

Statistical Thinking For Data Science And Analytics

Who commits financial
statement fraud and why

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Who commits financial statement fraud and why



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

Who commits financial statement fraud and why

- We believe it is useful to measure the different ways in which occupational fraud impacts different types of organizations. Our hope is that this analysis may enable organizations to better identify where to strengthen or focus their anti-fraud efforts based on the experiences of other similar organizations.

Types of Organizations

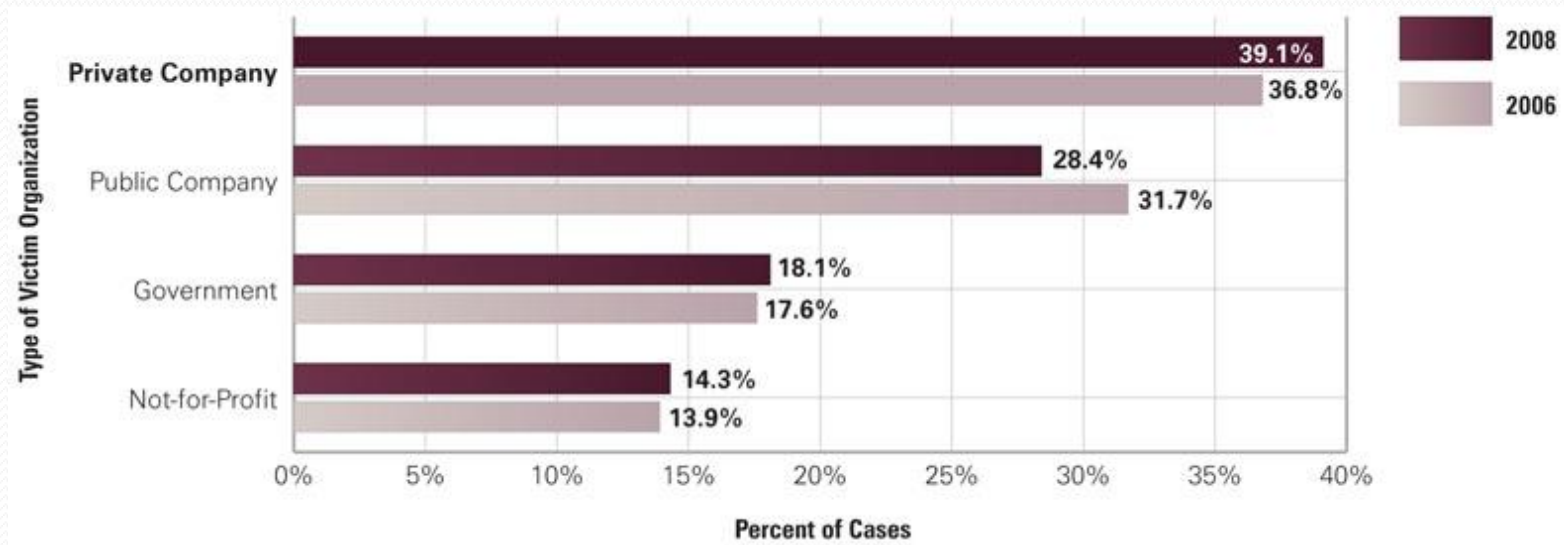
- Nearly 40% of the victims in our study were privately owned companies, making this category the most highly represented among cases reported to us.
- Additionally, 28% of the 959 cases occurred in public companies, 18% occurred in government agencies, and 14% took place in non-profit organizations.

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- This distribution is similar to that from our 2006 study. Please note, this should not be read to imply that private companies are necessarily more likely to experience fraud than other types of organizations.
- Our survey was distributed to CFEs, rather than to a random sample of organizations, so the data below simply shows us what types of organizations hired the CFEs in our study.
- However, it is useful to see that we are drawing on a fairly well-distributed sample of organization types.

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Organization Type of Victim — Frequency

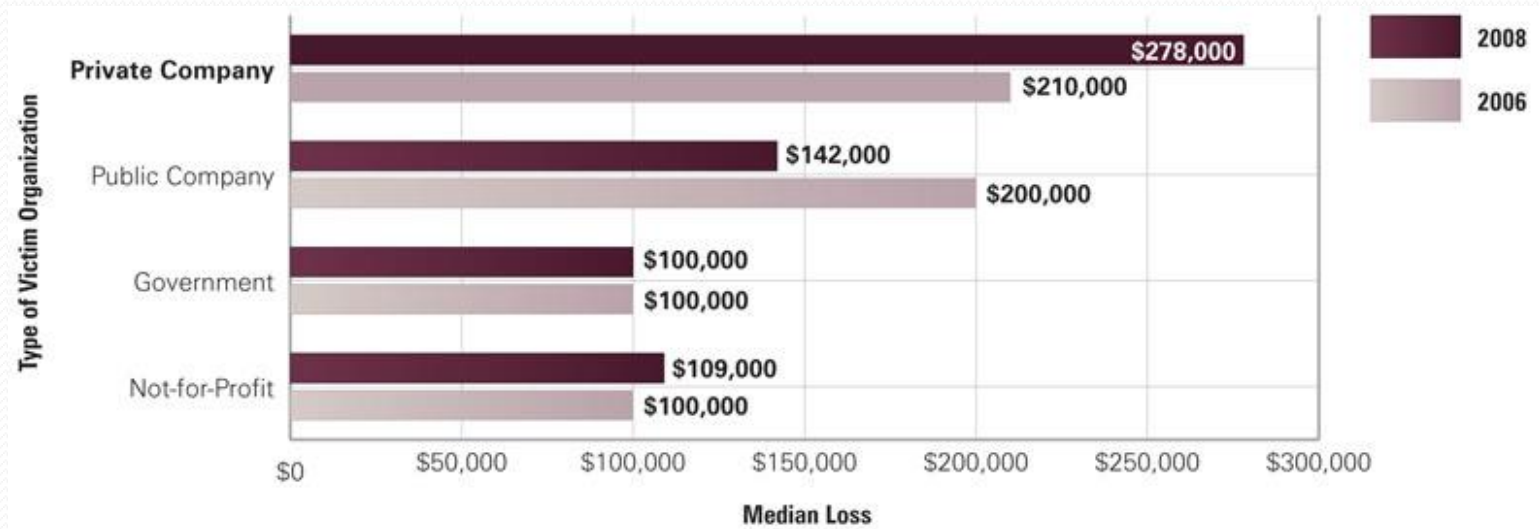


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- Frauds at the private companies cited in our survey caused the greatest median loss at \$278,000.
- This is nearly twice as great as the median loss suffered by public companies and over two-and-a-half times the median loss that occurred at government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

Who commits financial statement fraud and why

Organization Type of Victim — Median Loss



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

Median Duration of Fraud Based on Victim Organization Type

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

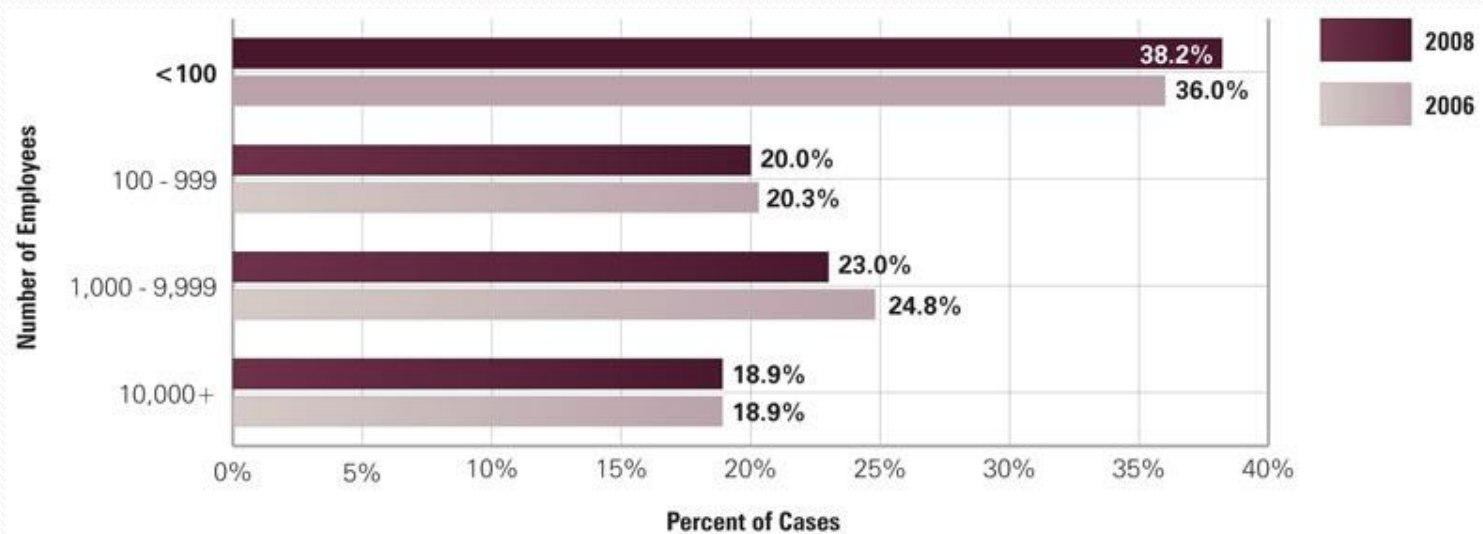
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Size of Organizations

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

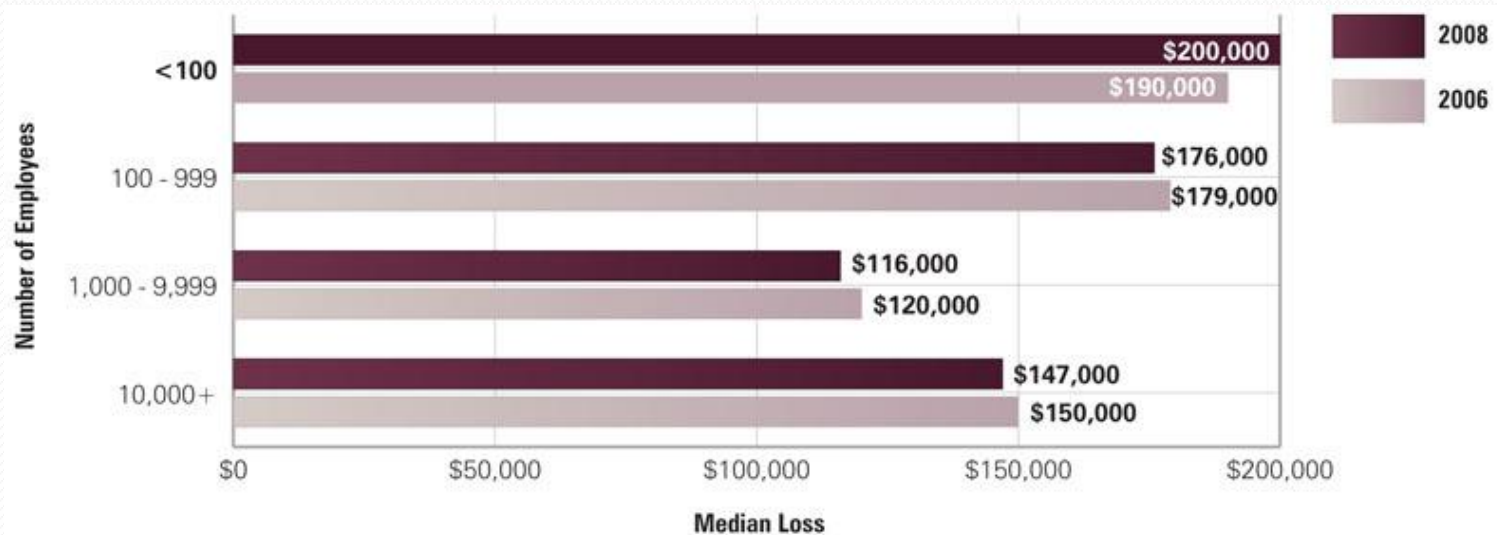
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Size of Victim Organization — Frequency



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Size of Victim Organization — Median Loss



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Methods of Fraud in Small Businesses

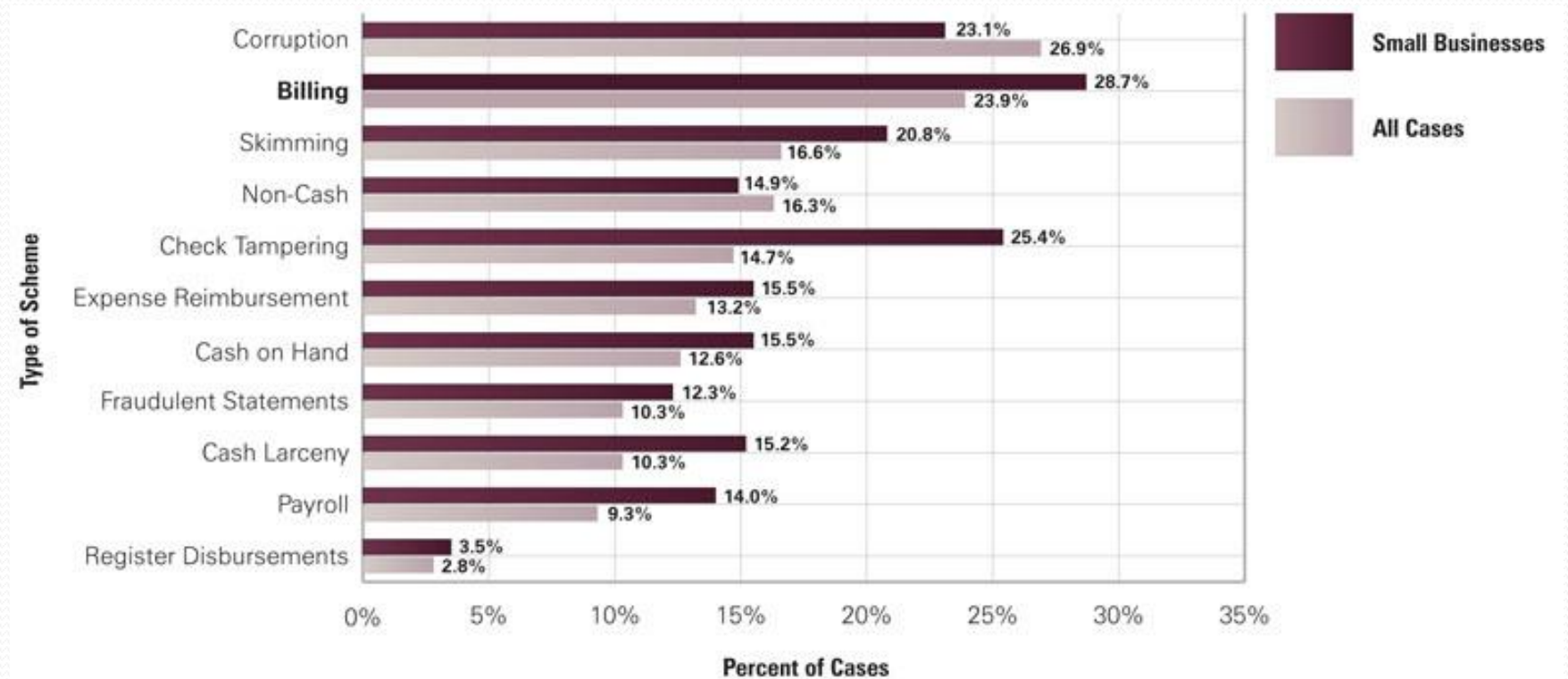
- To better understand the fraud issues faced by small businesses, we measured the frequency with which different fraud schemes occurred in these organizations.
- As the following chart illustrates, check tampering was much more common in small businesses than in other organizations. Over one-fourth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

Who commits financial statement fraud and why

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

Who commits financial statement fraud and why

Methods of Fraud — Small Business vs. All Cases¹⁰



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

Who commits financial statement fraud and why

Industry

- In addition to categorizing fraud victims by organization type, we also classified them based on the industries in which they operate.
- Again, this analysis does not necessarily indicate which industries are more or less likely to be victimized by fraud; it is more a representation of the companies that hired Certified Fraud Examiners over the last two years to investigate an internal fraud case.
- However, the findings in the tables highlight some interesting differences among the types and severity of fraud cases experienced by companies in different industries.

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- For example, of the 905 cases in which information about the victim's industry was provided, the greatest percentage (15%) occurred in the banking and financial services sector.
- On the opposite end of the spectrum, the agriculture, forestry, fishing, and hunting industry was cited in only 1.4% of cases, but experienced the second greatest median loss at \$450,000.
- The telecommunications industry endured the largest losses, with a median of \$800,000 for the 16 cases reported from that sector.

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

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

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Methods of Fraud Based on Industry

Most Common Scheme Types

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

Who commits financial statement fraud and why

Banking and Financial Services

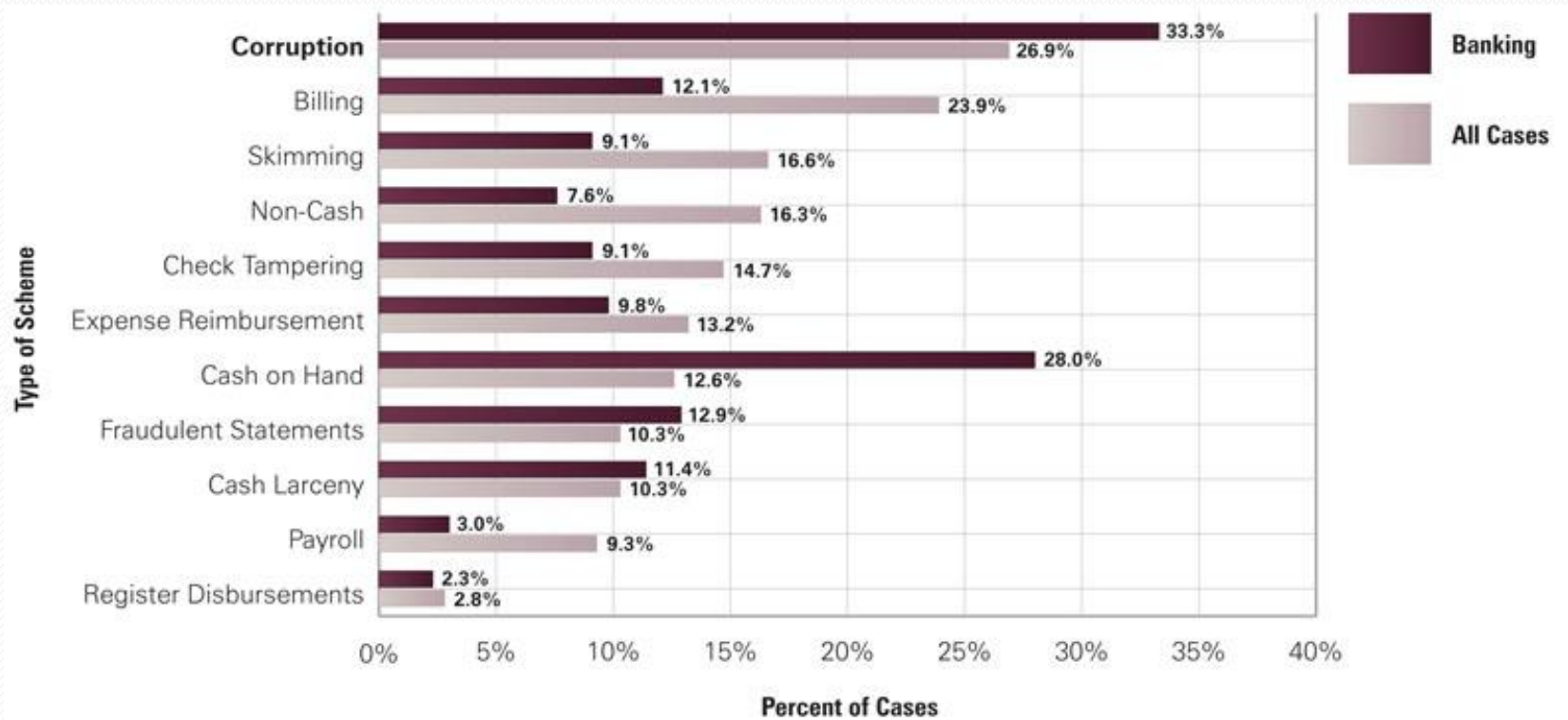
- Not surprisingly, in the banking and financial services sector, misappropriations of cash on hand were much more common than among all cases.
- Cash on hand schemes involve the theft of cash maintained on the premises of a victim organization. Banks have significant stores of cash on their premises, which can make them targets for this type of fraud.
- Cash on hand schemes tend to be relatively low-cost, with a median loss of \$35,000 among the cases in our study.

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- Corruption cases, on the other hand, tend to be much more costly; their median loss was \$375,000.
- We reviewed 132 cases that targeted financial institutions, and one-third of those frauds involved corruption, which was a higher rate than among all cases.
- Conversely, other common forms of occupational fraud like false billing, skimming, non-cash theft, and check tampering were much less common in banking institutions than among all cases reported.

Who commits financial statement fraud and why

Occupational Fraud Schemes in Banking and Financial Services Industry (132 cases)¹¹



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

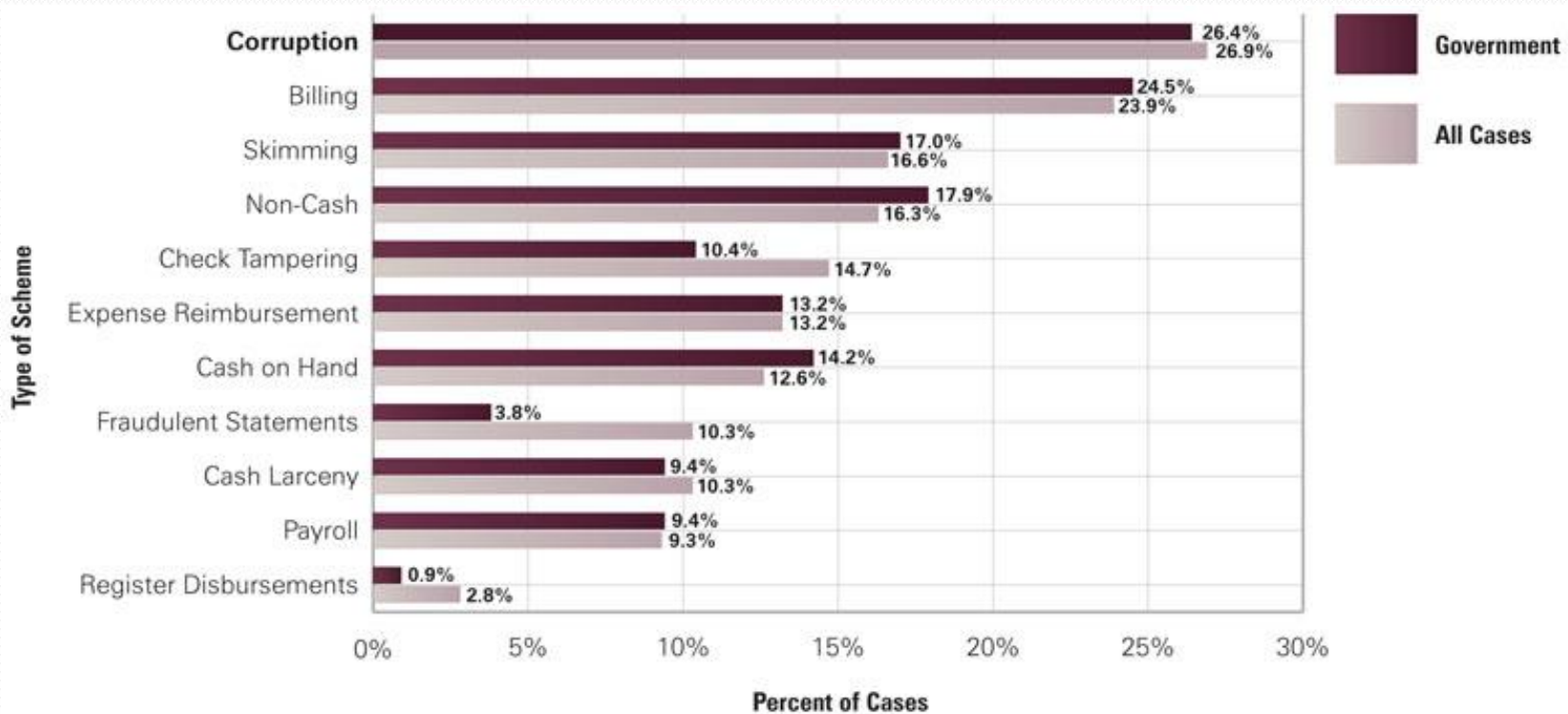
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Government and Public Administration

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

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Occupational Fraud Schemes in Government and Public Administration (106 cases)¹²



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

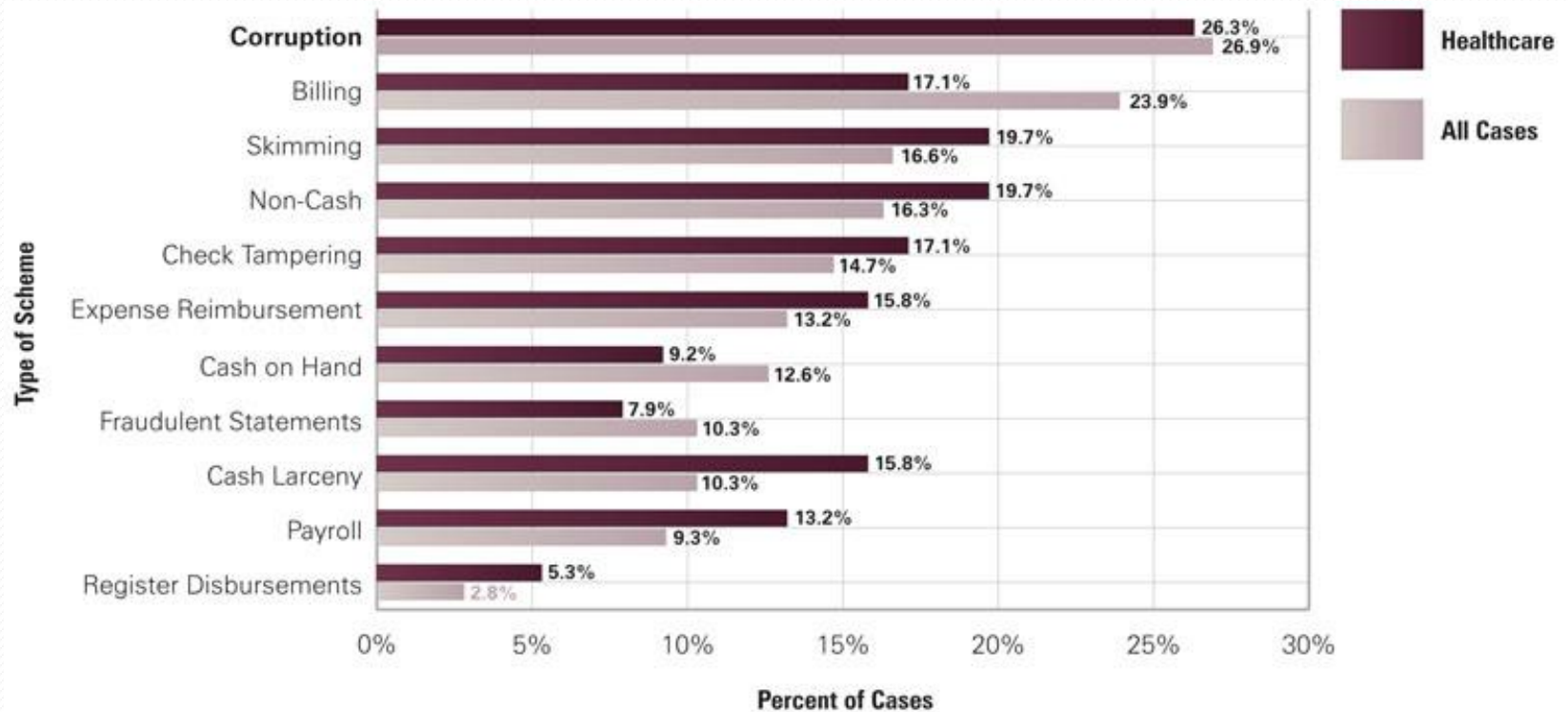
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Healthcare

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

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Occupational Fraud Schemes in the Healthcare Industry (76 cases)¹³



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

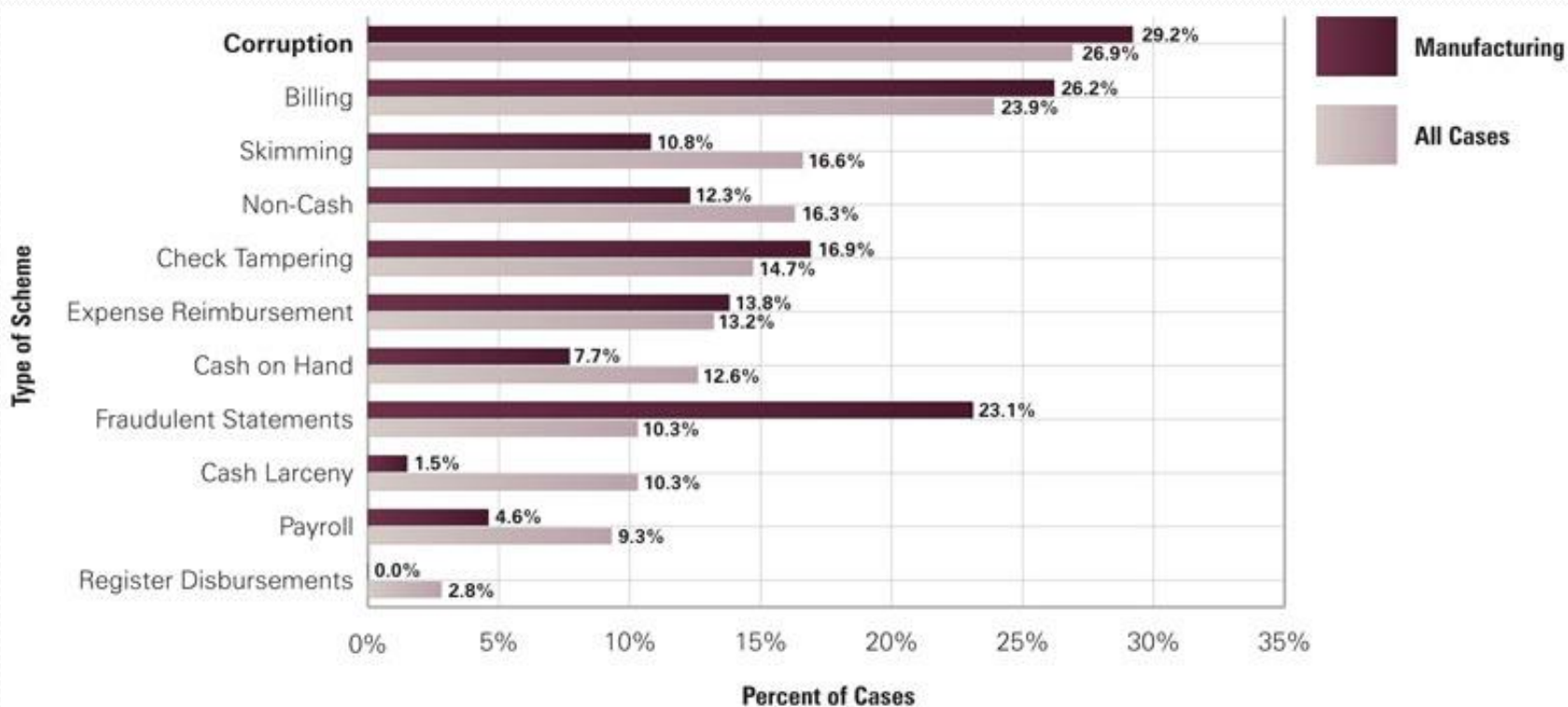
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Manufacturing

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

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Occupational Fraud Schemes in the Manufacturing Industry (65 cases)¹⁴



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

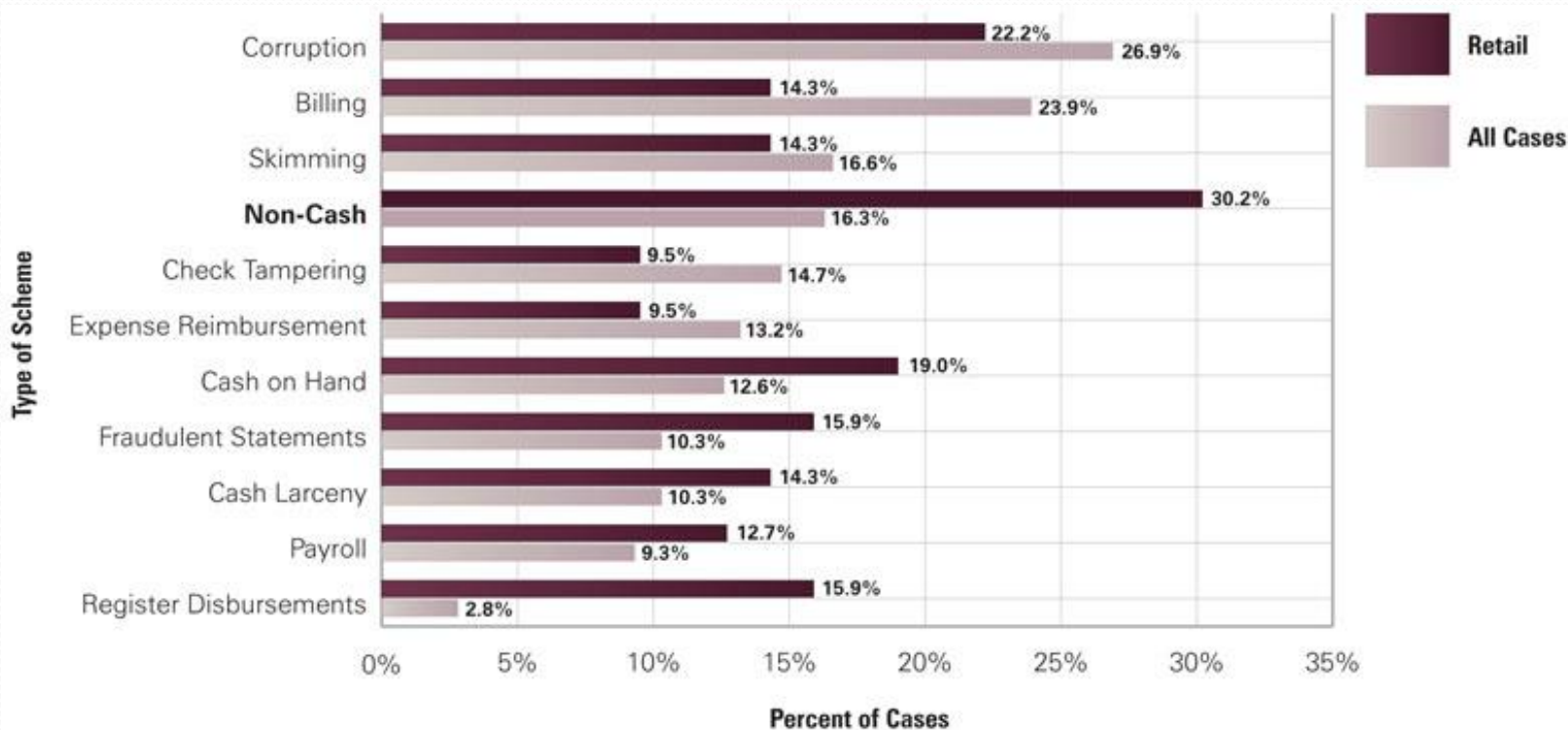
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Retail

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

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Occupational Fraud Schemes in the Retail Industry (63 cases)¹⁵



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

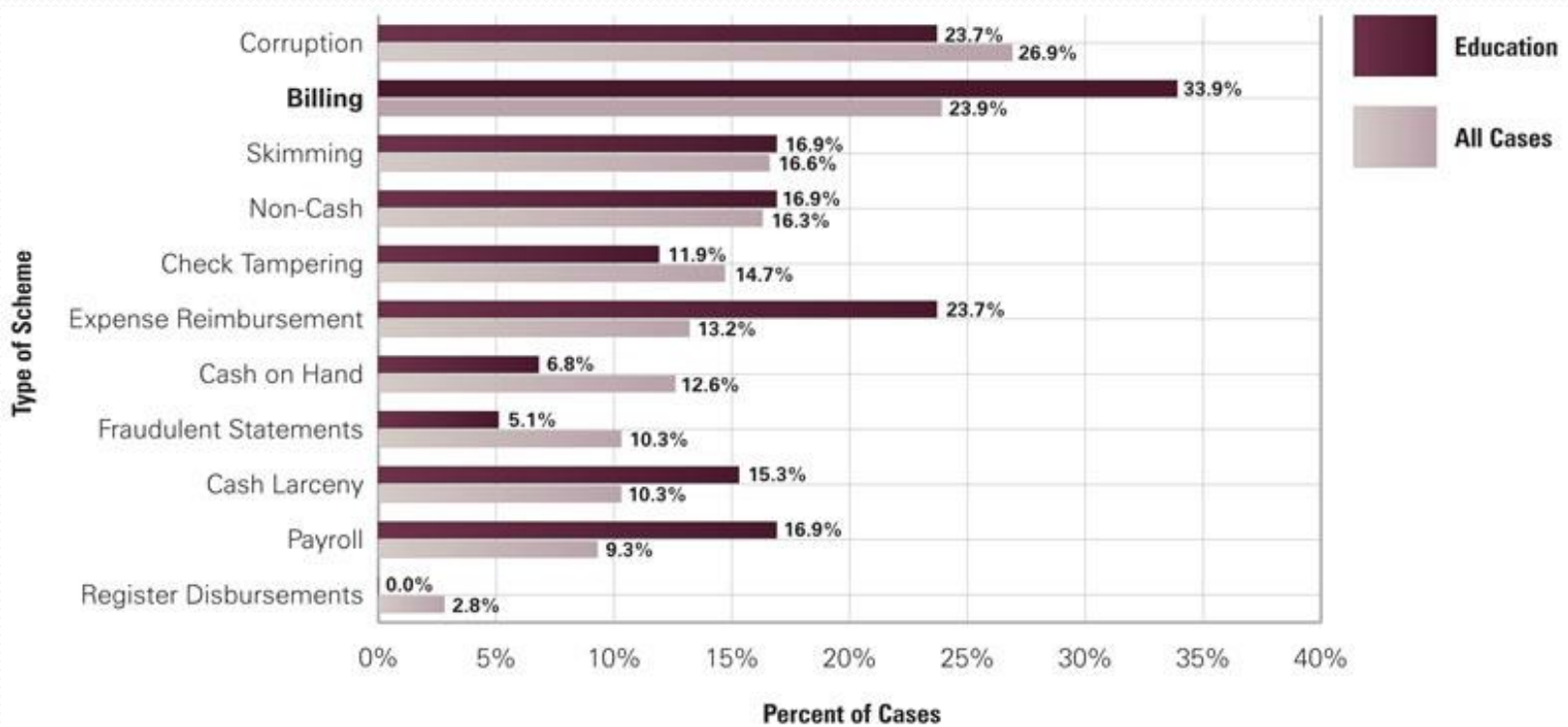
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Education

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

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Occupational Fraud Schemes in the Education Industry (59 cases)¹⁶



¹⁶The sum of percentages in this chart exceeds 100 percent because several cases involved multiple schemes from more than one category.

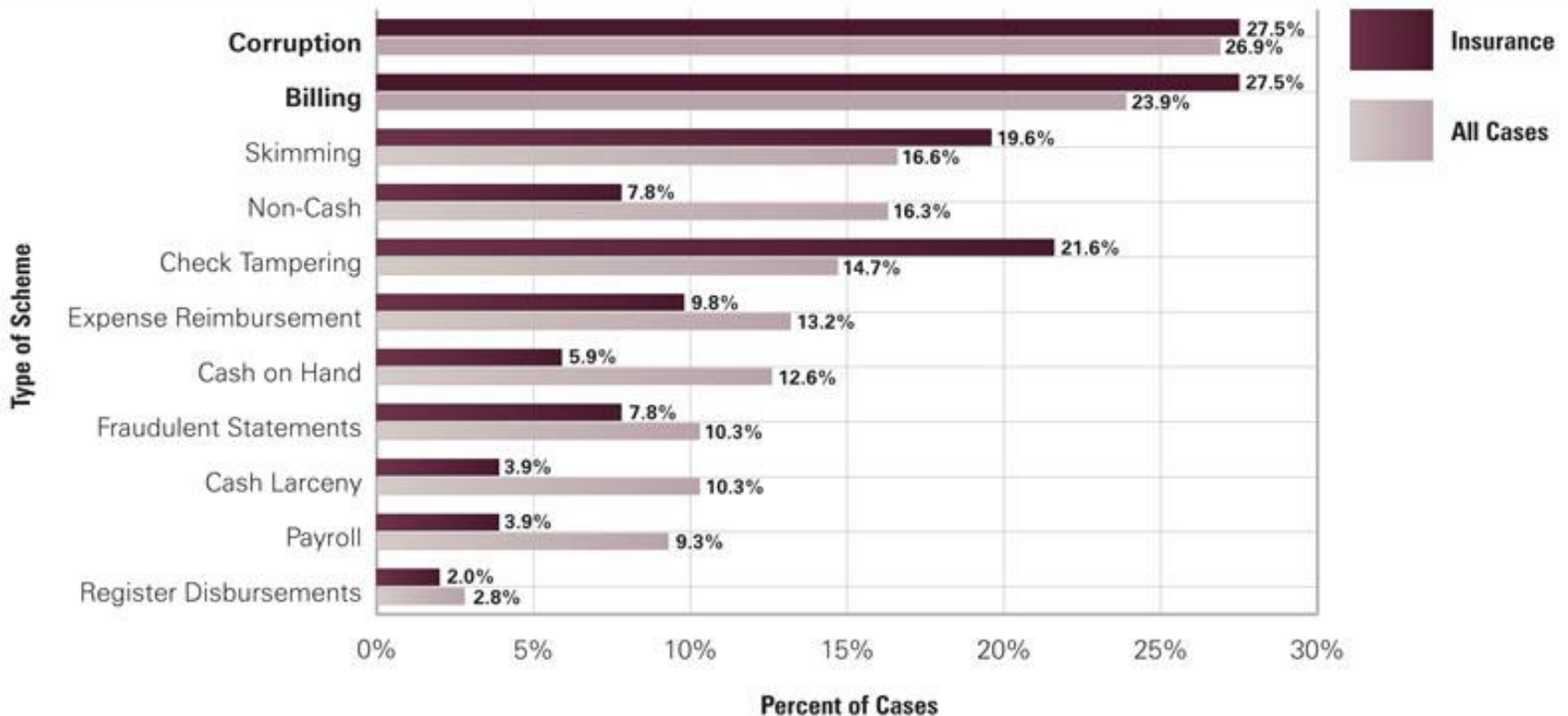
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Insurance

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

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Occupational Fraud Schemes in the Insurance Industry (51 cases)¹⁷



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

Who commits financial statement fraud and why

Industries with the Most Corruption Cases

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

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Corruption Cases by Industry			
Industry	# of Cases	Corruption Cases	% Corruption Cases
Oil and Gas	17	8	47.1%
Arts, Entertainment, and Recreation	16	6	37.5%
Banking / Financial Services	132	44	33.3%
Technology	28	9	32.1%
Services — Other	35	11	31.4%
Real Estate	29	9	31.0%
Manufacturing	65	19	29.2%
Communications / Publishing	14	4	28.6%
Insurance	51	14	27.5%
Utilities	22	6	27.3%
Government and Public Administration	106	28	26.4%

Healthcare	76	20	26.3%
Transportation and Warehousing	31	8	25.8%
Education	59	14	23.7%
Religious, Charitable, or Social Services	39	9	23.1%
Agriculture, Forestry, Fishing, and Hunting	13	3	23.1%
Retail	63	14	22.2%
Services — Professional	34	7	20.6%
Telecommunications	16	3	18.8%
Wholesale Trade	17	3	17.6%
Construction	42	5	11.9%

Who commits financial statement fraud and why

Industries with the Most Financial Statement Fraud Cases

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

Who commits financial statement fraud and why

Financial Statement Fraud Cases by Industry			
Industry	# of Cases	FSF Cases	% FSF Cases
Telecommunications	16	4	25.0%
Manufacturing	65	15	23.1%
Agriculture, Forestry, Fishing, and Hunting	13	3	23.1%
Retail	63	10	15.9%
Technology	28	4	14.3%
Banking / Financial Services	132	17	12.9%
Oil and Gas	17	2	11.8%
Services — Professional	34	4	11.8%
Wholesale Trade	17	2	11.8%
Services — Other	35	4	11.4%
Transportation and Warehousing	31	3	9.7%

Healthcare	76	6	7.9%
Insurance	51	4	7.8%
Communications / Publishing	14	1	7.1%
Construction	42	3	7.1%
Arts, Entertainment, and Recreation	16	1	6.3%
Education	59	3	5.1%
Government and Public Administration	106	4	3.8%
Real Estate	29	1	3.4%
Religious, Charitable, or Social Services	39	1	2.6%
Utilities	22	0	0.0%

Who commits financial statement fraud and why

Anti-Fraud Controls in Place at Time of Fraud

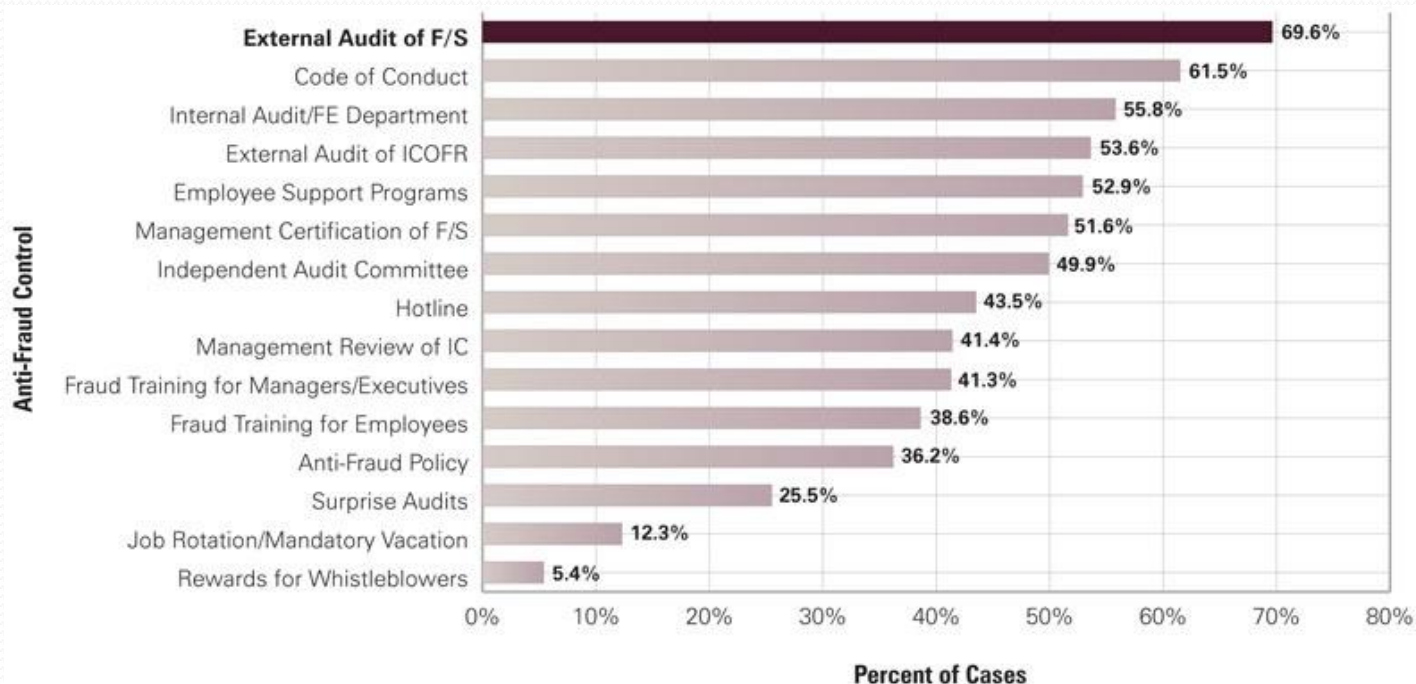
- Respondents to our survey were asked to identify which, if any, of 15 common fraud-related controls had been implemented by the victim organization at the time the fraud occurred.
- External audits of financial statements were the most common anti-fraud control. Seventy percent of victims utilized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

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



**External Audit of F/S” = independent external audits of the organization’s financial statements

“Internal Audit / FE Department” = internal audit department or fraud examination department

“External Audit of ICOFR” = independent audits of the organization’s internal controls over financial reporting

“Management Certification of F/S” = management certification of the organization’s financial statements

“Management Review of IC” = regular management review of internal controls

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Effectiveness of Controls

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

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

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

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Hotlines

- Hotlines are frequently touted as an essential component of an effective system of anti-fraud controls.
- In fact, the Sarbanes-Oxley Act of 2002 mandated that all public companies implement a formal reporting mechanism, such as a hotline, so that employees and other parties can report fraudulent or inappropriate activity.
- But once a hotline is in place, how effective is it in detecting fraud?

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- There were 417 cases in our study in which the victim organization had a hotline at the time of the fraud, and 216 of those cases (51.8%) were initially detected by a tip.
- Somewhat surprisingly, among these 216 cases, only 98 of the tips (45.4%) actually came through the hotline.
- We had anticipated that the utilization rate of the hotlines would be higher, but it is likely that a certain percentage of employees, customers, etc. are not necessarily concerned with making a confidential report of misconduct, which is one of the principal benefits of a hotline or other formal reporting mechanism.

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

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SOX-Related Controls

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

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Publicly Traded Companies

- Public companies were required to have the SOX-mandated controls in place during the period covered by our survey — with the exception of small public companies who were allowed extra time to have both management and auditors review the internal controls over financial reporting.
- The impact these controls had on the severity of the frauds that occurred in public companies is notable.
- Publicly traded organizations with SOX-related controls in place incurred median losses 70% to 96% lower than the corporations that had not yet implemented these controls.

Who commits financial statement fraud and why

- Interestingly, the control associated with the largest reduction in median loss — management certification of the financial statements — was also the only control associated with a negative impact on the length of the scheme.
- Corporations that had management certify the company's financial

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

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Who commits financial statement fraud and why

Privately Held Companies

- Although privately held companies are not generally required to comply with the Sarbanes-Oxley Act, many have followed the lead of public companies in implementing SOX-mandated internal controls to help prevent and detect fraud.
- However, the private companies in our study had a lower rate of implementation of these controls than any other organization category.

Who commits financial statement fraud and why

- Hotlines, which were associated with the greatest reduction in median losses for private companies, were the least commonly cited SOX-related control.
- Less than 20% of private companies had an anonymous reporting mechanism in place at the time of the fraud.

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

Who commits financial statement fraud and why

Not-For-Profit Organizations

- Non-profit organizations face unique challenges in fighting occupational fraud; not least among these is striking the right balance between using funding for the stated mission of the organization and spending valuable resources on ensuring the protection of the entity's assets.
- Unfortunately, the results of our survey indicate that these entities may be focusing their resources on less effective controls, while missing some important opportunities to thwart fraudsters.

Who commits financial statement fraud and why

- The least common controls implemented by non-profits — hotlines and management review of the financial statements — were the controls associated with the largest reduction in median loss by far.

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

Who commits financial statement fraud and why

Government Agencies

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

Who commits financial statement fraud and why

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

Who commits financial statement fraud and why

SOX-Related Controls for Financial Statement Fraud Cases

- Sarbanes-Oxley was passed in response to several large financial statement fraud schemes, and, as such, the Act mandates the implementation of specific controls targeted toward preventing and detecting financial statement manipulation.
- Accordingly, we analyzed the impact of SOX-related controls in all reported cases of financial statement fraud in our study.
- We found that the presence of these controls was not correlated to a decrease in the median loss for financial statement fraud schemes; in fact, for all controls except hotlines, the converse was true.

Who commits financial statement fraud and why

- Organizations with these controls in place experienced greater fraudulent financial statement manipulations than organizations lacking these controls.
- Additionally, organizations that had independent audit committees and those whose management

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

Who commits financial statement fraud and why

Importance of Controls in Detecting or Limiting Fraud

- We asked survey respondents to provide their opinions about how important a role each of several internal controls played in detecting or limiting the losses from the specific fraud scheme they investigated.

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

Who commits financial statement fraud and why

Importance of Controls in Detecting or Limiting Fraud

- Their responses were restricted to only those controls that were in place at the time of the fraud and were ranked on a scale of one (not at all important) to five (very important).

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

*Based on average score.

Who commits financial statement fraud and why

By Fraud Type

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

Who commits financial statement fraud and why

Asset Misappropriations

- For those schemes in which the perpetrator misappropriated his or her employer's assets, the CFEs who responded to our survey believed the victim organization's internal audit department played the most important role in uncovering or limiting the fraud.

Who commits financial statement fraud and why

- Independent audits of financial statements and of internal controls scored the lowest for asset misappropriation schemes.
- This is not surprising given that such audits generally only target frauds that materially affect the organization's financial statements, which may not be true of many asset misappropriation schemes.

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

Who commits financial statement fraud and why

Corruption

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

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

Who commits financial statement fraud and why

Financial Statement Fraud

- Certain controls, such as independent audits of the financial statements and of internal controls over financial reporting, are primarily targeted at detecting financial statement fraud schemes.
- However, when asked to provide an opinion on the importance of the eight internal control mechanisms in detecting and limiting the financial statement fraud that took place, the respondents ranked these controls well below other controls not specifically aimed at this type of scheme.

Who commits financial statement fraud and why

- Rewards for whistleblowers scored the highest, on average, followed by an internal audit or fraud examination department, and a formal fraud hotline.

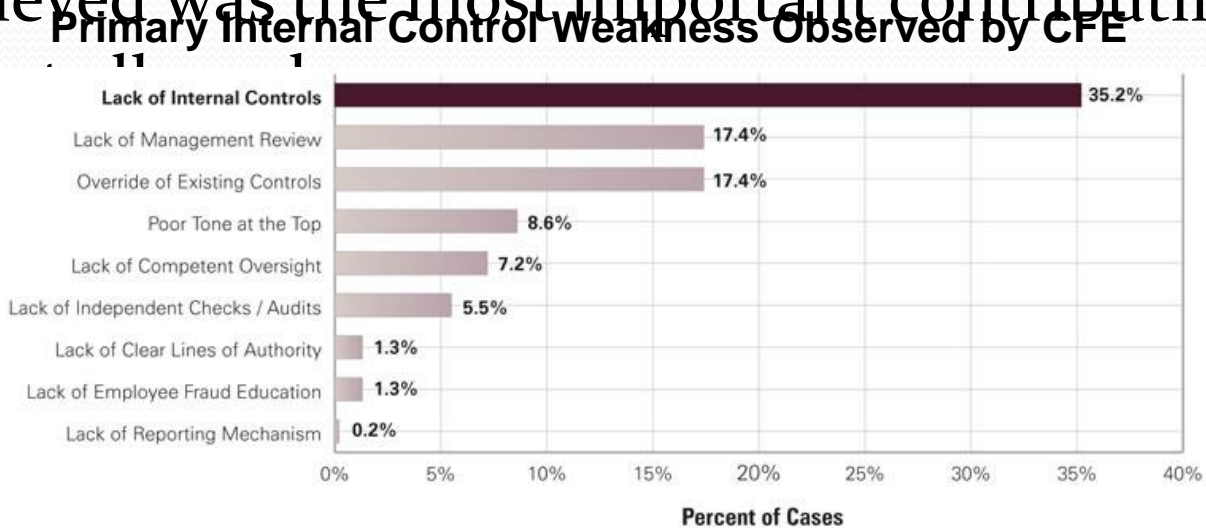
CFEs' Ranking of Controls' Importance in Detecting or Limiting Financial Statement Fraud Schemes	
Control	Average Score
Rewards for Whistleblowers	4.00
Internal Audit / FE Department	3.78
Fraud Hotline	3.77
Surprise Audits	3.69
Mandatory Job Rotation / Vacations	3.17
Audit of F/S	2.93
Management Review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

Who commits financial statement fraud and why

Control Weaknesses that Contributed to Fraud

- We also asked survey participants which of several circumstances they believed was the most important contributing factor to the fraud

most important contributing factor to the fraud management and oversight factors



most

Who commits financial statement fraud and why

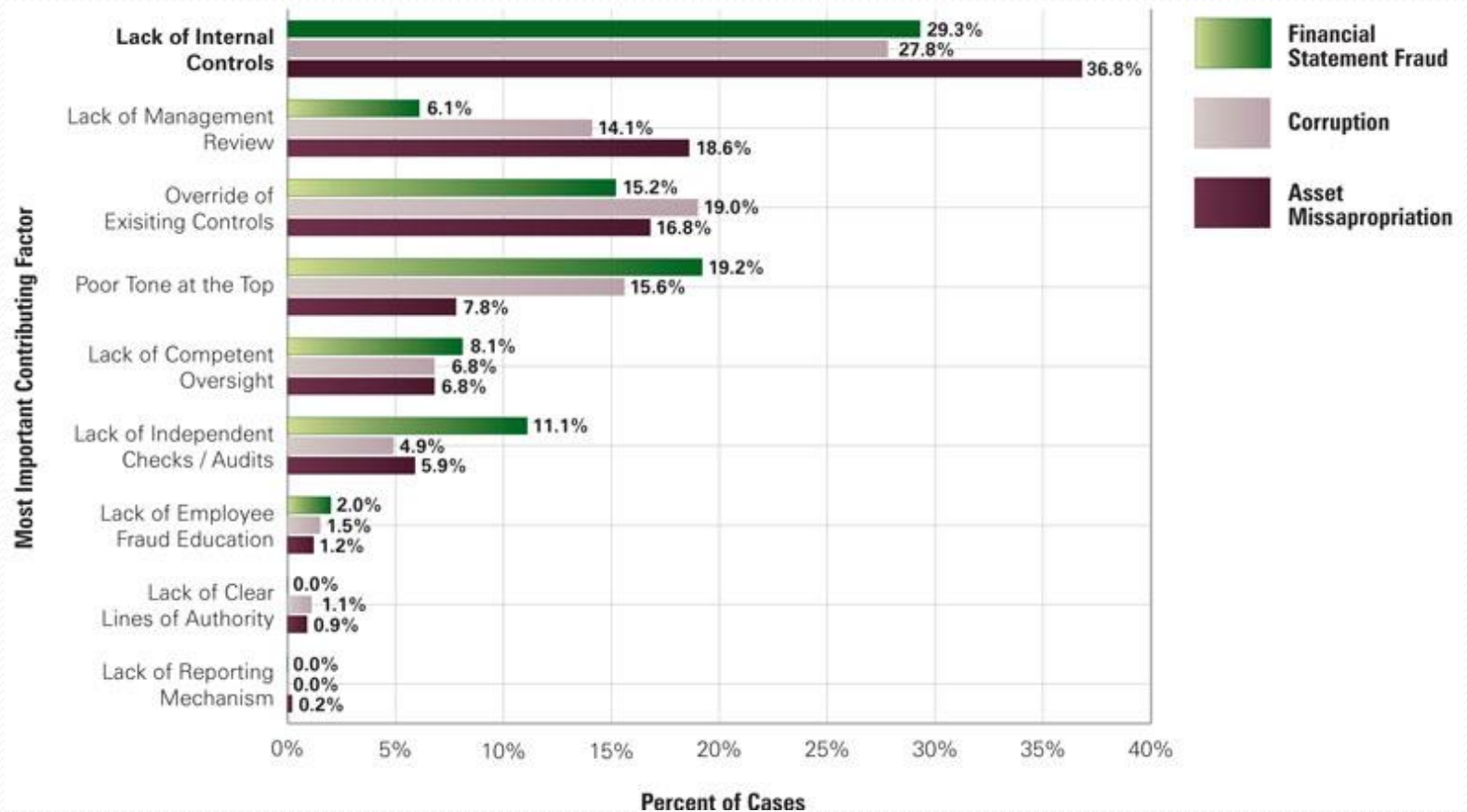
- When we broke occupational frauds down by the three major categories — asset misappropriations, corruption and fraudulent statements — we found that lack of internal controls was the most commonly cited control weakness in all three categories, but beyond that there were notable distinctions based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

Who commits financial statement fraud and why

- We also found that lack of independent audits was considered the most important contributing factor much more often in financial statement frauds than in the other two categories.
- Among corruption schemes, override of controls was the second most commonly cited contributing factor after lack of controls.
- Corruption cases were also frequently related to organizations with a poor tone at the top.

Who commits financial statement fraud and why

Breakdown of Primary Internal Control Weaknesses by Scheme Type



Who commits financial statement fraud and why

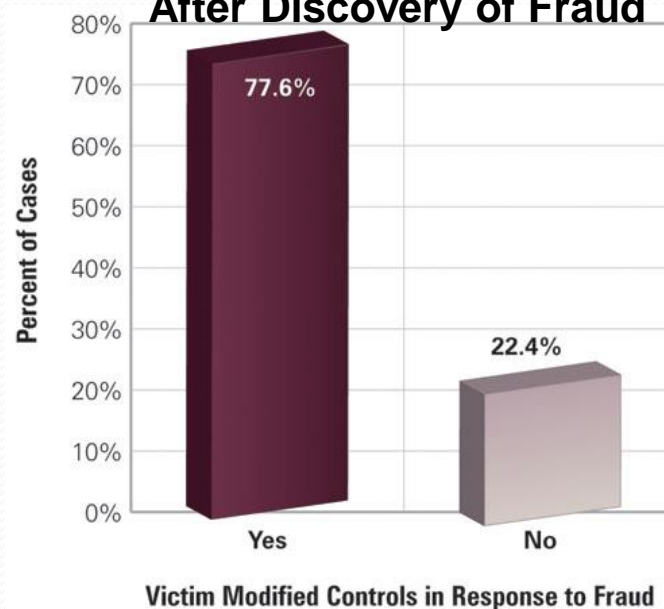
Modification of Controls in Response to Fraud

- Three-fourths of the Who commits financial statement fraud and why in our study altered their existing internal control system in direct response to the discovery of the fraud, which shows that most organizations perceived the fraud to have occurred or succeeded, at least in part, due to a control weakness.
- Among the entities that changed their control structure in response to the fraud, the most common change by far was to implement or modify management review of the internal control system.

Who commits financial statement fraud and why

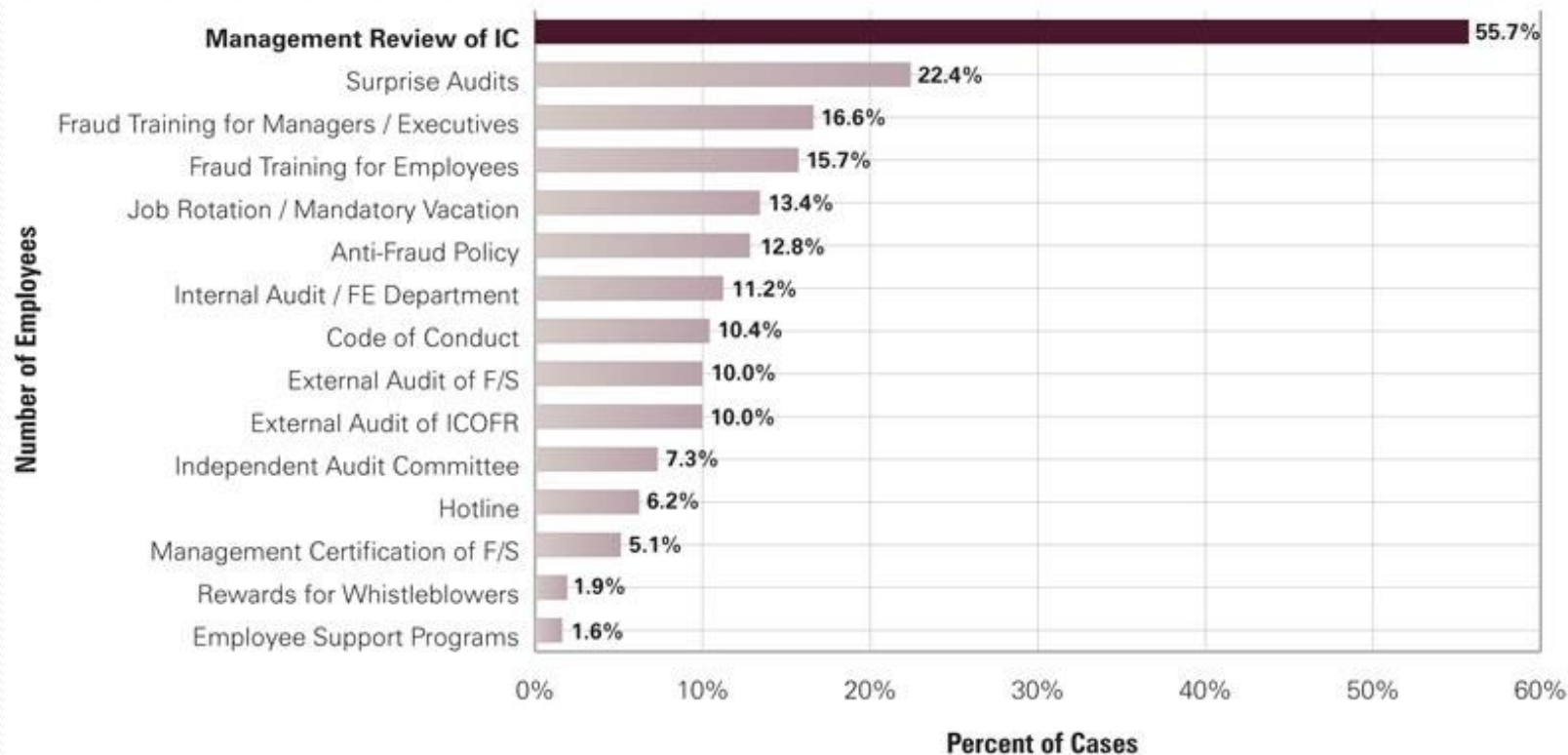
- This change was implemented 56% of the time, more than twice the rate of any other modification.
- Surprise audits were the second most commonly implemented or modified control mechanism.
- This finding is quite encouraging, as surprise audits were associated with the greatest reduction in both median loss and median scheme length in our study, but were one of the least commonly implemented controls prior to the fraud.

Who commits financial statement fraud and why That Modified Controls After Discovery of Fraud



Who commits financial statement fraud and why

Internal Controls Modified or Implemented in Response to Fraud



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