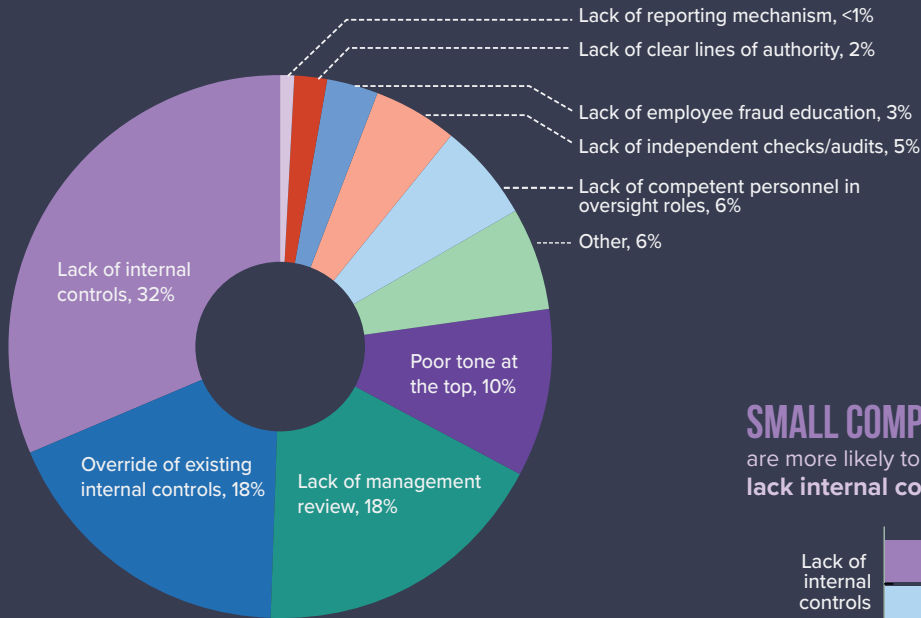
FIG. 24 How do anti-fraud controls vary by size of victim organization?



Internal Control Weaknesses That Contribute to Occupational Fraud

Various factors can facilitate a perpetrator's ability to commit and conceal an occupational fraud scheme.

What are the primary internal control weaknesses that contribute to occupational fraud?



MANAGER-LEVEL PERPETRATORS are more likely than other perpetrators to OVERRIDE EXISTING CONTROLS

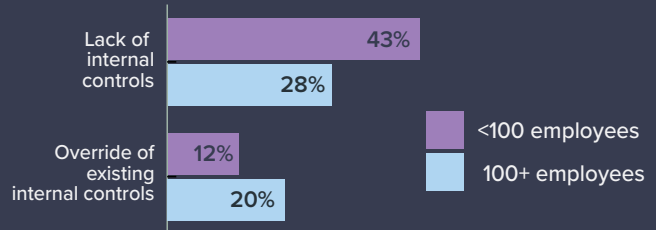


Employees	15%
Managers	22%
Owner/executives	17%

SMALL COMPANIES are more likely to **lack internal controls**

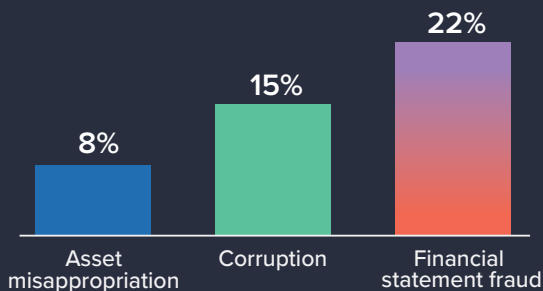


LARGE COMPANIES are more likely to have **controls overridden**

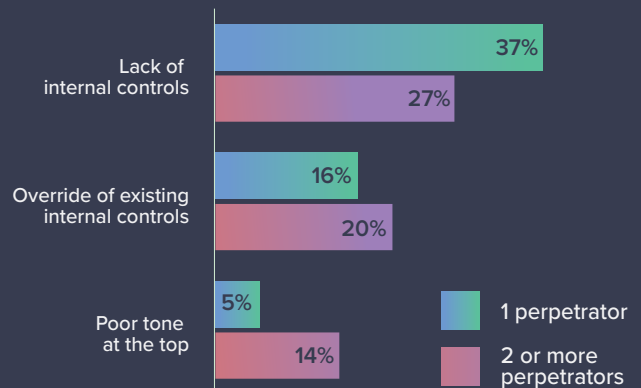


POOR TONE AT THE TOP

was the primary risk factor in **22%** of all financial statement frauds.



SOLE PERPETRATORS take advantage of a lack of controls, while schemes involving **COLLUSION** are supported by poor tone at the top and an ability to override controls



Background Checks Run on the Perpetrators

Although most occupational fraud perpetrators do not have a criminal history (see Figure 39 on page 48), it is still prudent for organizations to run background checks (to the extent legally permissible) during the hiring process to avoid letting known fraudsters in through the front door. As noted in Figure 25, however, only approximately half of the victim organizations in our study undertook this due diligence step when hiring the perpetrator. Interestingly, of the 52% of organizations that did conduct a background check, 13% of them uncovered a red flag in the perpetrator’s background and proceeded with the decision to hire them anyway.

When running background checks, organizations might choose to prioritize different aspects of an individual’s background. Figure 26 shows that, of the background checks conducted by the victim organizations in our study, 81% included a check on the perpetrator’s employment history and 75% included a check of the perpetrator’s criminal background.

FIG. 25 Was a background check run on the perpetrator prior to hiring?

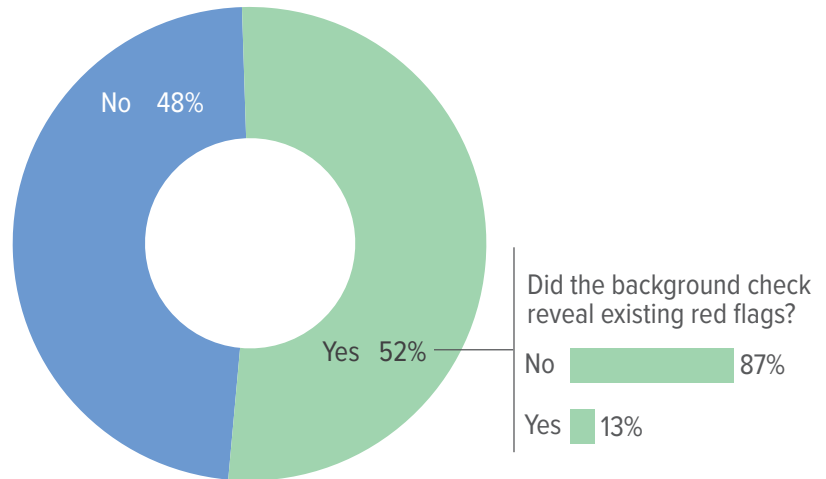
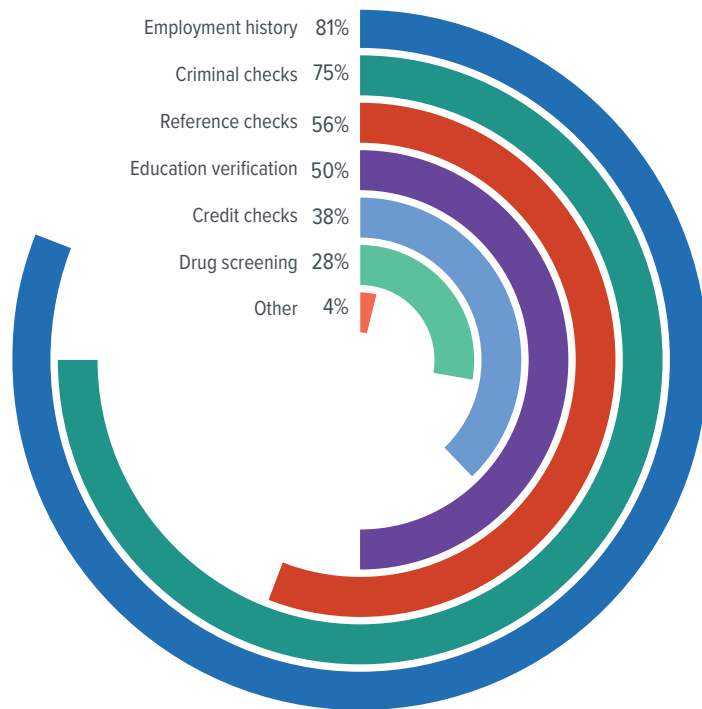


FIG. 26 What types of background checks were run on the perpetrator prior to hiring?





PERPETRATORS

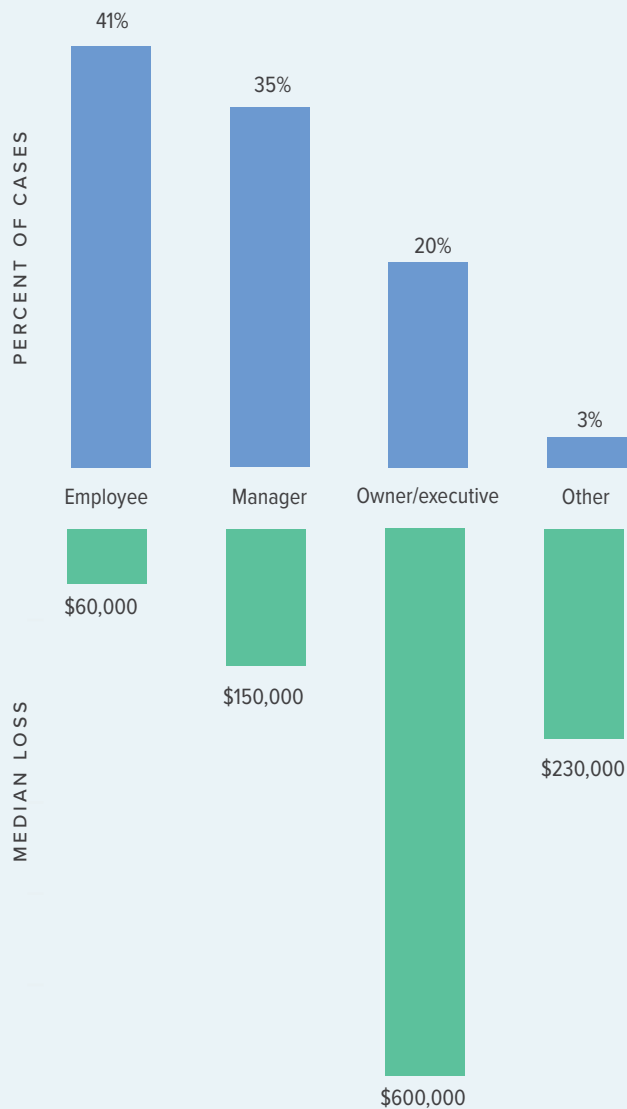
One of the key goals of our study is to identify the common characteristics and risk profiles of those who commit occupational fraud. Our survey included several questions focused on the fraud perpetrators' job details, basic demographics, prior misconduct, and behavioral warning signs. This information was compiled to help organizations better understand and identify the risks and red flags of fraud in their own workforces.



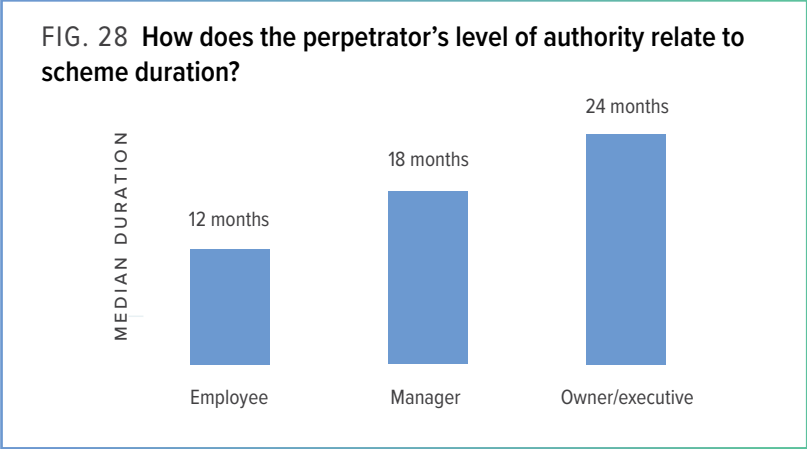
Perpetrator's Position

The perpetrator's level of authority within an organization tends to strongly correlate with the size of a fraud. Owners/executives accounted for only 20% of the frauds in our study, but the median loss in those cases (USD 600,000) far exceeded the losses caused by managers and staff-level employees. This is consistent with our past studies, all of which found that losses tend to rise in tandem with a fraudster's level of authority. Owners/executives are generally in a better position to override controls than their lower-level counterparts, and they often have greater access to an organization's assets. Both of these facts might help explain why losses attributable to this group tend to be so much larger.

FIG. 27 How does the perpetrator's level of authority relate to occupational fraud?



As seen in Figure 28, the length of fraud schemes also tends to rise in correlation with the perpetrator’s authority. The median duration of a fraud committed by an owner/executive was 24 months, compared to 18 months for schemes committed by managers and 12 months for those committed by staff-level employees.



Perpetrator’s Tenure

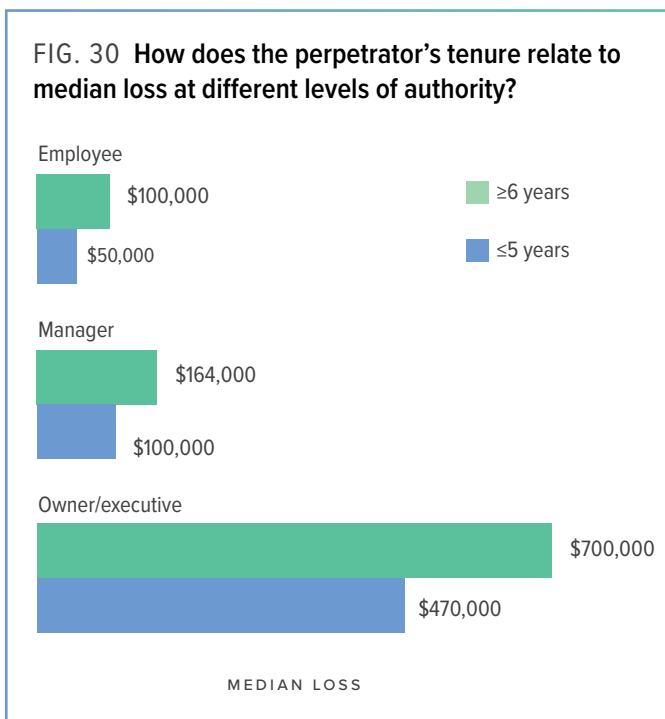
The longer a fraud perpetrator works for a company, the more damage that person’s scheme is likely to cause, as shown in Figure 29. Those who had been with the victim organization for at least ten years stole a median USD 200,000, which was four times greater than the median loss caused by employees with less than one year of tenure.

FIG. 29 How does the perpetrator’s tenure relate to occupational fraud?



The impact of tenure on fraud losses remains evident even when we control for the fraudster’s level of authority. In Figure 30 we divided all fraudsters into two groups: those who had been with their organizations five years or less and those who had been with their organization six years or longer. Next, we compared the median loss caused by these two groups at three levels of authority: owner/executive, manager, and employee. At every level, the longer-tenured fraudsters caused significantly larger losses.

What this tells us is that longer-tenured fraudsters do not steal more merely because they have been promoted over time to higher levels of authority. Instead, their added experience with their organizations seems to improve their skills or abilities related to committing fraud. This might be because they become better at identifying gaps or weaknesses in internal controls, because they become more trusted (and thus are subject to lower levels of review by peers and supervisors), or because they learn over time how others have successfully committed fraud. Regardless, this data indicates that the ability to defraud an organization seems to be something people improve at with experience.



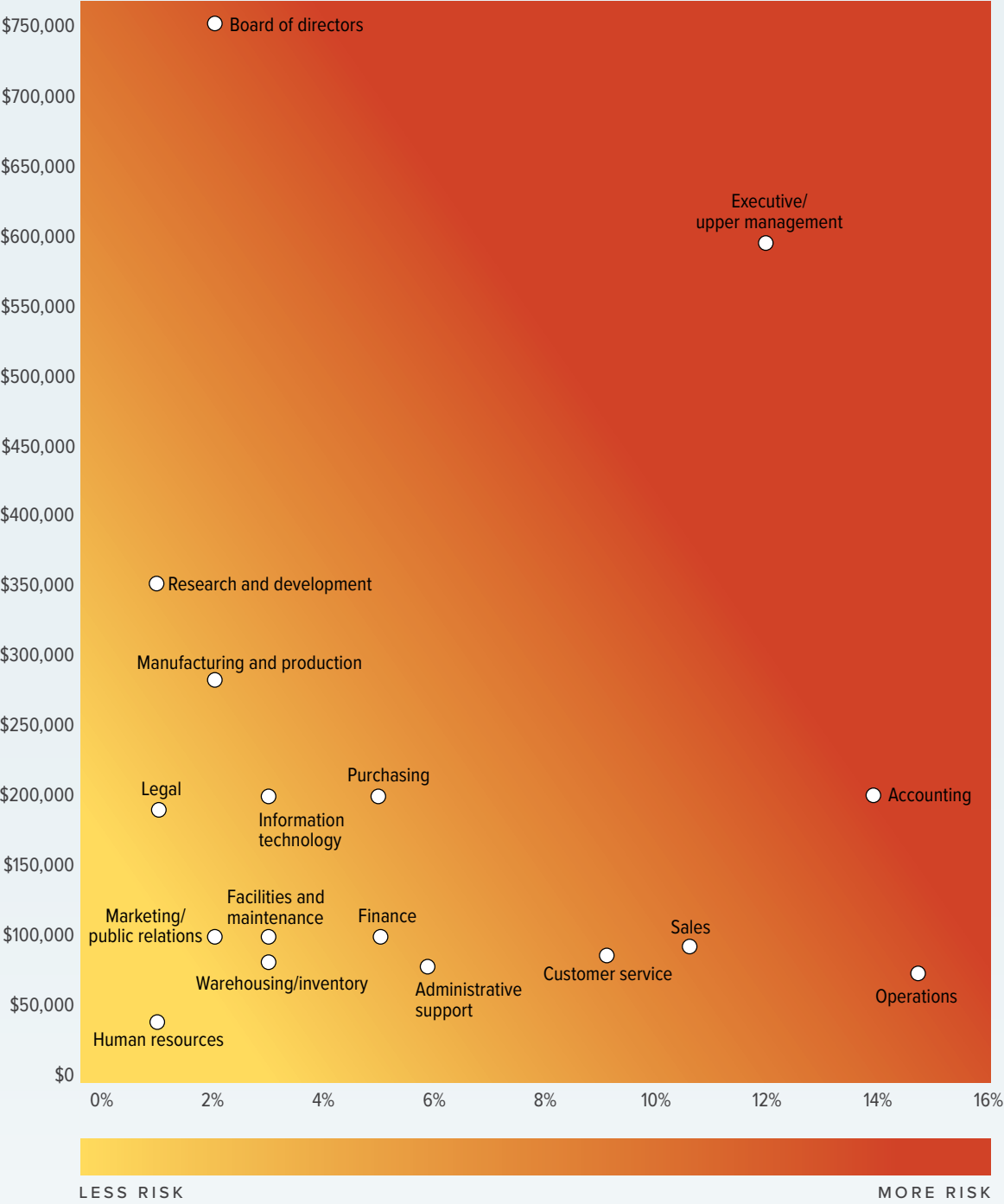
Perpetrator’s Department

Figure 31 is a heat map showing the frequency and median loss of fraud schemes based on the perpetrator’s department. This illustrates the relative risks of occupational fraud in the different parts of a typical organization, which may help anti-fraud professionals effectively allocate anti-fraud controls and resources. For example, the executive/upper management team and the accounting department were both associated with high frequency and median loss, which indicates that fraud risks in these areas should be carefully addressed in any anti-fraud program.

Department*	Number of cases	Percent of cases	Median loss
Operations	288	15%	\$72,000
Accounting	277	14%	\$200,000
Executive/upper management	234	12%	\$596,000
Sales	225	11%	\$94,000
Customer service	175	9%	\$86,000
Administrative support	116	6%	\$76,000
Finance	101	5%	\$100,000
Purchasing	96	5%	\$200,000
Information technology	69	3%	\$200,000
Facilities and maintenance	60	3%	\$100,000
Warehousing/inventory	60	3%	\$85,000
Board of directors	45	2%	\$750,000
Marketing/public relations	40	2%	\$100,000
Manufacturing and production	35	2%	\$275,000
Human resources	27	1%	\$40,000
Research and development	14	1%	\$350,000
Legal	13	1%	\$195,000

*Departments with fewer than 10 cases were omitted

FIG. 31 What departments pose the greatest risk for occupational fraud?



Schemes Based on Perpetrator's Department

The eight departments shown in Figure 32 accounted for 76% of all occupational frauds in our study. The specific fraud schemes used by perpetrators in these departments are presented to help organizations assess risk and develop effective anti-fraud controls within these high-risk areas. Boxes are shaded from yellow to red, with darker boxes indicating higher-frequency schemes for each department.

FIG. 32 What are the most common occupational fraud schemes in high-risk departments?

DEPARTMENT	Cases	Billing	Cash larceny	Cash on hand	Check and payment tampering	Corruption	Expense reimbursements	Financial statement fraud	Noncash	Payroll	Register disbursements	Skimming
Operations	288	15%	5%	10%	5%	44%	12%	7%	15%	8%	3%	9%
Accounting	277	32%	14%	12%	27%	24%	18%	15%	11%	21%	5%	19%
Executive/upper management	234	26%	11%	12%	11%	62%	26%	30%	18%	12%	3%	10%
Sales	225	10%	6%	10%	5%	39%	14%	8%	21%	2%	4%	10%
Customer service	175	5%	8%	11%	8%	33%	6%	1%	9%	2%	2%	17%
Administrative support	116	31%	8%	18%	12%	29%	14%	8%	12%	9%	3%	12%
Finance	101	20%	10%	12%	9%	35%	14%	14%	12%	9%	3%	8%
Purchasing	96	22%	4%	4%	2%	81%	7%	7%	18%	2%	0%	4%



Perpetrator's Gender

As shown in Figure 33, more than 70% of the perpetrators in our study were males. Men also caused a significantly larger median loss (USD 150,000) than women (USD 85,000). This is consistent with our past studies, all of which have found a significant gender disparity in fraud loss and frequency.

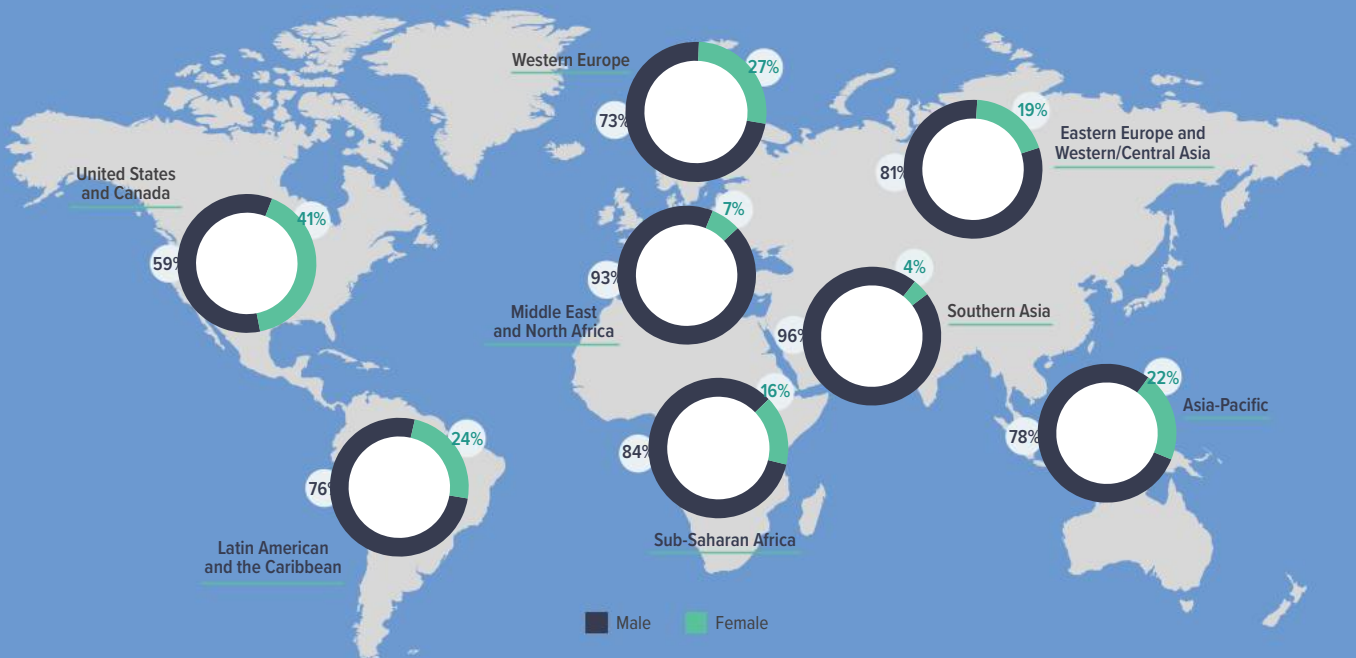
Perpetrator's Gender Based on Region

There was a large variance in the gender distribution of occupational fraudsters based on geographic region. Figure 34 shows that in the United States and Canada, males accounted for only 59% of occupational fraud perpetrators, whereas in Southern Asia and the Middle East and North Africa, men committed more than 90% of occupational frauds.

FIG. 33 How does the perpetrator's gender relate to occupational fraud?



FIG. 34 How does the gender distribution of perpetrators vary by region?



Position of Perpetrator Based on Gender

We examined gender distribution and median loss data based on the perpetrator's level of authority, as shown in Figure 35. At all levels of authority (employee, manager, and owner/executive), males committed a much larger percentage of frauds than women did. Male owners/executives and managers also accounted for much larger losses than their female counterparts. This was particularly true at the owner/executive level, where the median loss caused by men (USD 795,000) was more than four times larger than the median loss caused by women (USD 172,000). At the employee level, however, losses caused by males and females were equal.

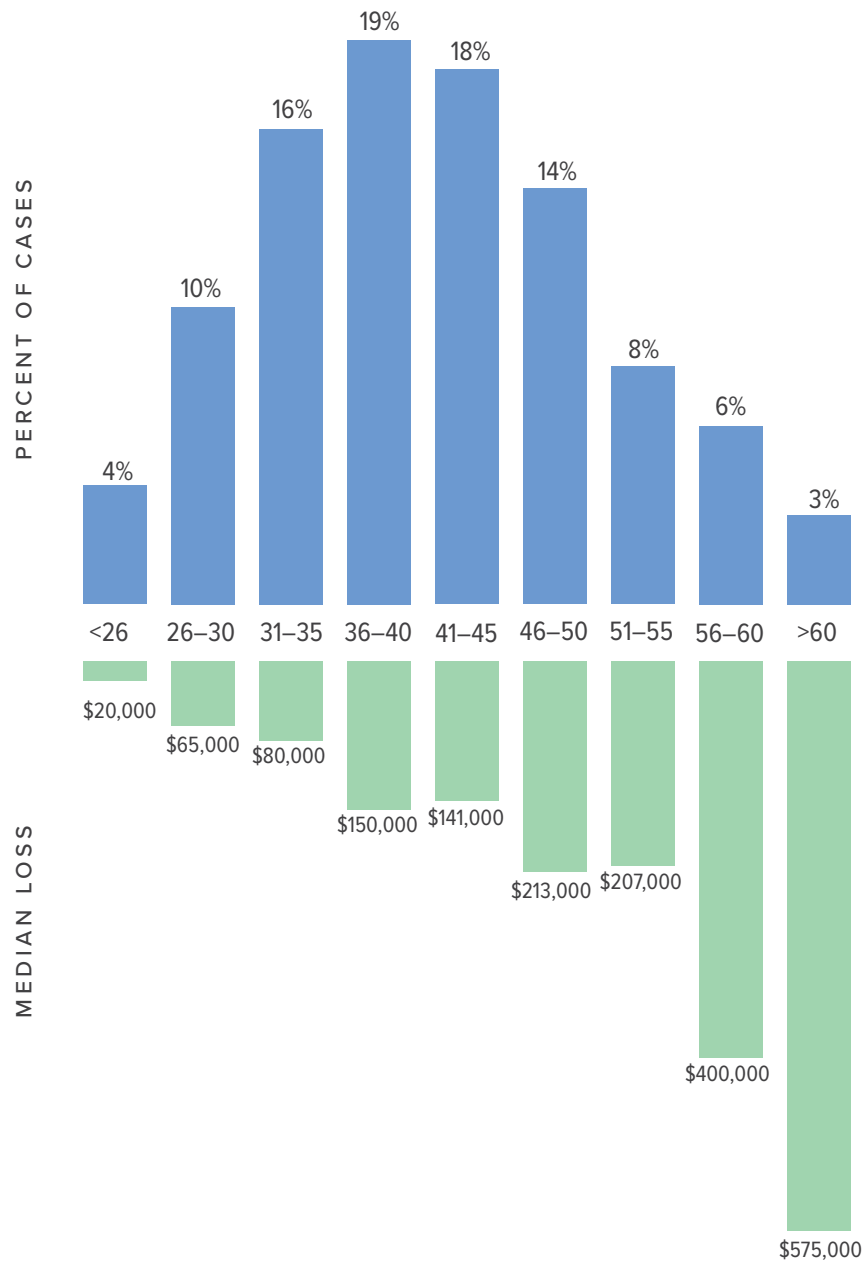
FIG. 35 How do gender distribution and median loss vary based on the perpetrator's level of authority?



Perpetrator's Age

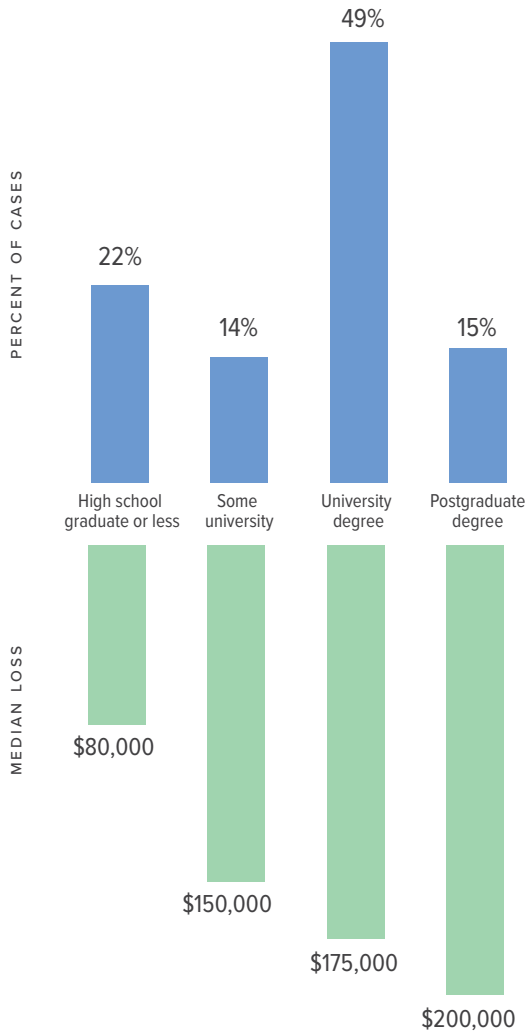
The age distribution of fraud perpetrators in our study was bell-shaped, with 53% of fraudsters between the ages of 31 and 45. Median losses, on the other hand, tended to rise along with the age of the perpetrator. Those in the 56 to 60 and 60+ age ranges together accounted for less than 10% of all cases, but they caused median losses of USD 400,000 and USD 575,000, respectively, which were by far the highest losses in any age range.

FIG. 36 How does the perpetrator's age relate to occupational fraud?



Perpetrator's Education Level

FIG. 37 How does the perpetrator's education level relate to occupational fraud?



We also found a correlation between the perpetrator's education level and median loss. Figure 37 shows that fraudsters with a high school degree or less caused a median loss of USD 80,000, while those with a postgraduate degree caused a median loss of USD 200,000. Generally, we would expect losses to correlate with education because those with higher levels of education tend to hold higher positions of authority and might also have greater technical capabilities for committing fraud.



HIGH-RISK DEPARTMENTS

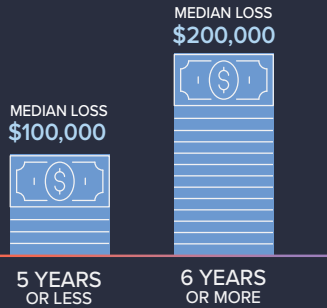
More than three-fourths of all occupational frauds were committed by employees from these 8 business units:

Operations	15%
Accounting	14%
Executive/upper management	12%
Sales	11%
Customer service	9%
Administrative support	6%
Finance	5%
Purchasing	5%

Profile of a Fraudster

Our study includes perpetrator data from more than 2,000 fraud cases, which can help organizations assess fraud risk in their own workforces.

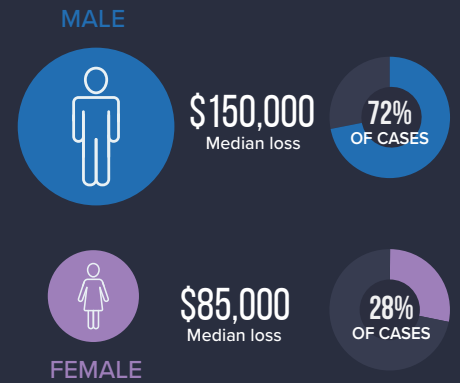
TENURE



Occupational fraudsters who had been with their organizations at least 6 years caused **TWICE** the loss of less-tenured employees.

GENDER

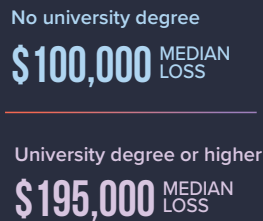
Males committed more frauds and caused higher losses.



EDUCATION

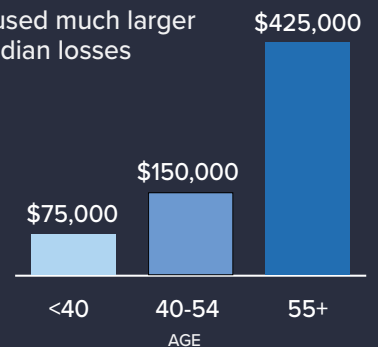


64% of occupational fraudsters had a university degree or higher.



AGE

Older fraudsters caused much larger median losses



Collusion by Multiple Perpetrators

Figure 38 shows that 51% of frauds in our study were committed by two or more fraudsters working in collusion. Losses tended to increase with multiple perpetrators—particularly when three or more individuals conspired to commit fraud. One reason collusive frauds might be more costly is that multiple fraudsters working together might be better able to undermine the systems of separated duties and independent verification that are at the heart of many anti-fraud controls.

Perpetrator's Criminal Background

Our past studies have shown that most occupational fraudsters have no prior criminal history before they commit their crimes, and our current data reinforces those findings. Only 4% of the perpetrators in this study had been previously convicted of a fraud-related offense. It should be noted that 41% of the occupational frauds in our study were never reported to law enforcement (see Response to Fraud infographic on page 55), which is also consistent with our past research. This indicates that the true number of repeat offenders is probably higher than what can be determined through criminal records.

FIG. 38 How does the number of perpetrators in a scheme relate to occupational fraud?

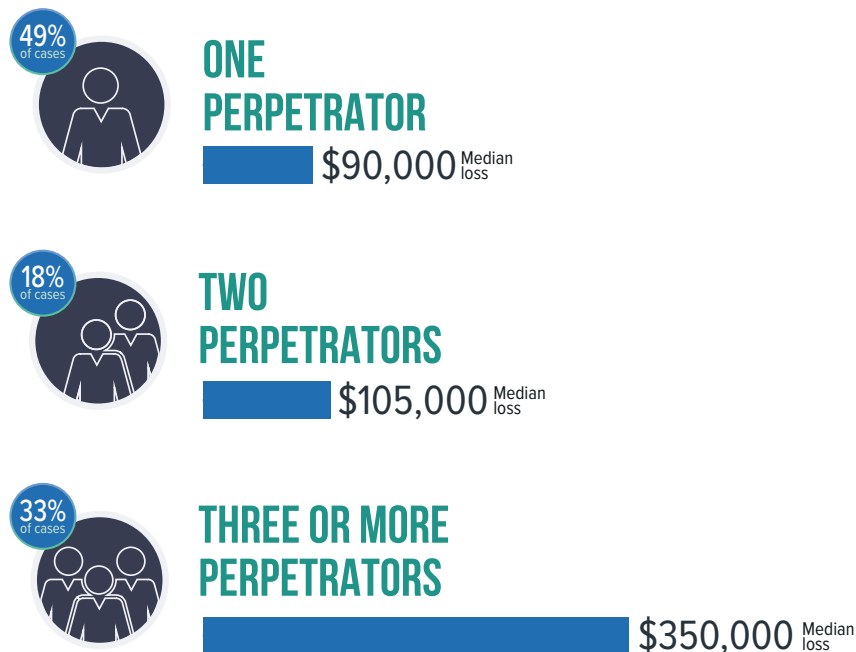
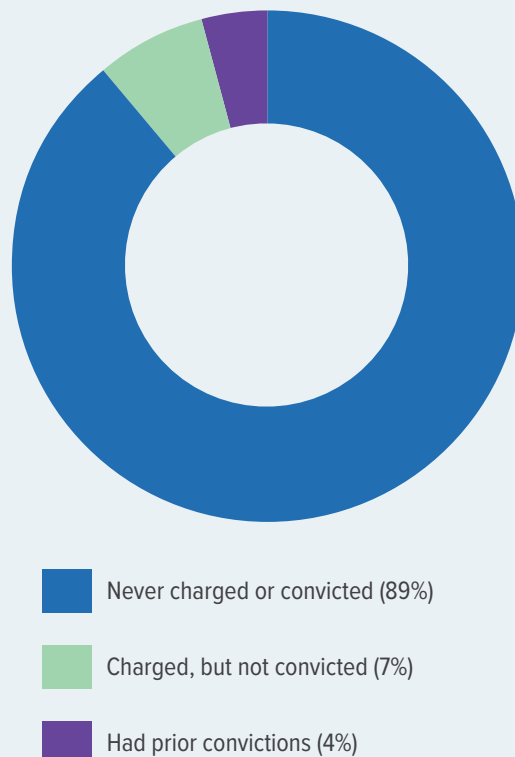


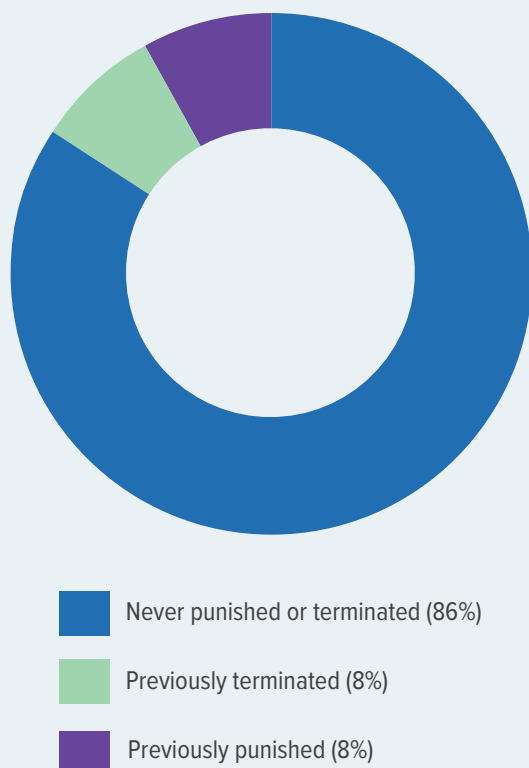
FIG. 39 Do perpetrators tend to have prior fraud convictions?



Perpetrator's Employment History

Figure 40 shows that 86% of fraudsters had never been punished or terminated for fraud-related conduct prior to the crimes reported in this study. As with the criminal conviction data in Figure 39, this tends to indicate that most occupational fraudsters are first-time offenders. But also like the criminal conviction data, there is reason to believe that this data might understate the true number of repeat fraudsters. According to Figure 44 on page 54, 5% of fraudsters received no internal punishment, 10% were permitted to resign, and 11% signed private settlement agreements with the victim organizations. This suggests that a significant number of occupational fraudsters will have no record of employment-related discipline even after having been caught by their employers.

FIG. 40 Do perpetrators tend to have prior employment-related disciplinary actions for fraud?

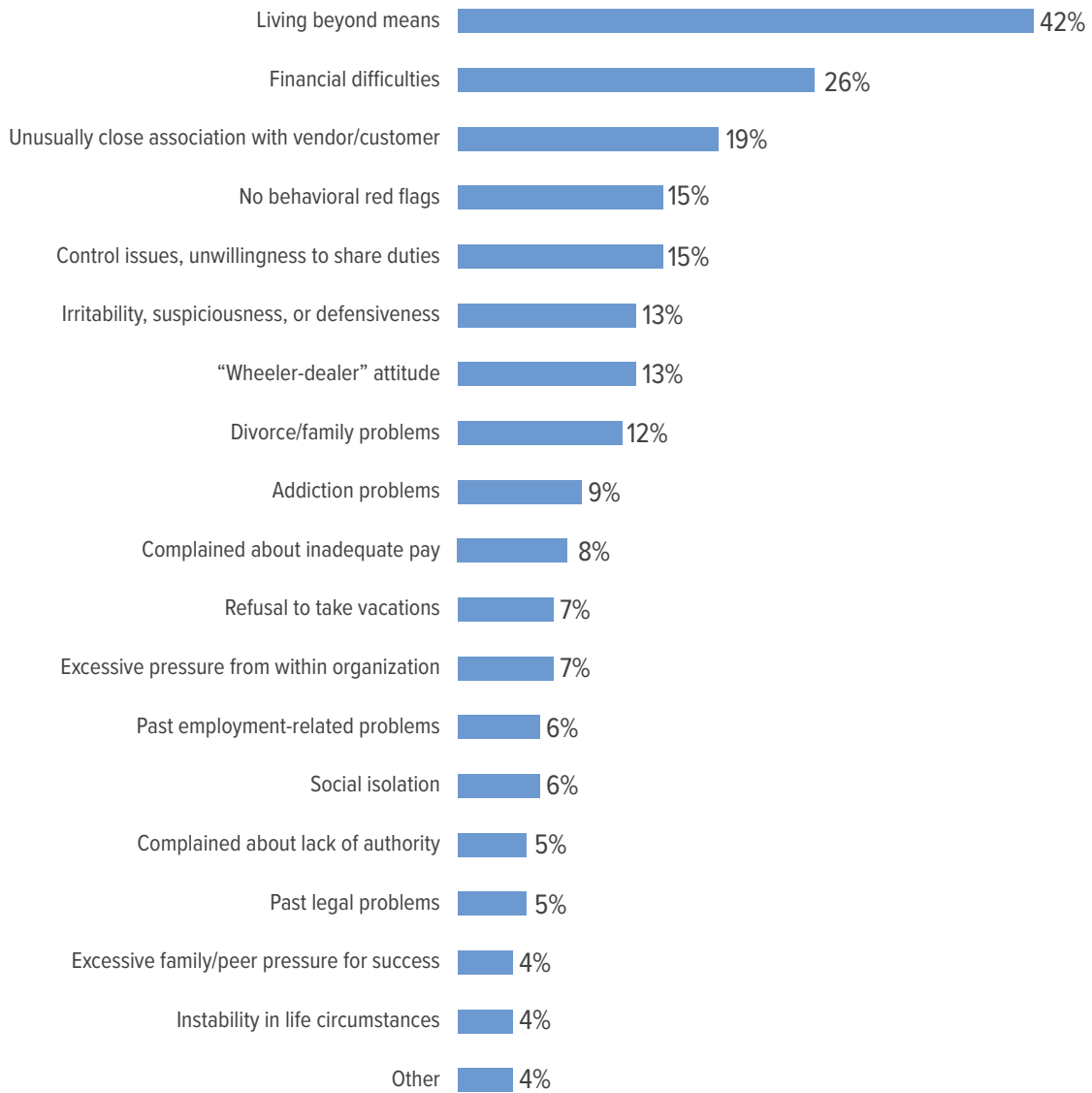


Behavioral Red Flags Displayed by Perpetrators

The typical occupational fraud scheme lasts 14 months before it is detected; during this time, the perpetrator will often display certain behavioral traits that tend to be associated with fraudulent conduct. Figure 41 on pg. 50 shows the relative frequency of 17 common behavioral red flags. Significantly, all of these red flags had been identified by someone in the respective victim organizations before the frauds were detected.

At least one behavioral red flag was present in 85% of the cases in our study, and multiple red flags were present in 49% of cases. The seven most common red flags were: (1) living beyond means; (2) financial difficulties; (3) unusually close association with a vendor or customer; (4) excessive control issues or unwillingness to share duties; (5) unusual irritability, suspiciousness, or defensiveness; (6) a general “wheeler-dealer” attitude involving shrewd or unscrupulous behavior; and (7) recent divorce or family problems. At least one of these seven red flags had been identified before the perpetrator was caught in 76% of all cases.

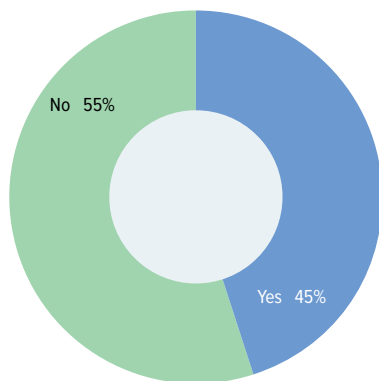
FIG. 41 How often do perpetrators exhibit behavioral red flags?



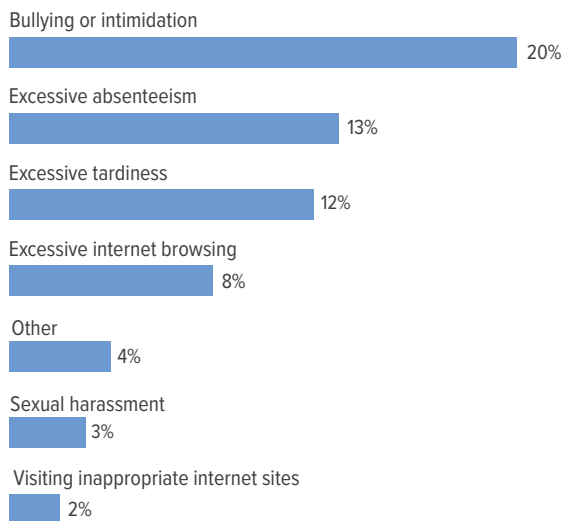
Non-Fraud-Related Misconduct by Perpetrators

In order to determine if there is a correlation between fraud and other forms of workplace violations, we asked survey respondents whether the fraudster had been engaged in non-fraud-related misconduct prior to or during the time of the frauds. Figure 42 shows that 45% of occupational fraudsters had engaged in some type of non-fraud-related misconduct. The most common was bullying or intimidation (20% of cases), followed by excessive absenteeism (13%) and excessive tardiness (12%).

FIG. 42 Do fraud perpetrators also engage in non-fraud-related misconduct?



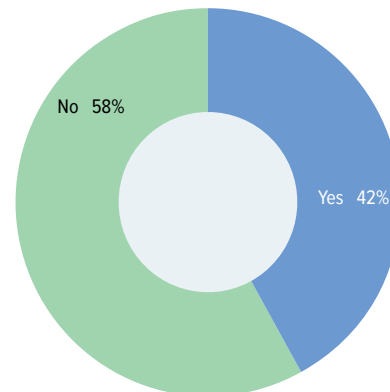
Which forms of non-fraud misconduct are most common among fraud perpetrators?



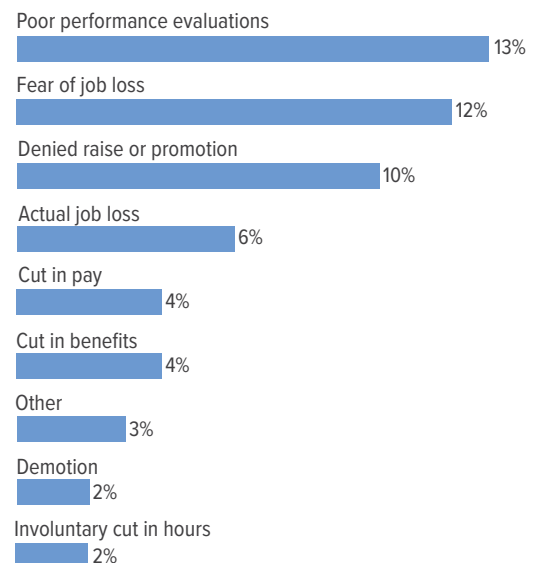
Human Resources-Related Red Flags

In some circumstances, negative events surrounding a person's conditions of employment (such as poor performance evaluations, loss of pay or benefits, fear of job loss, etc.) can cause financial stress or resentment toward the employer, which might play a role in the decision to commit fraud. We refer to these events as *human resources-related red flags*. As Figure 43 shows, 42% of fraudsters had experienced some form of HR-related red flags prior to or during the time of their frauds. The most common of these were negative performance evaluations (13% of cases) and fear of job loss (12%).

FIG. 43 Do fraud perpetrators experience negative HR-related issues prior to or during their frauds?



Which HR-related issues are most commonly experienced by fraud perpetrators?



Behavioral Red Flags of Fraud

Recognizing the behavioral clues displayed by fraudsters can help organizations more effectively detect fraud and minimize their losses.

85% OF ALL FRAUDSTERS displayed at least one **BEHAVIORAL RED FLAG** while committing their crimes.

7 KEY WARNING SIGNS



42%

Living beyond means



26%

Financial difficulties



19%

Unusually close association with vendor/customer



15%

Control issues, unwillingness to share duties



13%

Irritability, suspiciousness, or defensiveness



13%

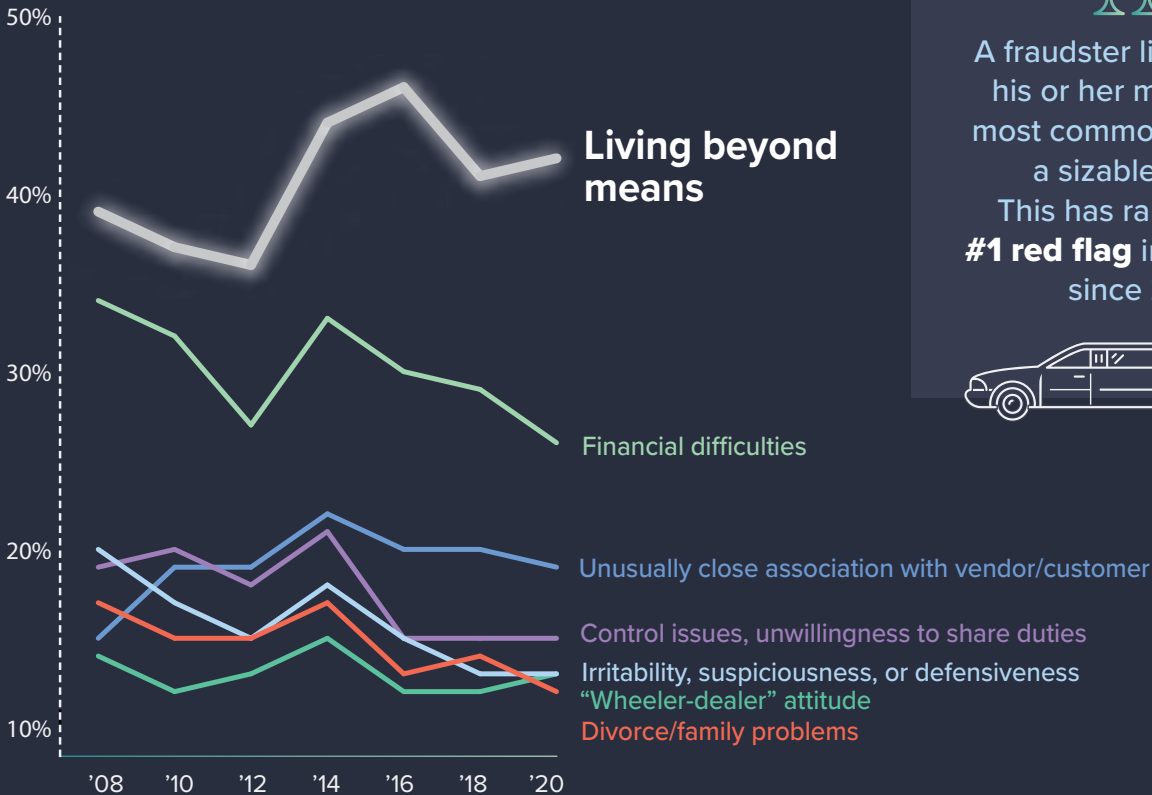
"Wheeler-dealer" attitude



12%

Divorce/family problems

LIVING BEYOND MEANS



A fraudster living beyond his or her means is the most common red flag by a sizable margin. This has ranked as the **#1 red flag** in every study since 2008.



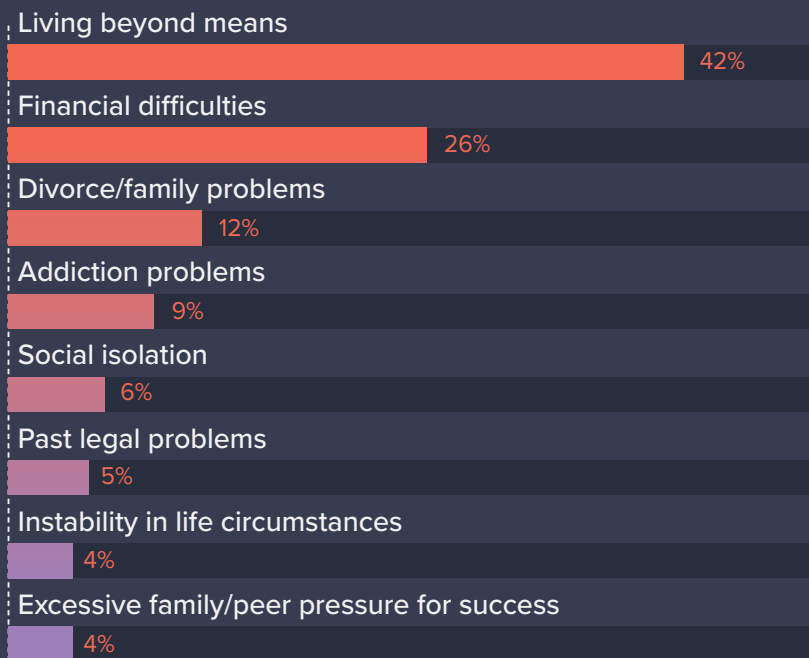


CLASSIFYING RED FLAG BEHAVIORS

In **52%** of cases, the fraudster exhibited red flags connected to their **work duties**.



In **63%** of cases, the fraudster exhibited red flag behavior associated with his or her **personal life**.



JOB PERFORMANCE AS A WARNING SIGN

A fraud perpetrator’s job performance will often suffer while the scheme is taking place. Each of these performance-related issues were cited in at least 10% of cases.



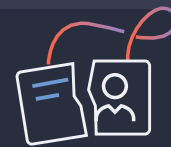
13%

POOR PERFORMANCE EVALUATIONS



13%

EXCESSIVE ABSENTEEISM



12%

FEAR OF JOB LOSS



12%

EXCESSIVE TARDINESS



10%

DENIED RAISE OR PROMOTION

CASE RESULTS

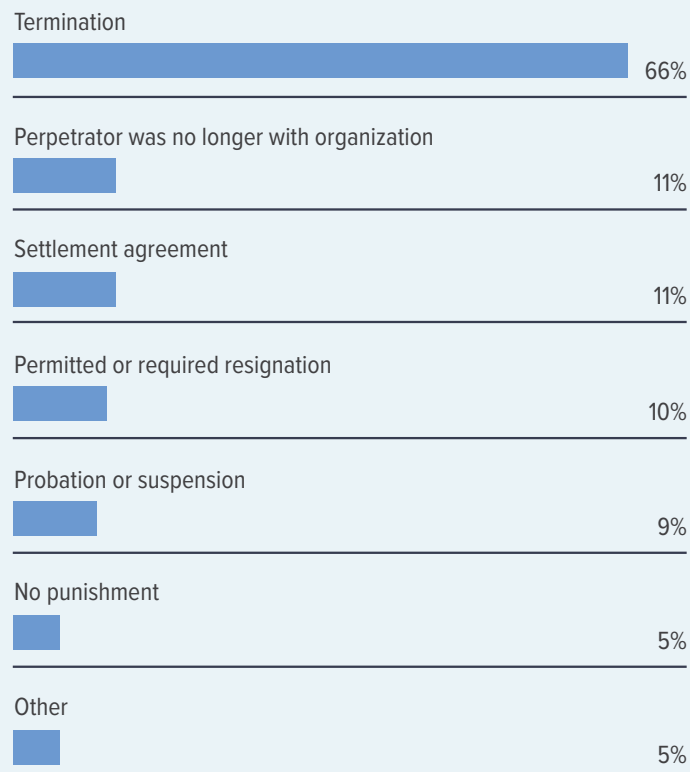


We asked respondents to identify what consequences fraud perpetrators faced after they had been caught, whether internal, through prosecution, or through civil litigation. This information can be used by organizations to identify the most common results that other victim organizations have experienced. It also can help inform victims about the likelihood of success in pursuing justice or recovery of stolen assets.

Internal Action Taken Against Perpetrator

Once an internal fraud is substantiated, the victim organization must decide what to do with the perpetrator. Termination was by far the most common response to fraud, but one-third of cases ended with a different internal result. Many cases resulted in relatively light punishments, where the perpetrator had already left the organization (11%), resigned (10%), or received no punishment at all (5%).

FIG. 44 How do victim organizations punish fraud perpetrators?



Response to Fraud

Organizations can respond to fraud internally, through civil litigation, and by referring the case to law enforcement. These are the results of such efforts.

INTERNAL PUNISHMENT

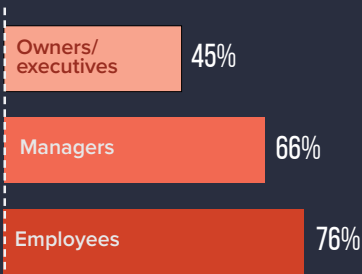
80% OF PERPETRATORS



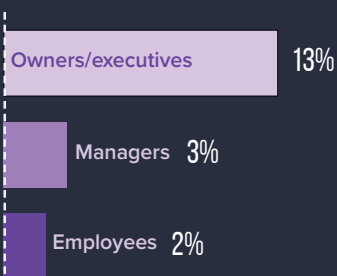
RECEIVED SOME PUNISHMENT

Owners/executives are less likely to receive punishment

TERMINATION for FRAUD



Received NO PUNISHMENT

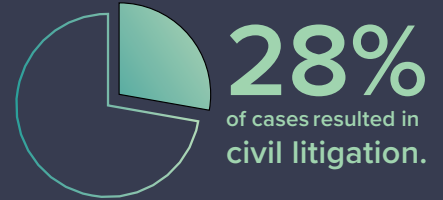


CIVIL LITIGATION

MEDIAN LOSS resulting in CIVIL LITIGATION



\$400,000



Of these cases:

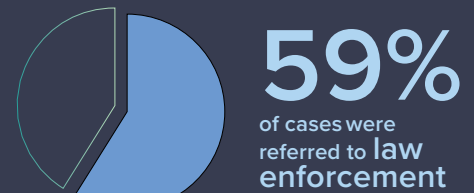
- 41% resulted in judgment for the victim
- 36% settled
- 21% resulted in judgment for the perpetrator

CRIMINAL PROSECUTION

MEDIAN LOSS in cases referred to LAW ENFORCEMENT



\$200,000



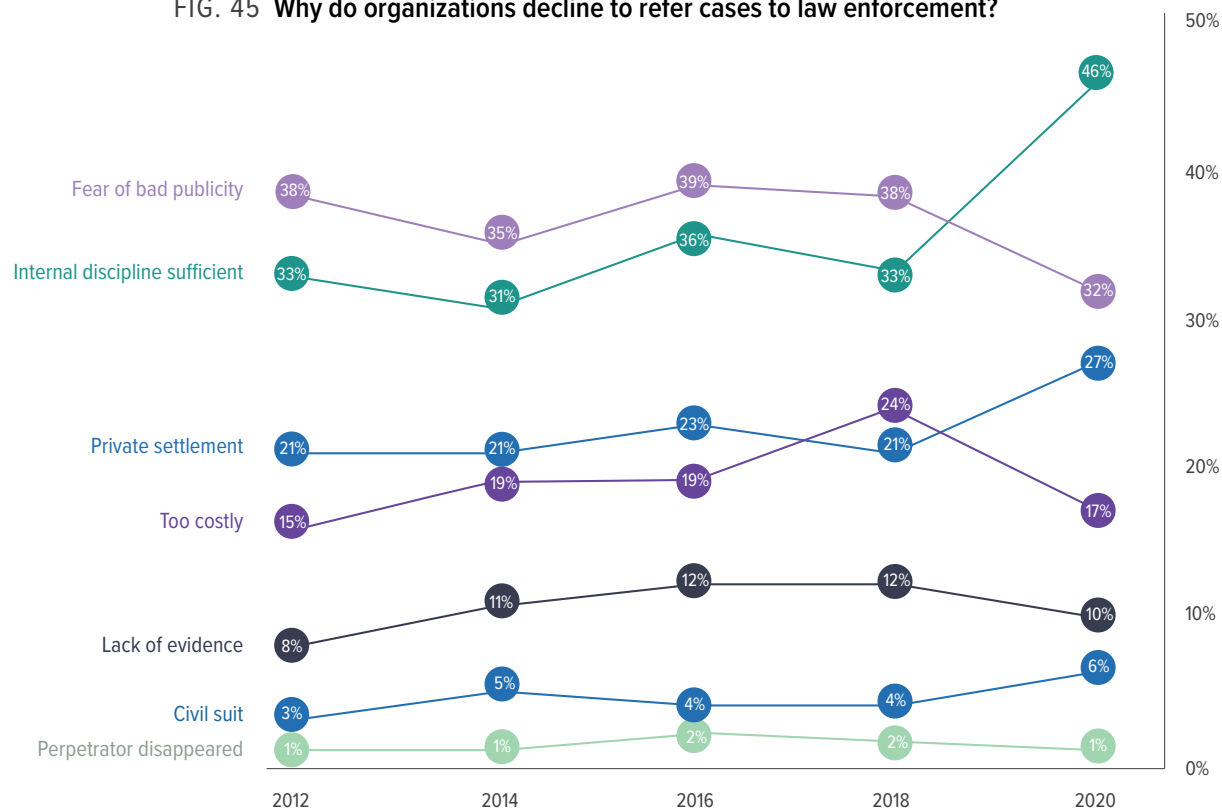
Of these cases:

- 56% pleaded guilty/no contest
- 23% were convicted at trial
- 12% were declined prosecution
- 2% were acquitted

Reasons for Not Referring Cases to Law Enforcement

As seen on the Response to Fraud infographic on page 55, many victims never report their cases to law enforcement. We asked respondents in those cases to tell us why. Figure 45 shows a timeline comparison of victims' reasons for non-referral; this year's report is the first time that fear of bad publicity was not the primary reason. Instead, 46% of victims determined that their internal discipline was sufficient. Coupled with the findings that private settlements and civil suits have also risen, it appears there may be a general trend of organizations seeking to resolve fraud cases internally or privately rather than through the criminal justice system.

FIG. 45 Why do organizations decline to refer cases to law enforcement?



Recovering Fraud Losses

For many victim organizations, recovering losses is the key concern once fraud has been detected. However, most organizations (54%) in our study did not recover any of their losses. We also analyzed whether there were regional differences in victim organizations' success in recovering some or all fraud losses, and our findings suggest that recovering lost assets might be more challenging in some regions than others. As shown in Figure 46, Eastern Europe and Western/Central Asia was the most difficult region for recovering fraud losses, with 61% of organizations recovering nothing, followed closely by Latin America and the Caribbean (60%). Western Europe and Southern Asia were the only regions where more than half of victims made at least some recovery of fraud losses.



FIG. 46 How does the recovery of fraud losses vary by region?

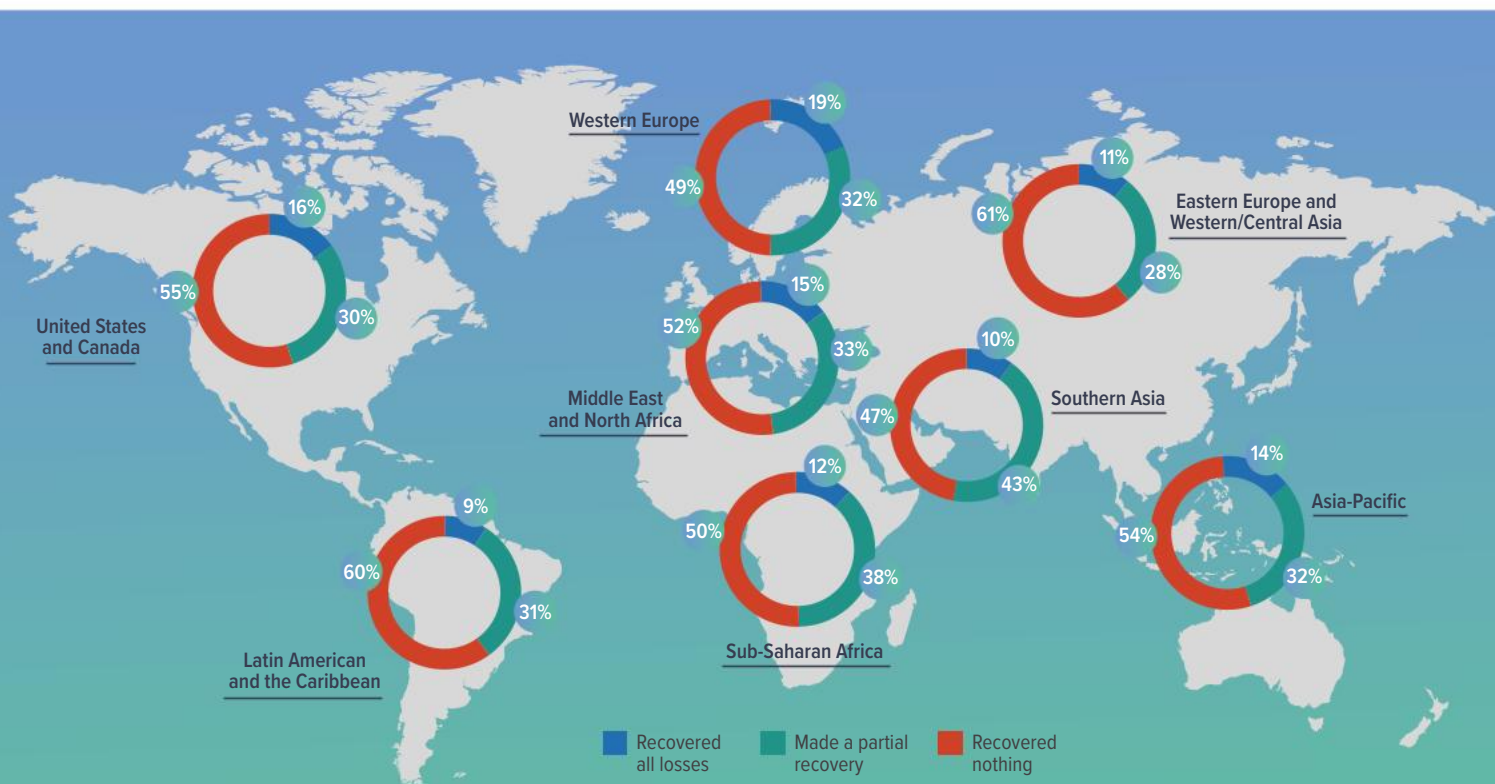
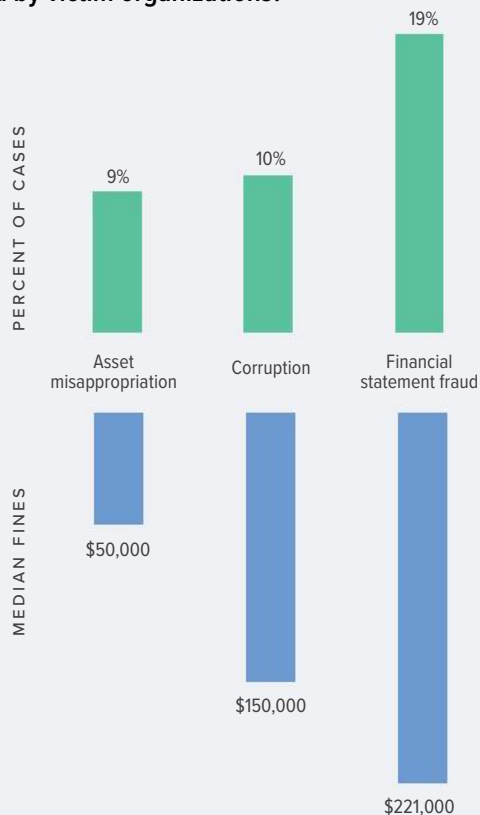


FIG. 47 How does the type of scheme relate to fines incurred by victim organizations?



Fines Against Victim Organizations

Beyond losses directly caused by occupational fraud, some victims also receive fines from authorities resulting from the fraud, such as when the victim failed to take sufficient steps to prevent bribery or violated financial reporting requirements. Our data indicates that financial statement fraud schemes are the most likely to result in a fine against the victim organization (19% of cases); these cases also result in the largest median fine (USD 221,000). While fines resulting from corruption and asset misappropriation schemes occurred at a similar rate (10% and 9%, respectively), the median fine in corruption cases was three times higher (USD 150,000).



METHODOLOGY

The 2020 *Report to the Nations* is based on the results of the 2019 *Global Fraud Survey*, an online survey opened to 51,608 Certified Fraud Examiners (CFEs) from July 2019 to September 2019. As part of the survey, respondents were asked to provide a narrative description of the single largest occupational fraud case they had investigated since January 2018. Additionally, after completing the survey the first time, respondents were provided the option to submit information about a second case.

Respondents were then presented with 77 questions regarding the particular details of the fraud case, including information about the perpetrator, the victim organization, and the methods of fraud employed, as well as fraud trends in general. (Respondents were not asked to identify the perpetrator or the victim.) We received 7,516 total responses to the survey, 2,504 of which were usable for purposes of this report. The data contained herein is based solely on the information provided in these 2,504 survey responses.

Cases submitted were required to meet the following four criteria:

1. **The case** must have involved occupational fraud (defined as fraud committed by a person against the organization for which they work).
2. **The investigation** must have occurred between January 2018 and the time of survey participation.
3. **The investigation** must have been complete at the time of survey participation.
4. **The respondent** must have been reasonably sure the perpetrator(s) was (were) identified.

Analysis Methodology

Percentages

In calculating the percentages discussed throughout this report, we used the total number of complete and relevant responses for the question(s) being analyzed. Specifically, we excluded any blank responses or instances where the participant indicated that they did not know the answer to a question. Consequently, the total number of cases included in each analysis varies.

In addition, several survey questions allowed participants to select more than one answer. Therefore, the sum of percentages in many figures throughout the report exceeds 100%. The sum of percentages in other figures might not be exactly 100% (i.e., it might be 99% or 101%) due to rounding of individual category data.



Loss Amounts

Unless otherwise indicated, all loss amounts discussed throughout the report are calculated using median loss rather than mean, or average, loss. Using median loss provides a more conservative—and we believe more accurate—picture of the typical impact of occupational fraud schemes. The statistical appendix to this report (see pages 78-81) provides a more holistic view of the losses in our study, reflecting quartiles and average loss amounts for numerous categories explored throughout the report.

To normalize the loss amounts reported to us and ensure that cases with extremely large losses were not identifiable, all average and total loss amounts reported were calculated using loss data that was winsorized at 5% (i.e., assigned all cases in the top 2.5% and bottom 2.5% the same value as the 97.5th percentile and 2.5th percentile, respectively). Additionally, we excluded median and average loss calculations for categories for which there were fewer than ten responses.

Because the direct losses caused by financial statement frauds are typically spread among numerous stakeholders, obtaining an accurate estimate for this amount is extremely difficult. Consequently, for schemes involving financial statement fraud, we asked survey participants to provide the gross amount of the financial statement misstatement (over- or under-statement) involved in the scheme. All losses reported for financial statement frauds throughout this report are based on those reported amounts.

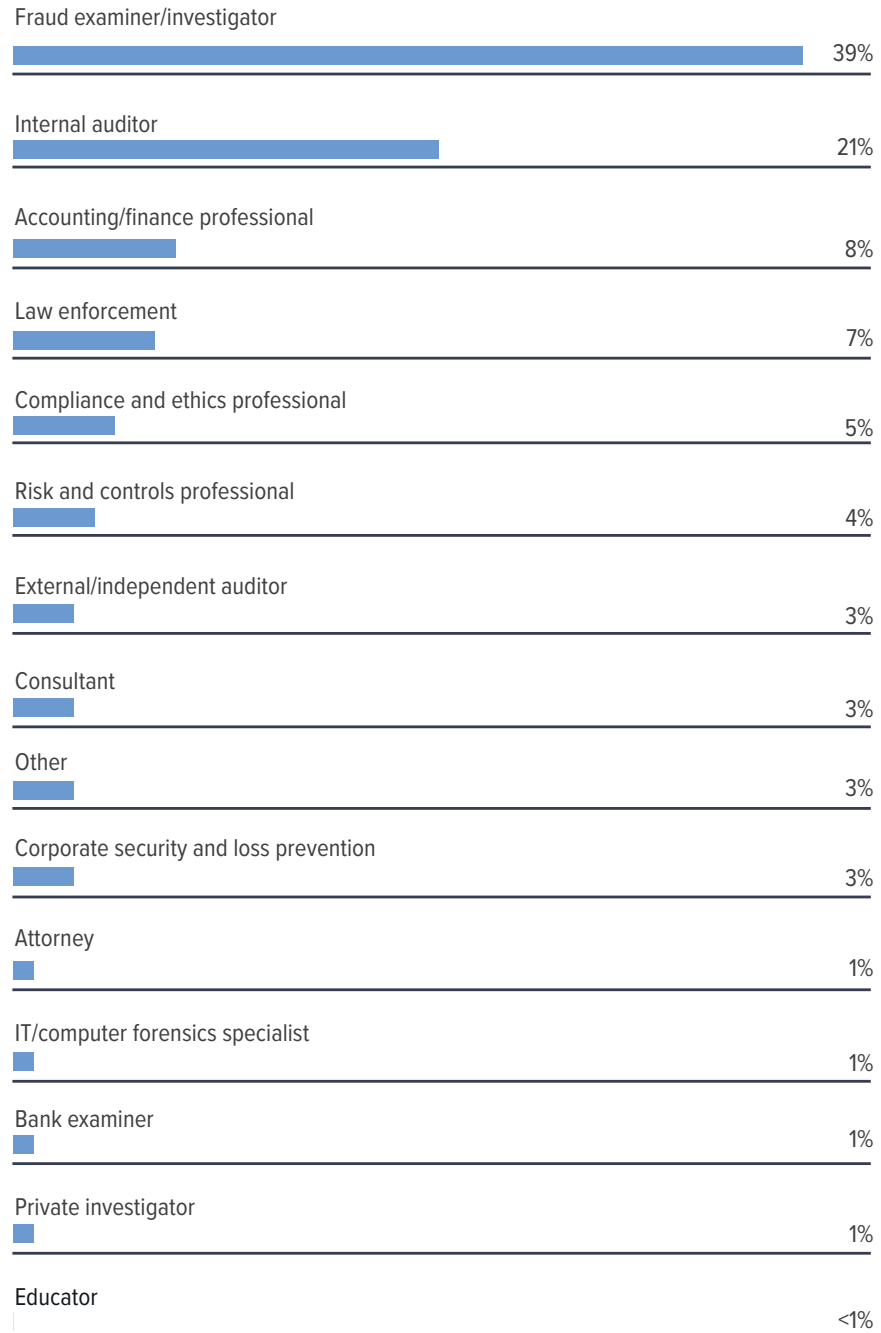
Survey Participants

To provide context for the survey responses and to understand who investigates cases of occupational fraud, we asked respondents to provide certain information about their professional experience and qualifications.

Primary Occupation

As noted in Figure 48, 39% of survey respondents indicated that their primary occupation is as a fraud examiner/investigator, followed by 21% who indicated they are internal auditors.

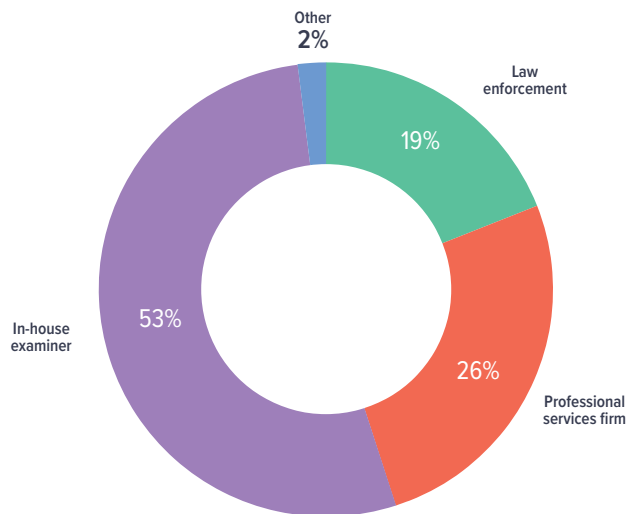
FIG. 48 What was the primary occupation of survey participants?



Nature of Fraud Examination Role

More than half of the survey respondents work in-house and conduct fraud-related engagements on behalf of a single company or agency. In contrast, 26% work for a professional services firm that conducts fraud-related engagements on behalf of client organizations, and 19% work in law enforcement and conduct fraud investigations of other parties under their agency's authority.

FIG. 49 What was the professional role of the survey participants?



Professional Experience

The CFEs who participated in our survey had a median 11 years of fraud examination experience, with 30% having more than 15 years of experience (see Figure 50). Additionally, as Figure 51 shows, one-quarter of survey participants have investigated more than 20 cases of fraud during the last two years, while 42% investigated five or fewer cases during that period.

FIG. 50 How much fraud examination experience did survey participants have?

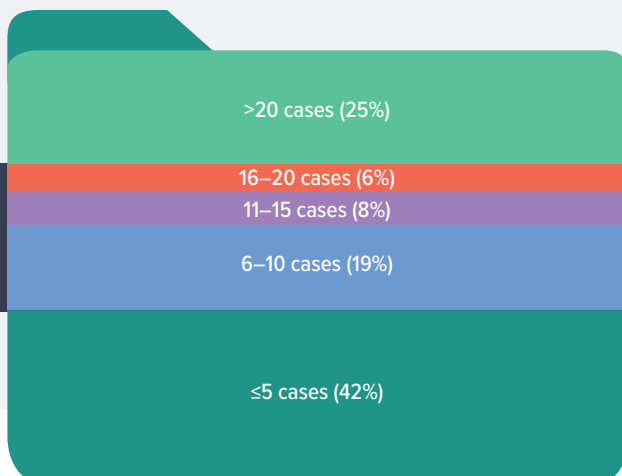


FIG. 51 How many fraud cases have survey participants investigated in the past two years?

REGIONAL FOCUS

ASIA-PACIFIC



FIG. 52 What are the most common occupational fraud schemes in the Asia-Pacific region?



FIG. 53 How is occupational fraud initially detected in the Asia-Pacific region?

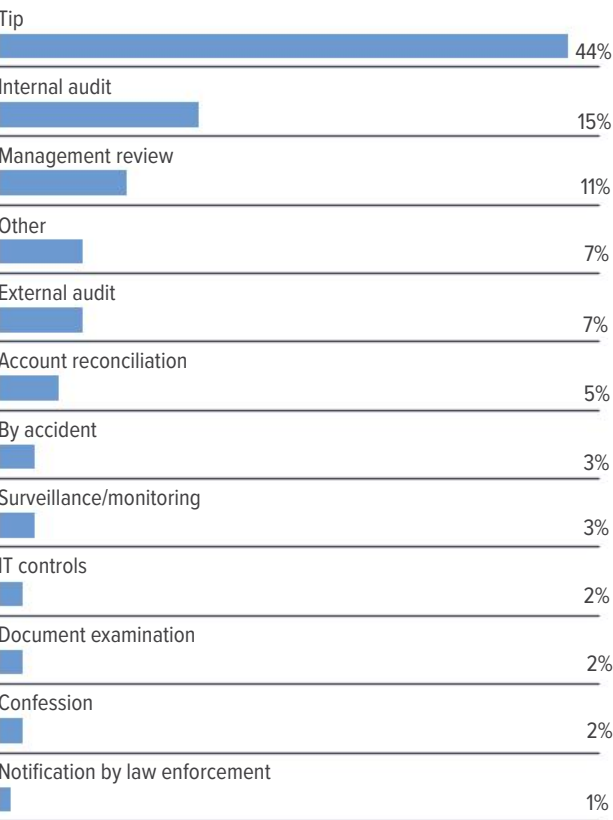


FIG. 54 What anti-fraud controls are the most common in the Asia-Pacific region?

Control	Percent of cases
External audit of financial statements	93%
Code of conduct	88%
Internal audit department	84%
Management certification of financial statements	80%
Management review	78%
External audit of internal controls over financial reporting	75%
Hotline	72%
Independent audit committee	71%
Fraud training for employees	64%
Fraud training for managers/executives	62%
Anti-fraud policy	59%
Employee support programs	50%
Dedicated fraud department, function, or team	50%
Formal fraud risk assessments	45%
Proactive data monitoring/analysis	43%
Surprise audits	36%
Job rotation/mandatory vacation	32%
Rewards for whistleblowers	15%

FIG. 55 How does the perpetrator’s level of authority relate to occupational fraud in the Asia-Pacific region?

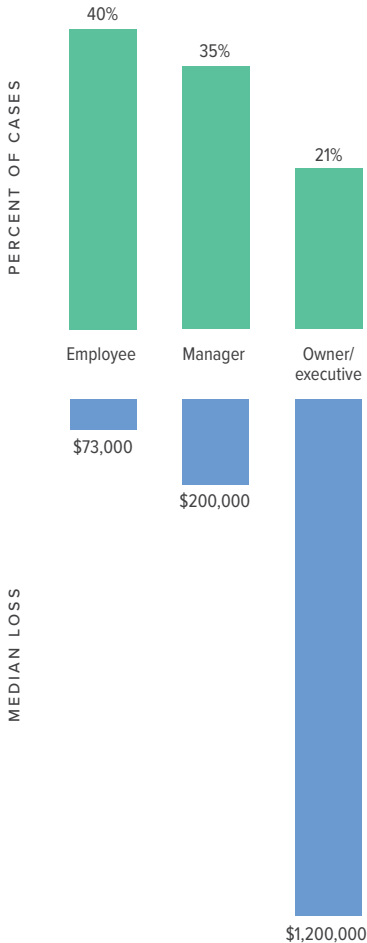
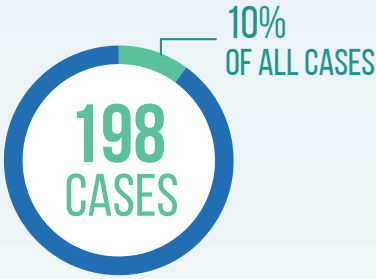


FIG. 56 Cases by country in the Asia-Pacific region

Country	Number of cases
Australia	29
China	33
Hong Kong	11
Indonesia	36
Japan	8
Laos	1
Macau	1
Malaysia	19
Myanmar (Burma)	1
New Zealand	3
Philippines	24
Singapore	17
South Korea	5
Taiwan	2
Thailand	6
Vietnam	2
Total cases:	198

MEDIAN LOSS:
USD 195,000



REGIONAL FOCUS

EASTERN EUROPE AND WESTERN/CENTRAL ASIA



FIG. 57 What are the most common occupational fraud schemes in Eastern Europe and Western/Central Asia?

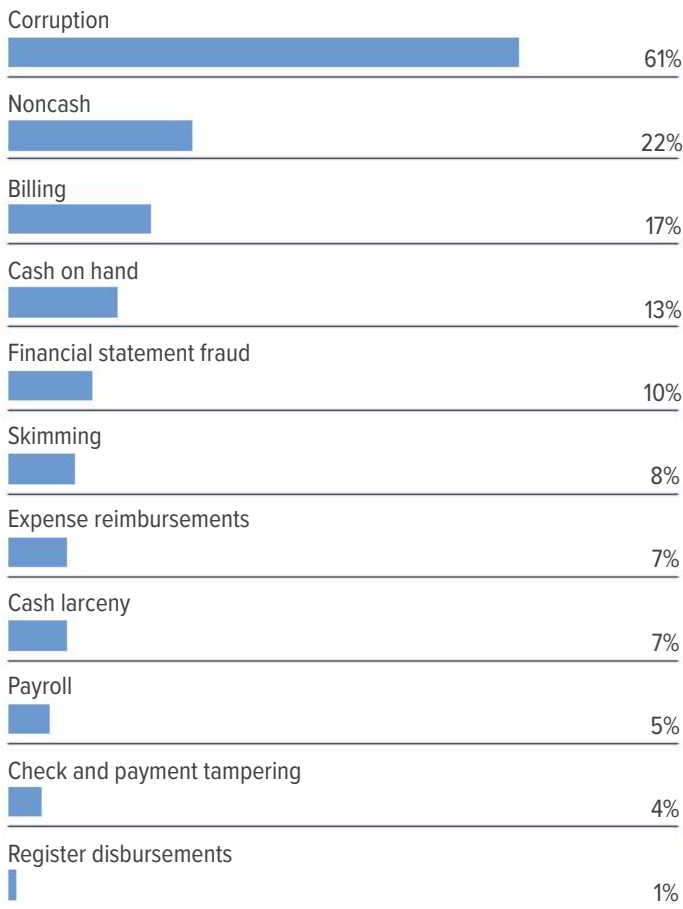


FIG. 58 How is occupational fraud initially detected in Eastern Europe and Western/Central Asia?

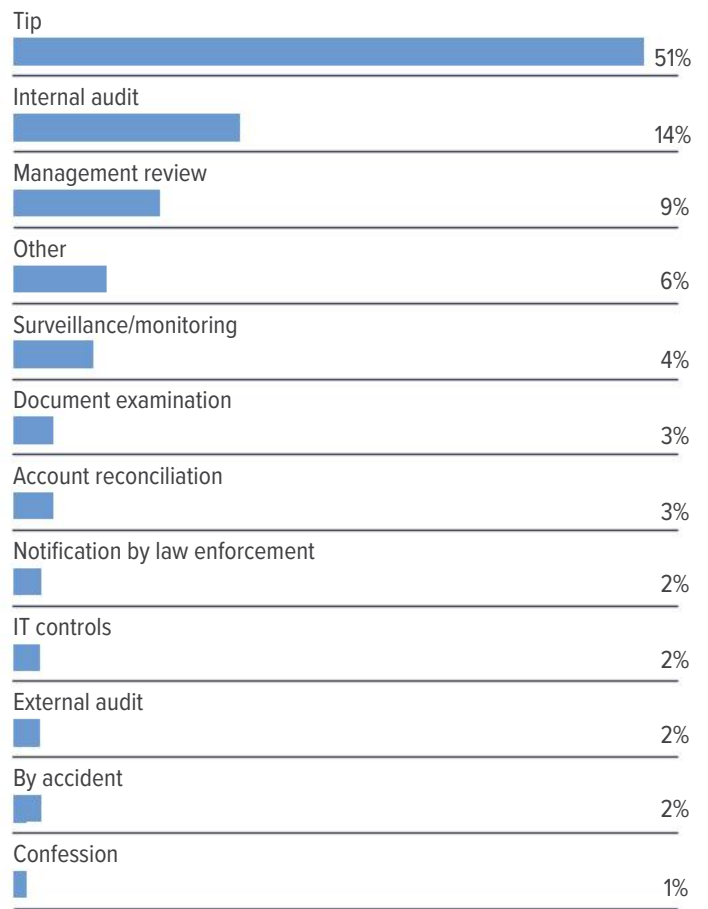


FIG. 59 What anti-fraud controls are the most common in Eastern Europe and Western/Central Asia?

Control	Percent of cases
External audit of financial statements	89%
Code of conduct	87%
Management review	84%
Internal audit department	80%
Management certification of financial statements	78%
Hotline	76%
Anti-fraud policy	73%
Independent audit committee	72%
External audit of internal controls over financial reporting	71%
Fraud training for employees	67%
Fraud training for managers/executives	66%
Dedicated fraud department, function, or team	58%
Formal fraud risk assessments	51%
Surprise audits	45%
Proactive data monitoring/analysis	42%
Employee support programs	29%
Job rotation/mandatory vacation	29%
Rewards for whistleblowers	9%

FIG. 60 How does the perpetrator's level of authority relate to occupational fraud in Eastern Europe and Western/Central Asia?

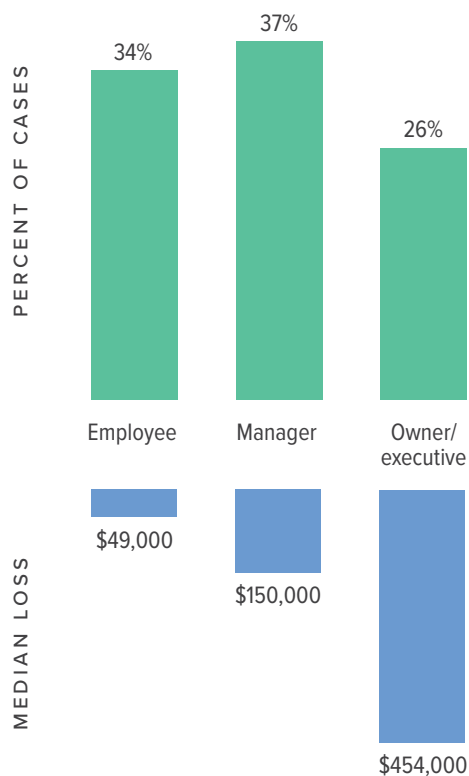
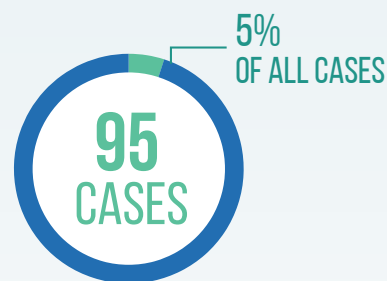


FIG. 61 Cases by country in Eastern Europe and Western/Central Asia

Country	Number of cases
Albania	1
Azerbaijan	1
Bosnia and Herzegovina	1
Bulgaria	2
Czech Republic	5
Estonia	1
Georgia	1
Hungary	5
Kazakhstan	4
Kosovo	2
Lithuania	1
Moldova	1
North Macedonia	2
Poland	6
Romania	9
Russia	13
Serbia	14
Slovakia	3
Slovenia	4
Tajikistan	1
Turkey	13
Ukraine	4
Uzbekistan	1
Total cases:	95

MEDIAN LOSS:
USD 133,000



REGIONAL FOCUS

LATIN AMERICA AND THE CARIBBEAN



FIG. 62 What are the most common occupational fraud schemes in Latin America and the Caribbean?

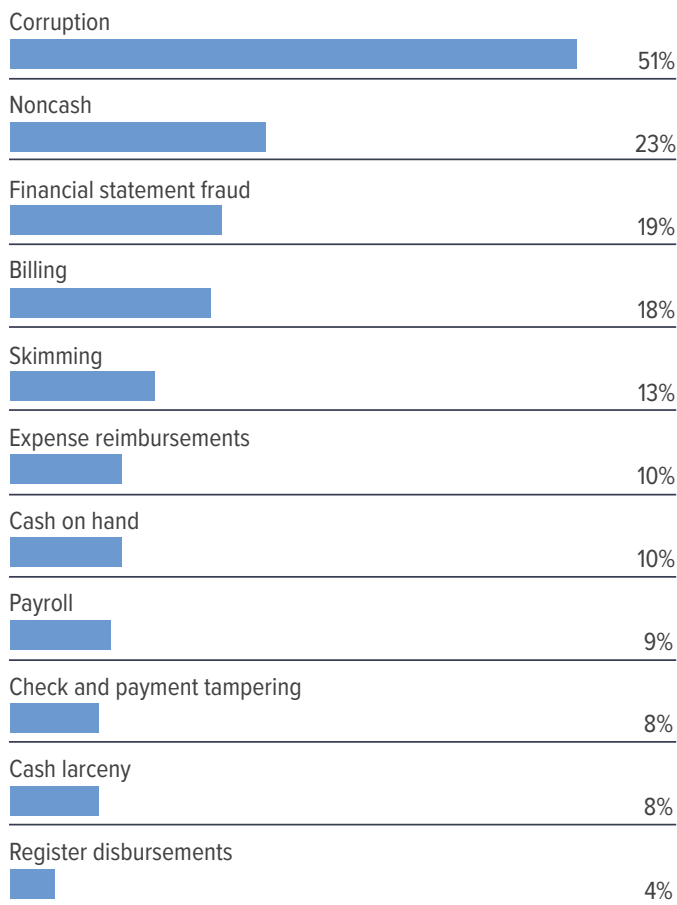


FIG. 63 How is occupational fraud initially detected in Latin America and the Caribbean?

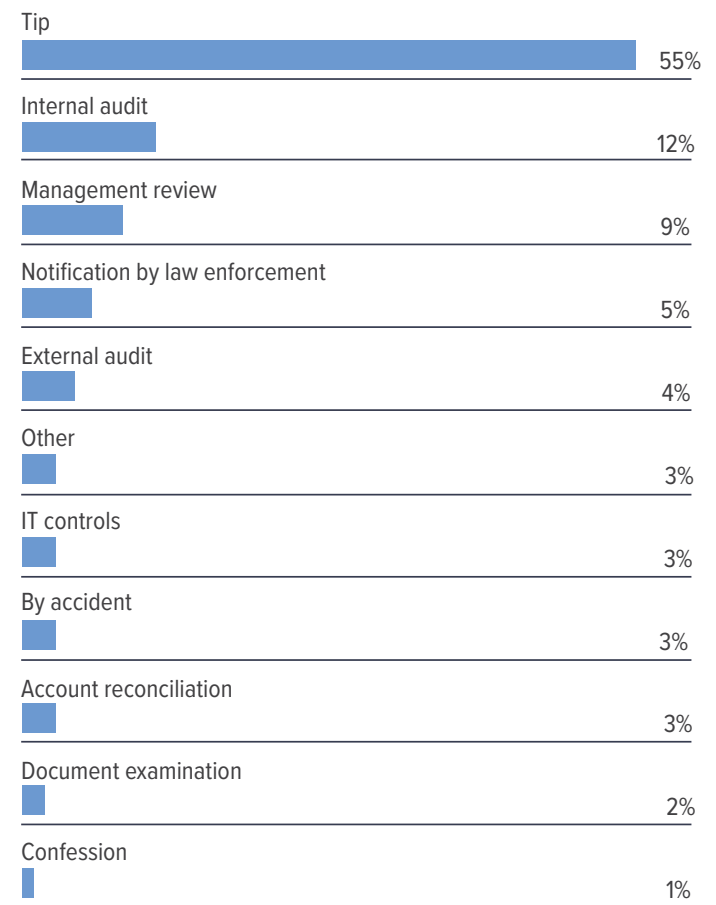


FIG. 64 What anti-fraud controls are the most common in Latin America and the Caribbean?

Control	Percent of cases
External audit of financial statements	88%
Code of conduct	88%
Internal audit department	81%
Management certification of financial statements	72%
Hotline	72%
External audit of internal controls over financial reporting	71%
Independent audit committee	67%
Management review	65%
Fraud training for employees	58%
Anti-fraud policy	56%
Fraud training for managers/executives	54%
Dedicated fraud department, function, or team	46%
Employee support programs	45%
Formal fraud risk assessments	44%
Surprise audits	40%
Proactive data monitoring/analysis	26%
Job rotation/mandatory vacation	16%
Rewards for whistleblowers	9%

FIG. 65 How does the perpetrator's level of authority relate to occupational fraud in Latin America and the Caribbean?

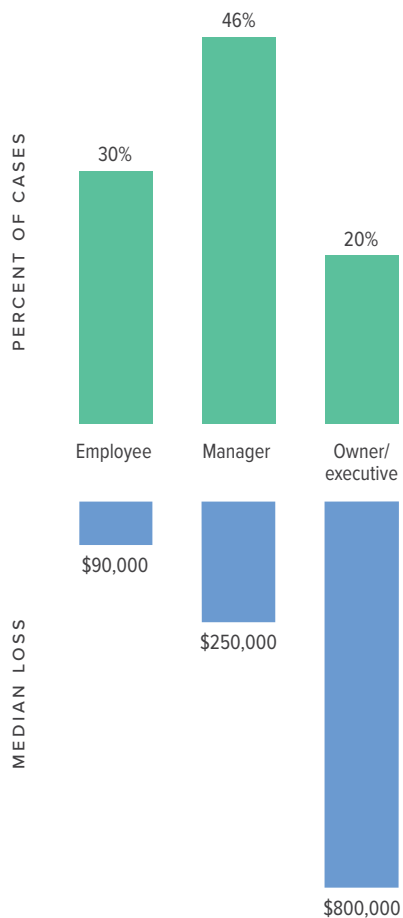


FIG. 66 Cases by country in Latin America and the Caribbean

Country	Number of cases
Argentina	10
Bahamas	5
Barbados	1
Brazil	22
Chile	2
Colombia	10
Costa Rica	4
Curaçao	1
Dominican Republic	1
Ecuador	1
Grenada	2
Haiti	1
Jamaica	3
Mexico	23
Peru	6
Saint Vincent and the Grenadines	1
Suriname	1
Trinidad and Tobago	5
Venezuela	2
Total cases:	101

MEDIAN LOSS:
USD 200,000



REGIONAL FOCUS

MIDDLE EAST AND NORTH AFRICA



FIG. 67 What are the most common occupational fraud schemes in the Middle East and North Africa?

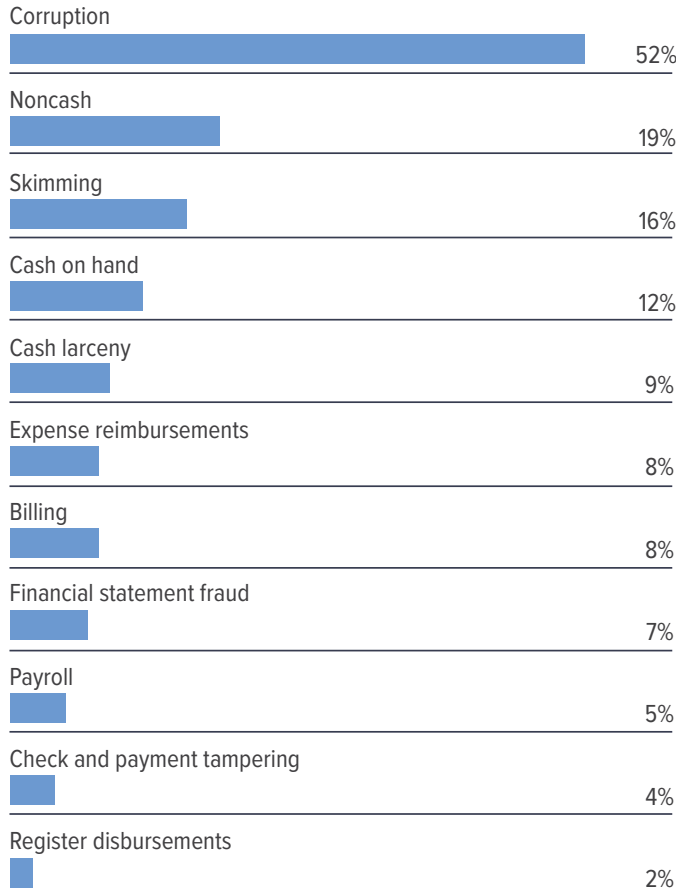


FIG. 68 How is occupational fraud initially detected in the Middle East and North Africa?

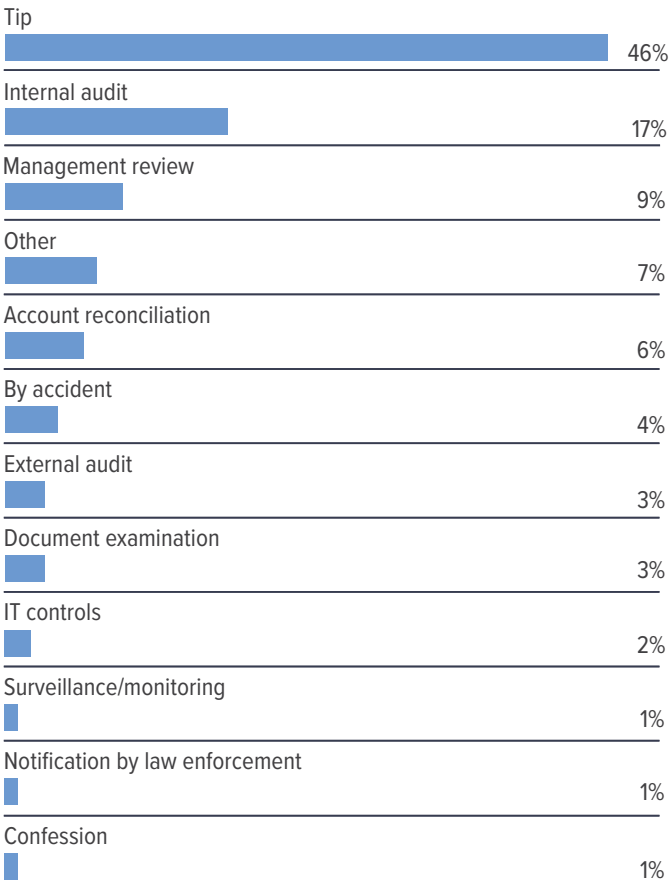


FIG. 69 What anti-fraud controls are the most common in the Middle East and North Africa?

Control	Percent of cases
External audit of financial statements	88%
Internal audit department	87%
Code of conduct	84%
Management certification of financial statements	83%
External audit of internal controls over financial reporting	74%
Management review	72%
Independent audit committee	72%
Hotline	72%
Fraud training for managers/executives	58%
Surprise audits	55%
Anti-fraud policy	55%
Fraud training for employees	55%
Dedicated fraud department, function, or team	46%
Formal fraud risk assessments	45%
Proactive data monitoring/analysis	41%
Employee support programs	34%
Job rotation/mandatory vacation	33%
Rewards for whistleblowers	17%

FIG. 70 How does the perpetrator’s level of authority relate to occupational fraud in the Middle East and North Africa?

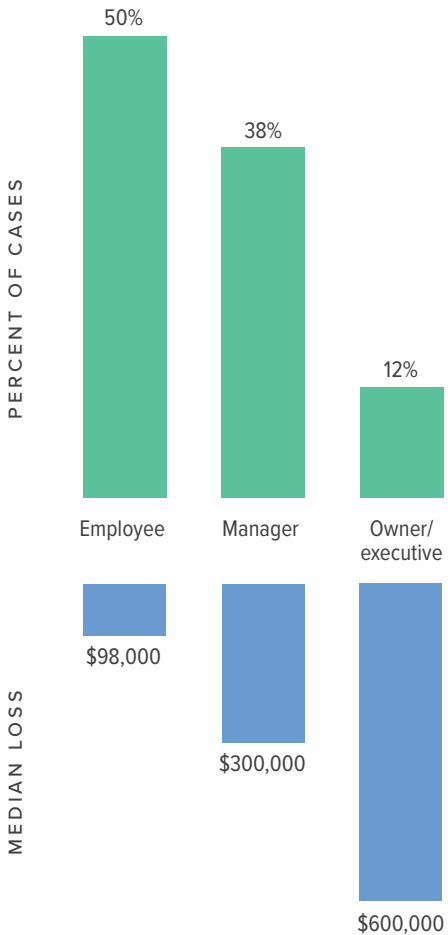
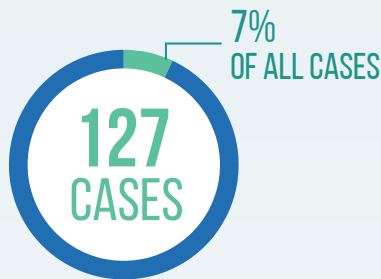


FIG. 71 Cases by country in the Middle East and North Africa

Country	Number of cases
Bahrain	5
Cyprus	11
Egypt	6
Iraq	3
Israel	1
Jordan	4
Kuwait	9
Lebanon	4
Morocco	3
Oman	5
Qatar	5
Saudi Arabia	23
Tunisia	2
United Arab Emirates	46
Total cases:	127

**MEDIAN LOSS:
USD 100,000**



REGIONAL FOCUS

SOUTHERN ASIA



FIG. 72 What are the most common occupational fraud schemes in Southern Asia?



FIG. 73 How is occupational fraud initially detected in Southern Asia?

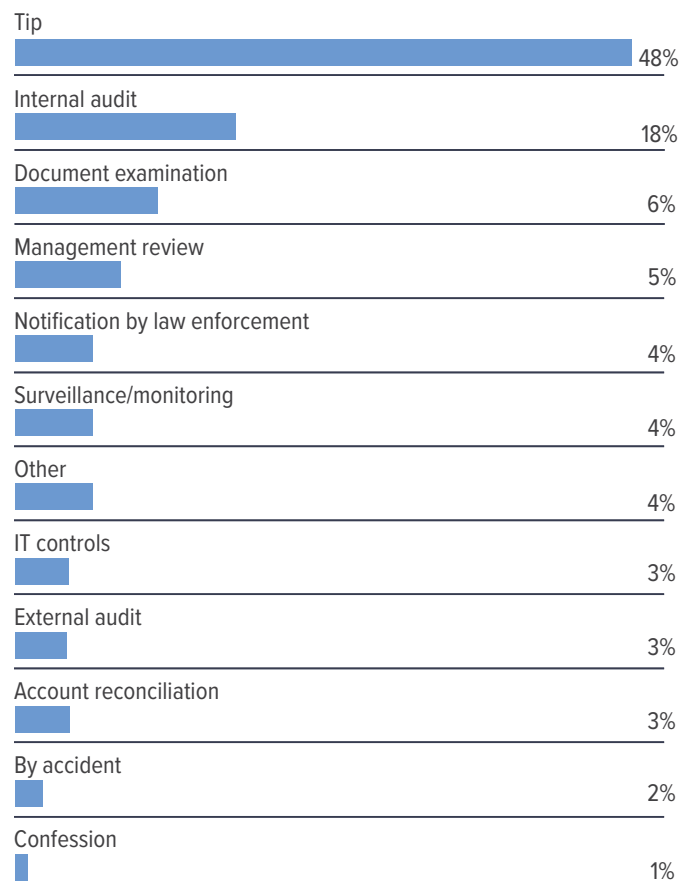


FIG. 74 What anti-fraud controls are the most common in Southern Asia?

Control	Percent of cases
External audit of financial statements	88%
Management certification of financial statements	86%
Internal audit department	86%
Code of conduct	81%
External audit of internal controls over financial reporting	76%
Management review	72%
Independent audit committee	70%
Hotline	66%
Anti-fraud policy	64%
Fraud training for managers/executives	55%
Fraud training for employees	51%
Employee support programs	43%
Surprise audits	43%
Dedicated fraud department, function, or team	36%
Formal fraud risk assessments	35%
Proactive data monitoring/analysis	34%
Job rotation/mandatory vacation	29%
Rewards for whistleblowers	20%

FIG. 75 How does the perpetrator's level of authority relate to occupational fraud in Southern Asia?

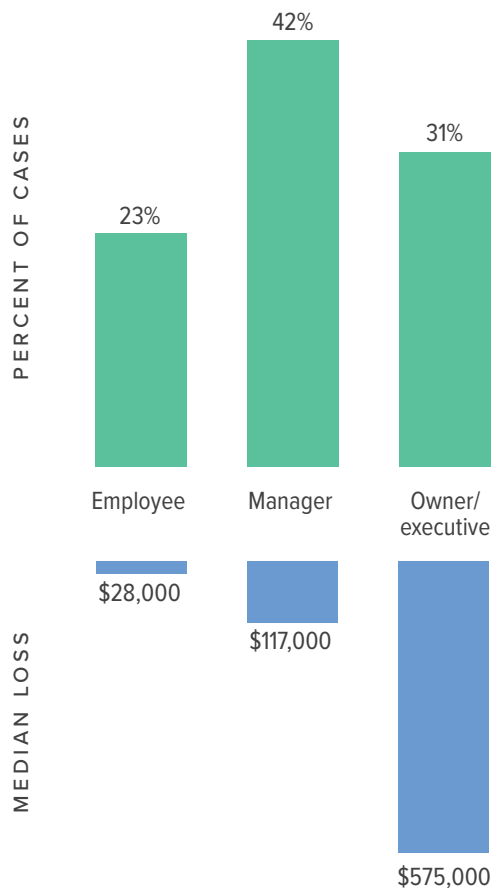
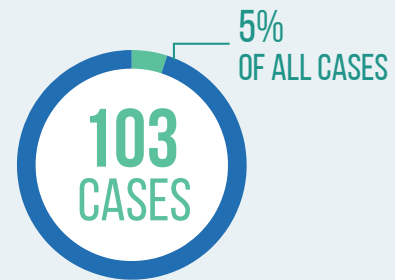


FIG. 76 Cases by country in Southern Asia

Country	Number of cases
Afghanistan	3
Bangladesh	4
India	77
Nepal	1
Pakistan	15
Sri Lanka	3
Total cases:	103

MEDIAN LOSS:
USD 117,000



REGIONAL FOCUS

SUB-SAHARAN AFRICA



FIG. 77 What are the most common occupational fraud schemes in Sub-Saharan Africa?

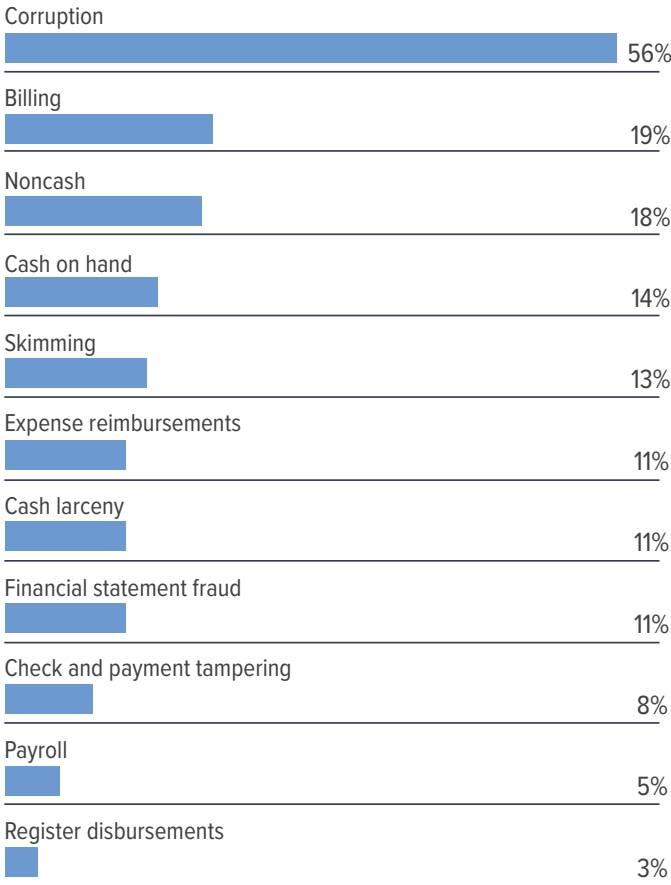


FIG. 78 How is occupational fraud initially detected in Sub-Saharan Africa?

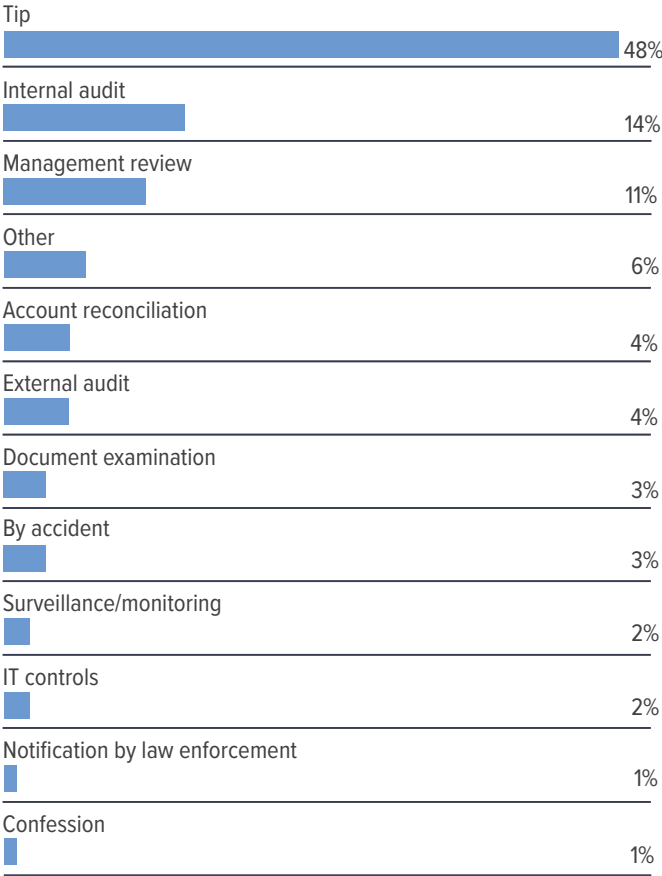


FIG. 79 What anti-fraud controls are the most common in Sub-Saharan Africa?

Control	Percent of cases
External audit of financial statements	92%
Code of conduct	86%
Internal audit department	85%
Management certification of financial statements	82%
External audit of internal controls over financial reporting	79%
Management review	70%
Hotline	69%
Independent audit committee	69%
Anti-fraud policy	61%
Fraud training for employees	57%
Fraud training for managers/executives	54%
Dedicated fraud department, function, or team	49%
Employee support programs	49%
Surprise audits	48%
Formal fraud risk assessments	44%
Proactive data monitoring/analysis	31%
Job rotation/mandatory vacation	28%
Rewards for whistleblowers	21%

FIG. 80 How does the perpetrator's level of authority relate to occupational fraud in Sub-Saharan Africa?

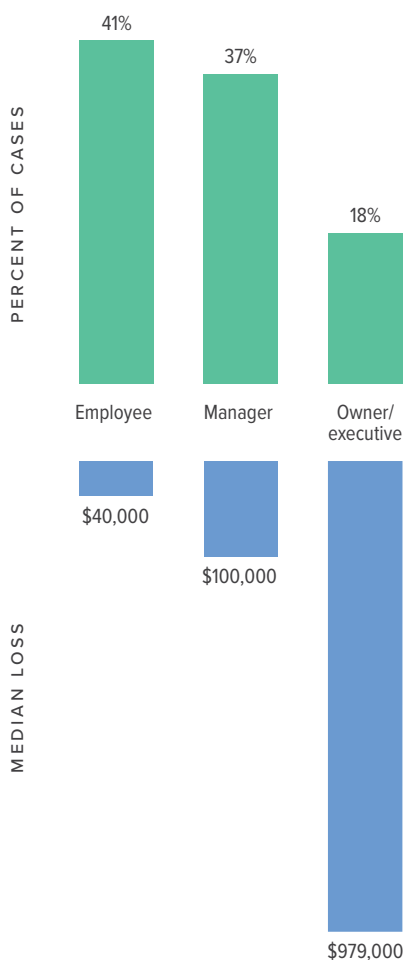
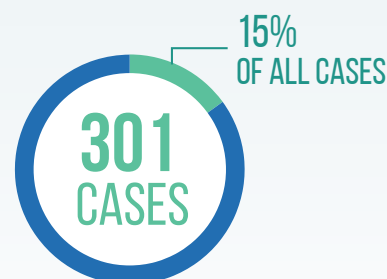


FIG. 81 Cases by country in Sub-Saharan Africa

Country	Number of cases
Angola	1
Benin	1
Botswana	5
Burundi	1
Cameroon	4
Central African Republic	2
Chad	1
Cote d'Ivoire	4
Democratic Republic of the Congo	5
Ethiopia	2
Gabon	1
Ghana	12
Kenya	53
Lesotho	2
Liberia	8
Madagascar	4
Malawi	10
Mauritius	6
Mozambique	3
Namibia	3
Nigeria	49
Rwanda	3
Senegal	2
South Africa	77
Sudan	2
Swaziland	1
Tanzania	7
Togo	4
Uganda	16
Zambia	3
Zimbabwe	9

Total cases: **301**

MEDIAN LOSS:
USD 100,000



REGIONAL FOCUS

UNITED STATES AND CANADA



FIG. 82 What are the most common occupational fraud schemes in the United States and Canada?

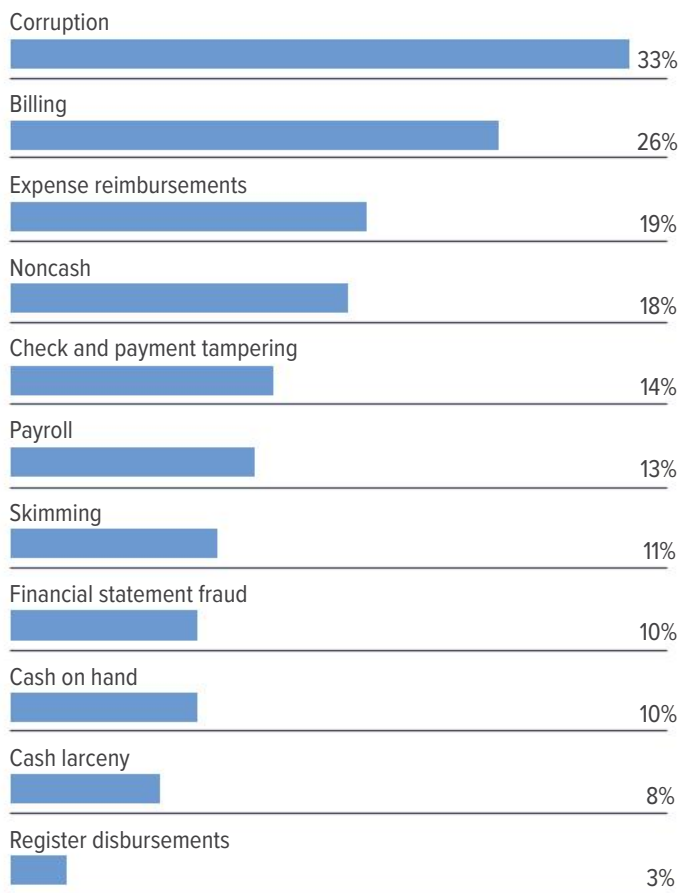


FIG. 83 How is occupational fraud initially detected in the United States and Canada?

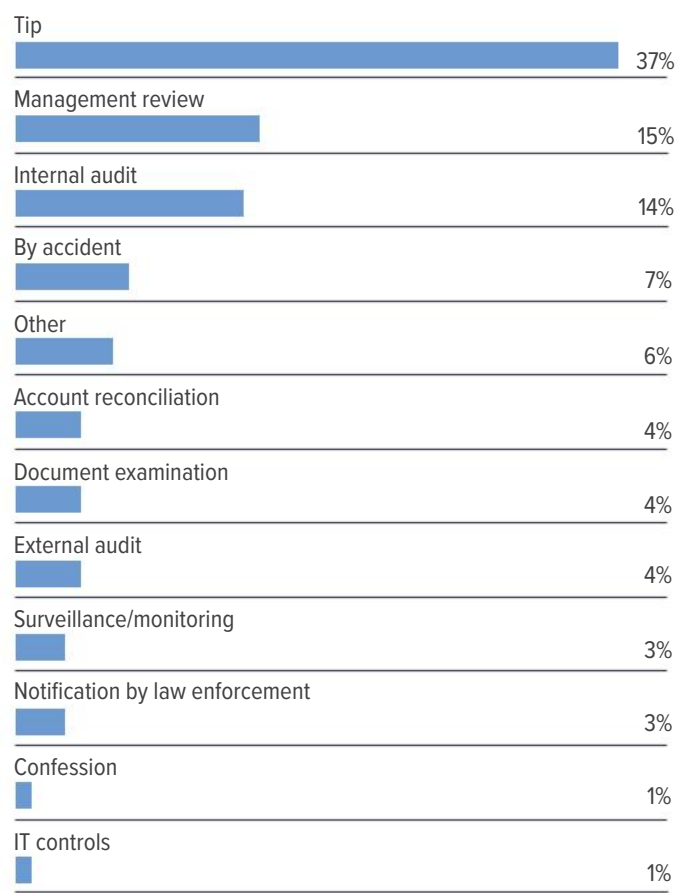


FIG. 84 What anti-fraud controls are the most common in the United States and Canada?

Control	Percent of cases
Code of conduct	80%
External audit of financial statements	72%
Internal audit department	71%
Employee support programs	71%
Management review	68%
Management certification of financial statements	67%
Independent audit committee	61%
Hotline	57%
External audit of internal controls over financial reporting	54%
Fraud training for managers/executives	51%
Fraud training for employees	51%
Anti-fraud policy	44%
Proactive data monitoring/analysis	38%
Formal fraud risk assessments	35%
Dedicated fraud department, function, or team	33%
Surprise audits	28%
Job rotation/mandatory vacation	15%
Rewards for whistleblowers	10%

FIG. 85 How does the perpetrator's level of authority relate to occupational fraud in the United States and Canada?

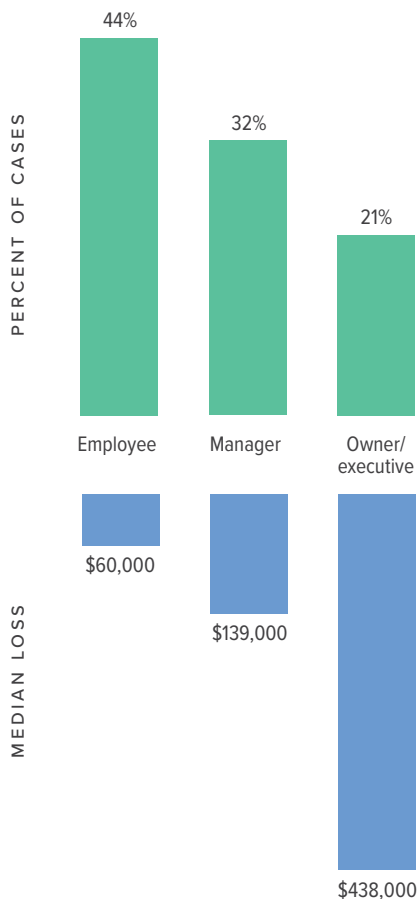
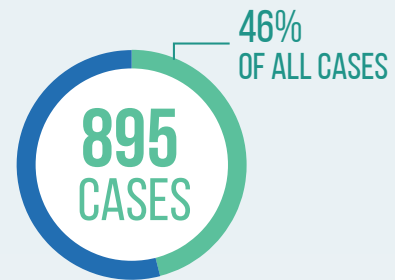


FIG. 86 Cases by country in the United States and Canada

Country	Number of cases
Canada	66
United States	829
Total cases:	895

MEDIAN LOSS:
USD 120,000



REGIONAL FOCUS

WESTERN EUROPE



FIG. 87 What are the most common occupational fraud schemes in Western Europe?

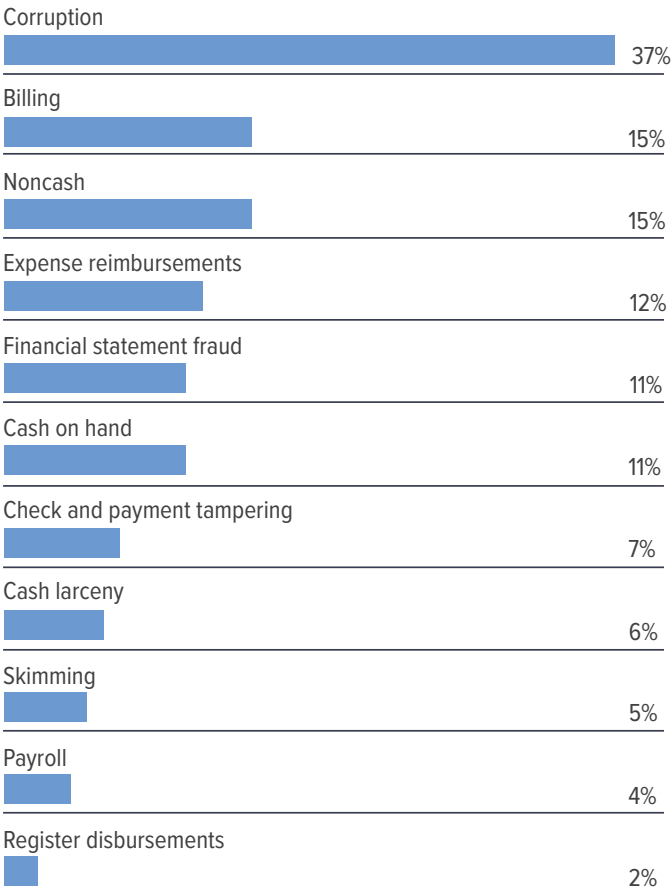


FIG. 88 How is occupational fraud initially detected in Western Europe?

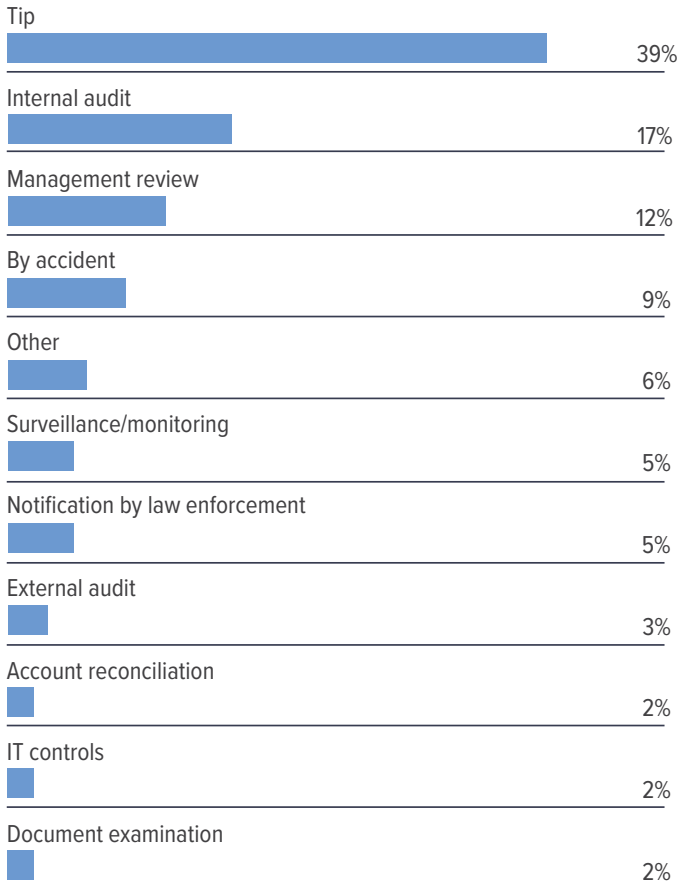


FIG. 89 What anti-fraud controls are the most common in Western Europe?

Control	Percent of cases
External audit of financial statements	89%
Code of conduct	87%
Management certification of financial statements	81%
Internal audit department	80%
External audit of internal controls over financial reporting	79%
Management review	74%
Independent audit committee	70%
Hotline	65%
Anti-fraud policy	65%
Fraud training for managers/executives	62%
Fraud training for employees	61%
Employee support programs	57%
Formal fraud risk assessments	53%
Dedicated fraud department, function, or team	51%
Proactive data monitoring/analysis	44%
Surprise audits	43%
Job rotation/mandatory vacation	25%
Rewards for whistleblowers	6%

FIG. 90 How does the perpetrator’s level of authority relate to occupational fraud in Western Europe?

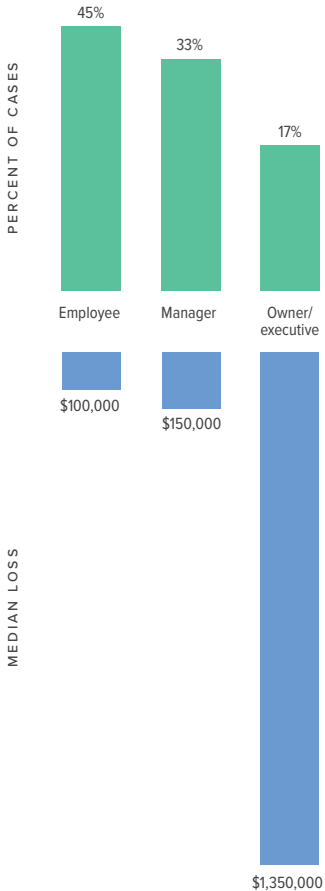
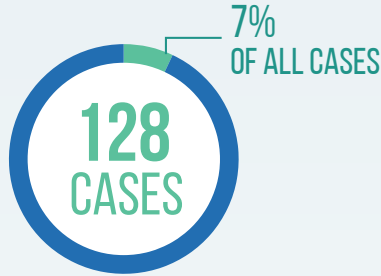


FIG. 91 Cases by country in Western Europe

Country	Number of cases
Austria	2
Belgium	3
Denmark	2
Finland	3
France	6
Germany	12
Greece	21
Ireland	2
Italy	10
Luxembourg	1
Netherlands	12
Spain	13
Switzerland	17
United Kingdom	24
Total cases:	128

**MEDIAN LOSS:
USD 139,000**



STATISTICAL APPENDIX



	Cases	25th percentile	Median (50th)	75th percentile	Mean*
All cases	2,448	\$29,000	\$125,000	\$605,000	\$1,509,000
Schemes					
Asset misappropriation	1,639	\$21,000	\$100,000	\$500,000	\$1,199,000
Billing	306	\$20,000	\$100,000	\$407,000	\$842,000
Noncash	305	\$10,000	\$78,000	\$500,000	\$1,138,000
Expense reimbursements	193	\$6,000	\$33,000	\$140,000	\$202,000
Skimming	160	\$10,000	\$47,000	\$133,000	\$361,000
Cash on hand	154	\$5,000	\$26,000	\$95,000	\$1,204,000
Check and payment tampering	141	\$40,000	\$110,000	\$500,000	\$588,000
Cash larceny	106	\$13,000	\$83,000	\$305,000	\$1,000,000
Payroll	105	\$16,000	\$62,000	\$238,000	\$367,000
Register disbursements	27	\$7,000	\$20,000	\$65,000	\$85,000
Corruption	789	\$34,000	\$200,000	\$1,100,000	\$3,039,000
Financial statement fraud	186	\$140,000	\$954,000	\$5,000,000	\$8,693,000
Detection method					
Tip	869	\$30,000	\$145,000	\$750,000	\$1,486,000
Internal audit	291	\$14,000	\$100,000	\$350,000	\$1,115,000
Management review	240	\$26,000	\$100,000	\$570,000	\$1,316,000
By accident	103	\$50,000	\$200,000	\$600,000	\$613,000
Account reconciliation	86	\$17,000	\$81,000	\$325,000	\$485,000
External audit	80	\$39,000	\$150,000	\$972,000	\$2,397,000
Document examination	71	\$32,000	\$101,000	\$500,000	\$1,357,000
Surveillance/monitoring	56	\$10,000	\$44,000	\$300,000	\$955,000
Notified by law enforcement	48	\$197,000	\$900,000	\$9,750,000	\$5,206,000
IT controls	33	\$9,000	\$80,000	\$1,255,000	\$1,133,000
Confession	23	\$100,000	\$225,000	\$3,000,000	\$3,826,000

*Mean amounts were calculated using loss data that was winsorized at 5% (i.e., assigned all cases in the top 2.5% and bottom 2.5% the same value as the 97.5th percentile and 2.5th percentile, respectively).

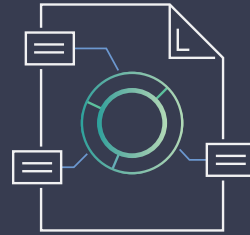
	Cases	25th percentile	Median (50th)	75th percentile	Mean*
Victim organization					
Region:					
United States and Canada	886	\$22,000	\$120,000	\$563,000	\$1,234,000
Sub-Saharan Africa	295	\$15,000	\$100,000	\$568,000	\$1,523,000
Asia-Pacific	197	\$38,000	\$195,000	\$1,000,000	\$1,988,000
Western Europe	124	\$50,000	\$139,000	\$638,000	\$2,113,000
Middle East and North Africa	124	\$33,000	\$100,000	\$1,000,000	\$1,302,000
Southern Asia	102	\$28,000	\$117,000	\$713,000	\$2,208,000
Latin America and the Caribbean	99	\$50,000	\$200,000	\$1,000,000	\$1,500,000
Eastern Europe and Western/Central Asia	94	\$30,000	\$133,000	\$499,000	\$1,603,000
Organization type:					
Private company	883	\$31,000	\$150,000	\$750,000	\$1,451,000
Public company	529	\$35,000	\$150,000	\$925,000	\$1,675,000
Nonprofit	189	\$12,000	\$75,000	\$300,000	\$639,000
Government	327	\$23,000	\$100,000	\$530,000	\$1,812,000
National	141	\$34,000	\$200,000	\$1,000,000	\$2,652,000
State/provincial	66	\$12,000	\$91,000	\$1,125,000	\$2,693,000
Local	105	\$18,000	\$75,000	\$253,000	\$365,000
Organization size:					
<100 employees	516	\$31,000	\$150,000	\$697,000	\$1,145,000
100–999 employees	452	\$26,000	\$120,000	\$520,000	\$1,580,000
1,000–9,999 employees	541	\$24,000	\$100,000	\$513,000	\$1,557,000
10,000+ employees	496	\$32,000	\$140,000	\$800,000	\$1,715,000
Organization revenue:					
< USD 50 million	745	\$28,000	\$114,000	\$500,000	\$985,000
USD 50 million–USD 499 million	473	\$20,000	\$120,000	\$684,000	\$1,884,000
USD 500 million–USD 999 million	236	\$21,000	\$132,000	\$608,000	\$1,936,000
USD 1 billion+	526	\$35,000	\$150,000	\$1,000,000	\$1,679,000
Industry:					
Banking and financial services	379	\$20,000	\$100,000	\$600,000	\$1,546,000
Government and public administration	193	\$18,000	\$100,000	\$500,000	\$1,609,000
Manufacturing	181	\$50,000	\$198,000	\$1,000,000	\$1,579,000
Health care	147	\$33,000	\$200,000	\$900,000	\$1,508,000
Energy	91	\$54,000	\$275,000	\$1,225,000	\$2,337,000
Retail	89	\$10,000	\$85,000	\$550,000	\$1,112,000
Insurance	86	\$12,000	\$70,000	\$410,000	\$889,000
Education	81	\$17,000	\$65,000	\$250,000	\$354,000
Construction	77	\$47,000	\$200,000	\$995,000	\$1,872,000
Telecommunications	66	\$71,000	\$250,000	\$2,000,000	\$2,049,000
Technology	65	\$39,000	\$150,000	\$1,000,000	\$1,823,000
Transportation and warehousing	63	\$32,000	\$150,000	\$1,000,000	\$653,000
Food service and hospitality	58	\$29,000	\$114,000	\$509,000	\$771,000
Services (professional)	53	\$46,000	\$150,000	\$700,000	\$772,000
Real estate	52	\$38,000	\$254,000	\$1,777,000	\$1,988,000
Religious, charitable, or social services	43	\$12,000	\$76,000	\$300,000	\$919,000
Agriculture, forestry, fishing, and hunting	39	\$29,000	\$100,000	\$1,000,000	\$2,191,000
Arts, entertainment, and recreation	39	\$30,000	\$90,000	\$255,000	\$1,254,000
Services (other)	29	\$7,000	\$150,000	\$1,400,000	\$2,316,000
Mining	26	\$100,000	\$475,000	\$3,100,000	\$4,409,000
Wholesale trade	25	\$20,000	\$130,000	\$454,000	\$923,000
Utilities	20	\$14,000	\$163,000	\$350,000	\$1,271,000
Communications and publishing	14	\$39,000	\$115,000	\$526,000	\$673,000

	Cases	25th percentile	Median (50th)	75th percentile	Mean
Perpetrator					
Number of perpetrators:					
One perpetrator	954	\$15,000	\$90,000	\$300,000	\$666,000
Two perpetrators	358	\$30,000	\$105,000	\$713,000	\$1,115,000
Three or more perpetrators	641	\$75,000	\$350,000	\$2,000,000	\$2,953,000
Position:					
Employee	803	\$10,000	\$60,000	\$259,000	\$545,000
Manager	688	\$36,000	\$150,000	\$600,000	\$1,247,000
Owner/executive	398	\$111,000	\$600,000	\$3,485,000	\$3,817,000
Tenure:					
> 10 years	452	\$50,000	\$200,000	\$1,000,000	\$2,082,000
6–10 years	432	\$50,000	\$190,000	\$1,000,000	\$1,664,000
1–5 years	886	\$20,000	\$100,000	\$500,000	\$1,268,000
< 1 year	169	\$10,000	\$50,000	\$295,000	\$604,000
Department:					
Operations	285	\$12,000	\$72,000	\$410,000	\$1,249,000
Accounting	273	\$50,000	\$200,000	\$763,000	\$1,109,000
Executive/upper management	230	\$132,000	\$596,000	\$3,383,000	\$3,787,000
Sales	222	\$22,000	\$94,000	\$385,000	\$807,000
Customer service	174	\$15,000	\$86,000	\$250,000	\$826,000
Administrative support	114	\$10,000	\$76,000	\$259,000	\$568,000
Finance	101	\$19,000	\$100,000	\$682,000	\$1,833,000
Purchasing	95	\$39,000	\$200,000	\$1,000,000	\$1,556,000
Information technology	66	\$73,000	\$200,000	\$813,000	\$1,204,000
Facilities and maintenance	59	\$30,000	\$100,000	\$450,000	\$390,000
Warehousing/inventory	58	\$20,000	\$85,000	\$313,000	\$453,000
Board of directors	45	\$101,000	\$750,000	\$5,575,000	\$5,205,000
Marketing/public relations	40	\$20,000	\$100,000	\$363,000	\$797,000
Manufacturing and production	34	\$45,000	\$275,000	\$1,350,000	\$1,486,000
Human resources	27	\$15,000	\$40,000	\$400,000	\$915,000
Legal	13	\$10,000	\$195,000	\$741,000	\$450,000
Research and development	12	\$26,000	\$350,000	\$1,113,000	\$1,795,000
Internal audit	8	†	†	†	†

†Loss calculations were omitted for categories with fewer than ten responses.

	Cases	25th percentile	Median (50th)	75th percentile	Mean
Perpetrator (cont.)					
Gender:					
Male	1,391	\$35,000	\$150,000	\$1,000,000	\$1,823,000
Female	543	\$18,000	\$85,000	\$300,000	\$677,000
Age:					
<26	81	\$5,000	\$20,000	\$113,000	\$169,000
26–30	191	\$15,000	\$65,000	\$250,000	\$403,000
31–35	307	\$18,000	\$80,000	\$400,000	\$845,000
36–40	347	\$31,000	\$150,000	\$600,000	\$1,320,000
41–45	345	\$38,000	\$141,000	\$750,000	\$1,733,000
46–50	268	\$56,000	\$213,000	\$1,200,000	\$2,379,000
51–55	152	\$50,000	\$207,000	\$1,000,000	\$1,641,000
56–60	117	\$78,000	\$400,000	\$2,284,000	\$3,086,000
>60	60	\$120,000	\$575,000	\$3,425,000	\$3,644,000
Education level:					
High school graduate or less	325	\$15,000	\$80,000	\$312,000	\$933,000
Some university	219	\$30,000	\$150,000	\$451,000	\$751,000
University degree	751	\$40,000	\$175,000	\$1,000,000	\$1,811,000
Postgraduate degree	238	\$35,000	\$200,000	\$1,000,000	\$2,285,000

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FRAUD PREVENTION CHECKLIST



The most cost-effective way to limit fraud losses is to prevent fraud from occurring. This checklist is designed to help organizations test the effectiveness of their fraud prevention measures. Additional guidance, resources, and tools for managing organizational fraud risk can be found at [ACFE.com/fraudrisktools](https://www.acfe.com/fraudrisktools).

1. Is ongoing anti-fraud training provided to all employees of the organization?

- Do employees understand what constitutes fraud?
- Have the costs of fraud to the company and everyone in it—including lost profits, adverse publicity, potential job loss, and decreased morale and productivity—been made clear to all employees?
- Do employees know where to seek advice when faced with uncertain ethical decisions, and do they believe that they can speak freely?
- Has a policy of zero-tolerance for fraud been communicated to employees through words and actions?

2. Is an effective fraud reporting mechanism in place?

- Have employees been taught how to communicate concerns about known or potential wrongdoing?
- Are one or more reporting channels (e.g., a third-party hotline, dedicated email inbox, or web-based form) available to employees?
- Do employees trust that they can report suspicious activity anonymously and/or confidentially (where legally permissible) and without fear of reprisal?
- Has it been made clear to employees that reports of suspicious activity will be promptly and thoroughly evaluated?
- Do reporting policies and mechanisms extend to vendors, customers, and other outside parties?

3. To increase employees' perception of detection, are the following proactive measures taken and publicized to employees?

- Is possible fraudulent conduct aggressively sought out, rather than dealt with passively?
- Are surprise fraud audits performed in addition to regularly scheduled audits?
- Are data analytics techniques used to proactively search for fraud and, if so, has the use of such techniques been made known throughout the organization?
- Do managers actively review the controls, processes, accounts, or transactions under their purview for adherence to company policies and expectations?

4. Is the management climate/tone at the top one of honesty and integrity?

- Are employees periodically surveyed to determine the extent to which they believe management acts with honesty and integrity?
- Are performance goals realistic and clearly communicated?
- Have fraud prevention goals been incorporated into the performance measures that are used to evaluate managers and to determine performance-related compensation?
- Has the organization established, implemented, and tested a process for oversight of fraud risks by the board of directors or others charged with governance (e.g., the audit committee)?

5. **Are fraud risk assessments performed to proactively identify and mitigate the company's vulnerabilities to internal and external fraud?**
6. **Are strong anti-fraud controls in place and operating effectively, including the following?**
 - Proper separation of duties
 - Use of authorizations
 - Physical safeguards
 - Job rotations
 - Mandatory vacations
7. **Does the internal audit department, if one exists, have adequate resources and authority to operate effectively and without undue influence from senior management?**
8. **Does the hiring policy include the following (where permitted by law)?**
 - Past employment verification
 - Criminal and civil background checks
 - Credit checks
 - Drug screening
 - Education verification
 - References checks
9. **Are employee support programs in place to assist employees struggling with addiction, mental/emotional health, family, or financial problems?**
10. **Is an open-door policy in place that allows employees to speak freely about pressures, providing management the opportunity to alleviate such pressures before they become acute?**
11. **Are regular, anonymous surveys conducted to assess employee morale?**

GLOSSARY OF TERMINOLOGY



Asset misappropriation: A scheme in which an employee steals or misuses the employing organization's resources (e.g., theft of company cash, false billing schemes, or inflated expense reports)

Billing scheme: A fraudulent disbursement scheme in which a person causes their employer to issue a payment by submitting invoices for fictitious goods or services, inflated invoices, or invoices for personal purchases (e.g., employee creates a shell company and bills employer for services not actually rendered; employee purchases personal items and submits an invoice to employer for payment)

Cash larceny: A scheme in which an incoming payment is stolen from an organization after it has been recorded on the organization's books and records (e.g., employee steals cash and checks from daily receipts before they can be deposited in the bank)

Cash-on-hand misappropriations: A scheme in which the perpetrator misappropriates cash kept on hand at the victim organization's premises (e.g., employee steals cash from a company vault)

Check or payment tampering scheme: A fraudulent disbursement scheme in which a person steals their employer's funds by intercepting, forging, or altering a check or electronic payment drawn on one of the organization's bank accounts (e.g., employee steals blank company checks and makes them out to themselves or an accomplice; employee re-routes an outgoing electronic payment to a vendor to be deposited into their own bank account)

Corruption: A scheme in which an employee misuses their influence in a business transaction in a way that violates their duty to the employer in order to gain a direct or indirect benefit (e.g., schemes involving bribery or conflicts of interest)

Employee support programs: Programs that provide assistance to employees dealing with personal issues or challenges, such as counseling services for drug, family, or financial problems

Expense reimbursements scheme: A fraudulent disbursement scheme in which an employee makes a claim for reimbursement of fictitious or inflated business expenses (e.g., employee files fraudulent expense report, claiming personal travel, nonexistent meals)

Financial statement fraud: A scheme in which an employee intentionally causes a misstatement or omission of material information in the organization's financial reports (e.g., recording fictitious revenues, understating reported expenses, or artificially inflating reported assets)

Hotline: A mechanism to report fraud or other violations, whether managed internally or by an external party. This might include, in addition to telephone hotlines, web-based platforms and other mechanisms established to facilitate fraud reporting.

Management review: The process of management reviewing organizational controls, processes, accounts, or transactions for adherence to company policies and expectations

Noncash misappropriations: Any scheme in which an employee steals or misuses noncash assets of the victim organization (e.g., employee steals inventory from a warehouse or storeroom; employee steals or misuses confidential customer information)

Occupational fraud: The use of one's occupation for personal enrichment through the deliberate misuse or misapplication of the employing organization's resources or assets

Payroll scheme: A fraudulent disbursement scheme in which an employee causes their employer to issue a payment by making false claims for compensation (e.g., employee claims overtime for hours not worked; employee adds ghost employees to the payroll)

Primary perpetrator: The person who worked for the victim organization and who was reasonably confirmed as the primary culprit in the case

Register disbursements scheme: A fraudulent disbursement scheme in which an employee makes false entries on a cash register to conceal the fraudulent removal of cash (e.g., employee fraudulently voids a sale on his or her cash register and steals the cash)

Skimming: A scheme in which an incoming payment is stolen from an organization before it is recorded on the organization's books and records (e.g., employee accepts payment from a customer but does not record the sale and instead pockets the money)

ABOUT THE ACFE

Founded in 1988 by Dr. Joseph T. Wells, CFE, CPA, the Association of Certified Fraud Examiners (ACFE) is the world's largest anti-fraud organization and premier provider of anti-fraud training and education. Together with more than 85,000 members, the ACFE is reducing business fraud worldwide and providing the training and resources needed to fight fraud more effectively. The ACFE provides educational tools and practical solutions for anti-fraud professionals through events, education, publications, networking, and educational tools for colleges and universities.

Certified Fraud Examiners

The ACFE offers its members the opportunity for professional certification with the Certified Fraud Examiner (CFE) credential. The CFE is preferred by businesses and government entities around the world, and indicates expertise in fraud prevention and detection. CFEs are anti-fraud experts who have demonstrated knowledge in four critical areas: Financial Transactions and Fraud Schemes, Law, Investigation, and Fraud Prevention and Deterrence.



Membership

Members of the ACFE include accountants, internal auditors, fraud investigators, law enforcement officers, lawyers, business leaders, risk/compliance professionals, and educators, all of whom have access to expert training, educational tools, and resources. Whether their career is focused exclusively on preventing and detecting fraudulent activities or they just want to learn more about fraud, the ACFE provides the essential tools and resources necessary for anti-fraud professionals to accomplish their objectives.

To learn more, visit ACFE.com or call (800) 245-3321 / +1 (512) 478-9000.

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