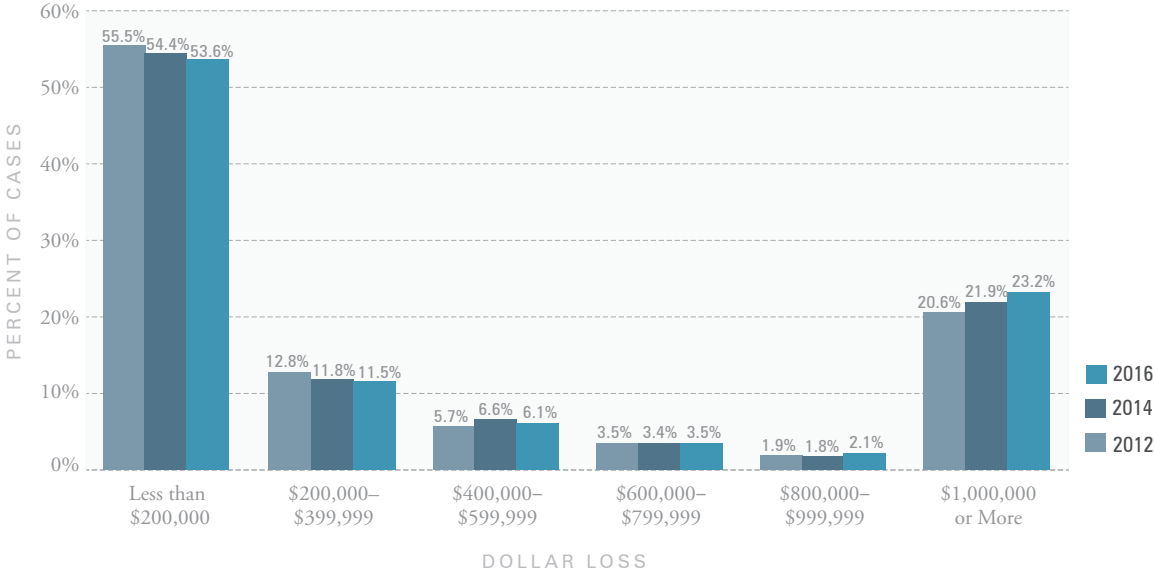


Figure 1: Geographical Location of Victim Organizations

Region	Number of Cases	Percent of Cases	Median Loss (in U.S. dollars)
United States	1038	48.8%	\$120,000
Sub-Saharan Africa	285	13.4%	\$143,000
Asia-Pacific	221	10.4%	\$245,000
Latin America and the Caribbean	112	5.3%	\$174,000
Western Europe	110	5.2%	\$263,000
Eastern Europe and Western/Central Asia	98	4.6%	\$200,000
Southern Asia	98	4.6%	\$100,000
Canada	86	4.0%	\$154,000
Middle East and North Africa	79	3.7%	\$275,000

Figure 2: Distribution of Dollar Losses



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 3: Occupational Fraud and Abuse Classification System (Fraud Tree)

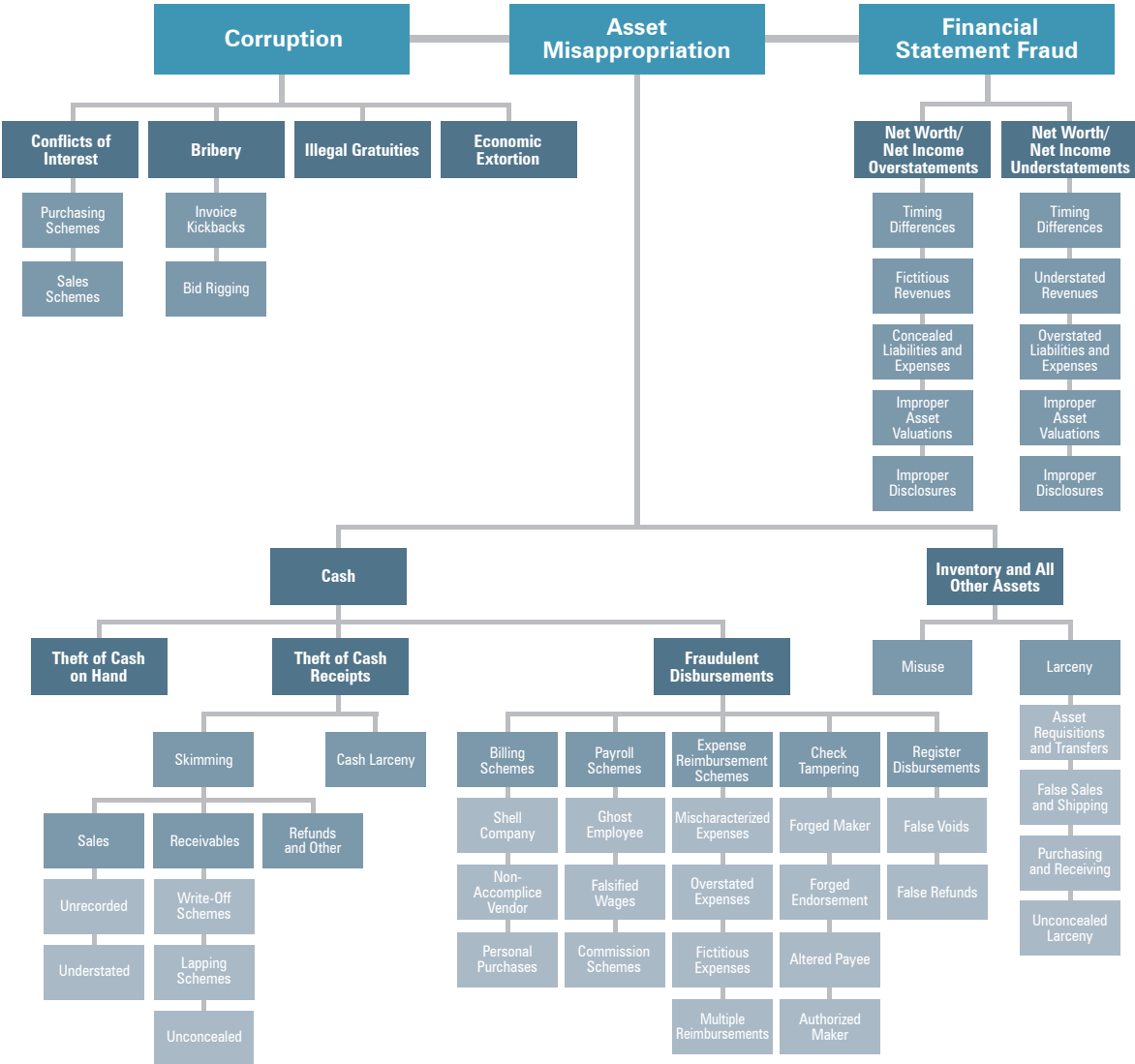
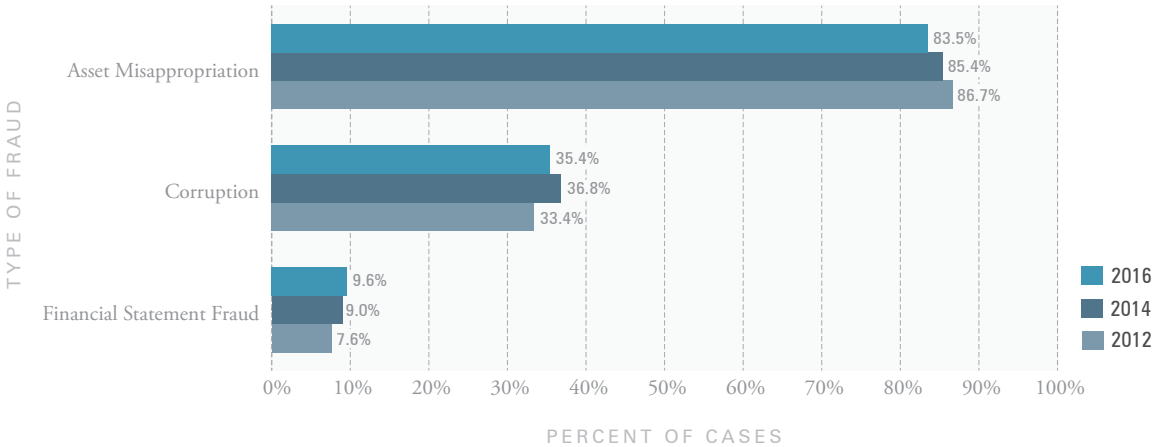
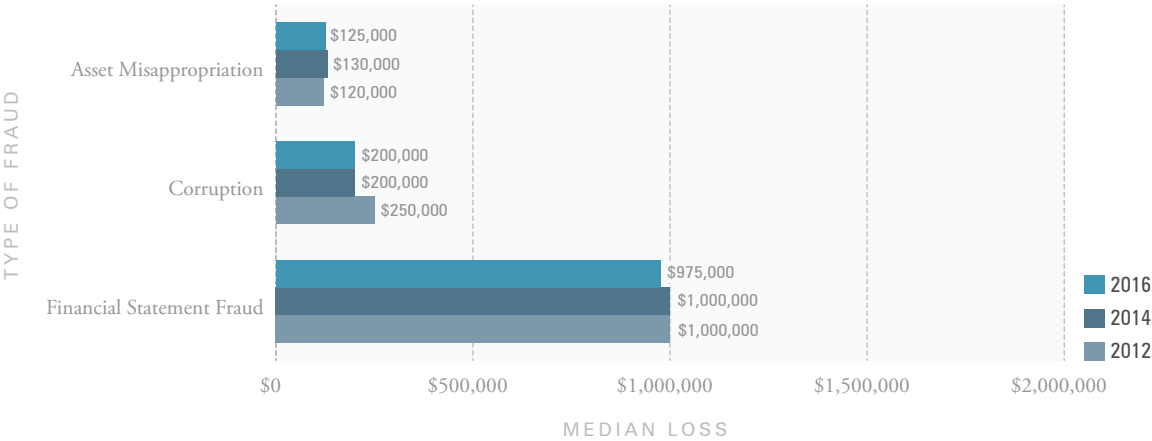


Figure 4: Occupational Frauds by Category—Frequency



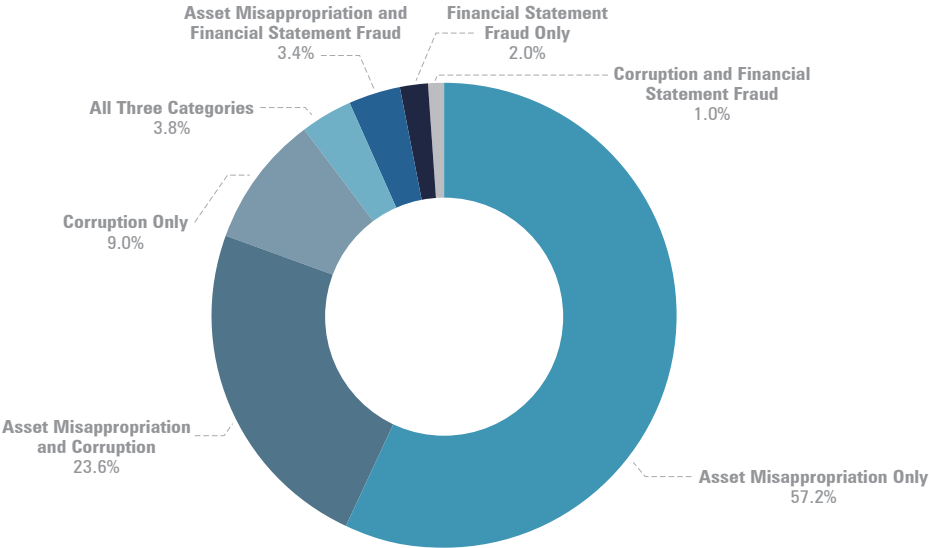
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 5: Occupational Frauds by Category—Median Loss



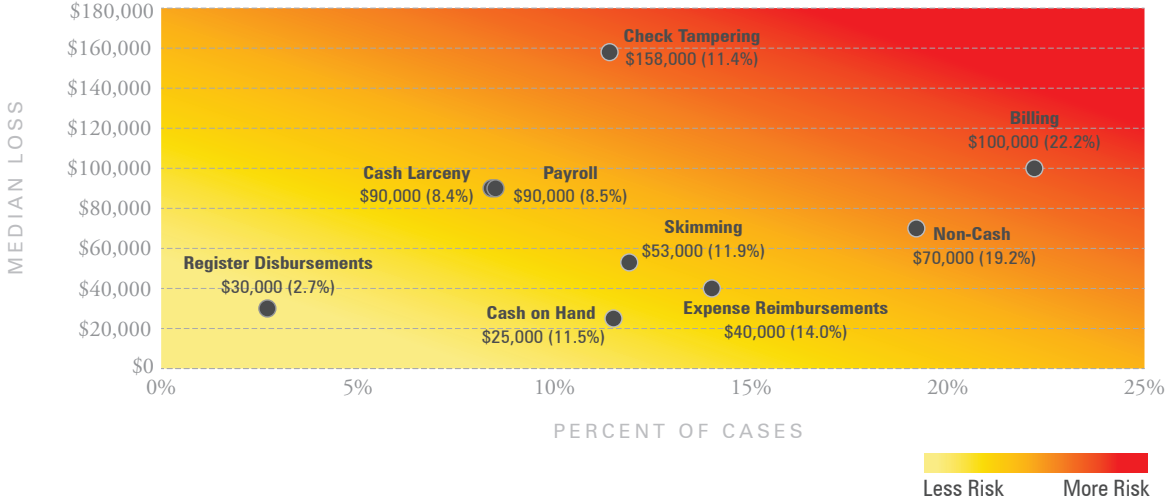
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 6: Overlap of Fraud Schemes



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 7: Frequency and Median Loss of Asset Misappropriation Sub-Schemes



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 8: Scheme Types by Region—United States

Scheme	Number of Cases	Percent of Cases
Billing	289	27.8%
Corruption	258	24.9%
Non-Cash	174	16.8%
Skimming	167	16.1%
Expense Reimbursements	164	15.8%
Check Tampering	154	14.8%
Payroll	131	12.6%
Cash on Hand	125	12.0%
Cash Larceny	102	9.8%
Financial Statement Fraud	93	9.0%
Register Disbursements	29	2.8%

Figure 9: Scheme Types by Region—Sub-Saharan Africa

Scheme	Number of Cases	Percent of Cases
Corruption	138	48.4%
Billing	53	18.6%
Non-Cash	50	17.5%
Cash on Hand	47	16.5%
Skimming	42	14.7%
Cash Larceny	34	11.9%
Check Tampering	33	11.6%
Expense Reimbursements	26	9.1%
Financial Statement Fraud	16	5.6%
Payroll	11	3.9%
Register Disbursements	7	2.5%

Figure 10: Scheme Types by Region—Asia-Pacific

Scheme	Number of Cases	Percent of Cases
Corruption	107	48.4%
Non-Cash	49	22.2%
Billing	45	20.4%
Expense Reimbursements	40	18.1%
Financial Statement Fraud	24	10.9%
Cash on Hand	23	10.4%
Check Tampering	22	10.0%
Skimming	20	9.0%
Cash Larceny	17	7.7%
Register Disbursements	10	4.5%
Payroll	6	2.7%

Figure 11: Scheme Types by Region—Latin America and the Caribbean

Scheme	Number of Cases	Percent of Cases
Corruption	51	45.5%
Non-Cash	26	23.2%
Billing	23	20.5%
Financial Statement Fraud	17	15.2%
Expense Reimbursements	16	14.3%
Check Tampering	14	12.5%
Skimming	10	8.9%
Payroll	9	8.0%
Cash on Hand	7	6.3%
Cash Larceny	3	2.7%
Register Disbursements	1	0.9%

Figure 12: Scheme Types by Region—Western Europe

Scheme	Number of Cases	Percent of Cases
Corruption	44	40.0%
Non-Cash	28	25.5%
Billing	21	19.1%
Expense Reimbursements	20	18.2%
Financial Statement Fraud	19	17.3%
Cash on Hand	10	9.1%
Check Tampering	9	8.2%
Payroll	9	8.2%
Cash Larceny	4	3.6%
Skimming	4	3.6%
Register Disbursements	3	2.7%

Figure 13: Scheme Types by Region—Eastern Europe and Western/Central Asia

Scheme	Number of Cases	Percent of Cases
Corruption	54	55.1%
Non-Cash	18	18.4%
Billing	18	18.4%
Financial Statement Fraud	17	17.3%
Cash on Hand	10	10.2%
Expense Reimbursements	10	10.2%
Cash Larceny	7	7.1%
Payroll	6	6.1%
Check Tampering	4	4.1%
Register Disbursements	3	3.1%
Skimming	2	2.0%

Figure 14: Scheme Types by Region—Southern Asia

Scheme	Number of Cases	Percent of Cases
Corruption	66	67.3%
Non-Cash	22	22.4%
Expense Reimbursements	14	14.3%
Billing	12	12.2%
Cash on Hand	9	9.2%
Financial Statement Fraud	8	8.2%
Cash Larceny	7	7.1%
Skimming	7	7.1%
Check Tampering	4	4.1%
Payroll	4	4.1%
Register Disbursements	2	2.0%

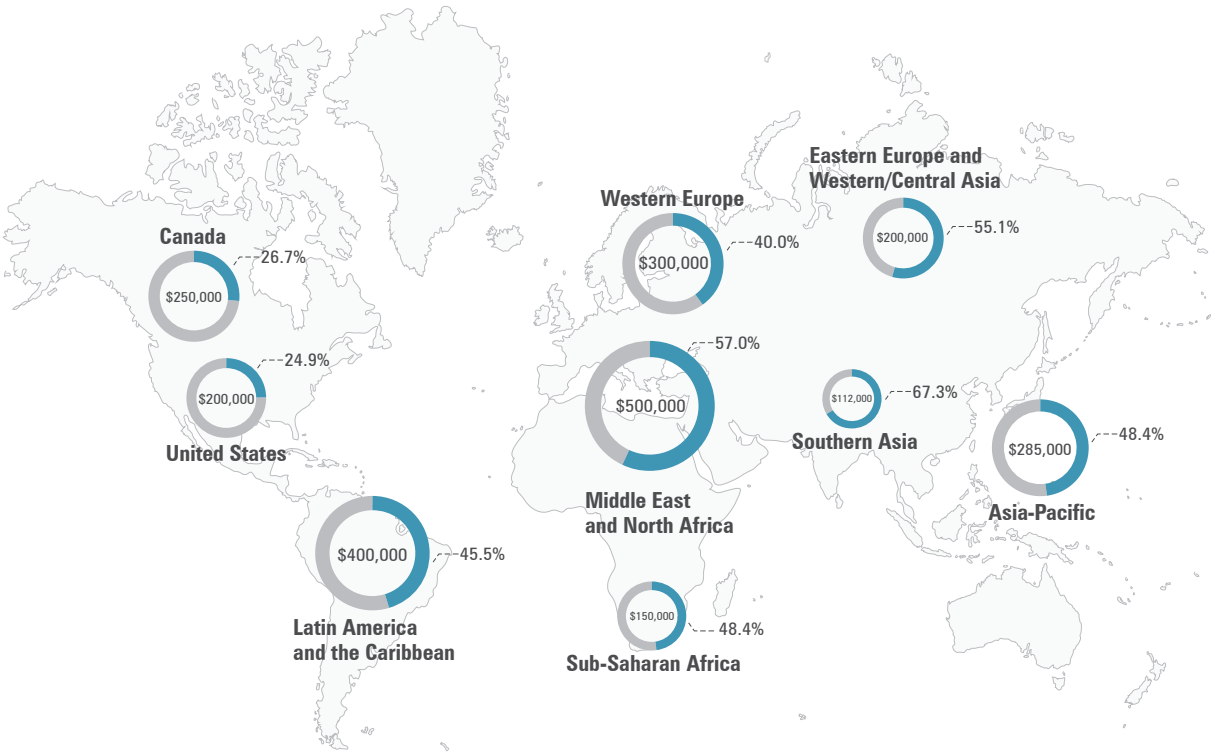
Figure 15: Scheme Types by Region—Canada

Scheme	Number of Cases	Percent of Cases
Billing	25	29.1%
Corruption	23	26.7%
Expense Reimbursements	15	17.4%
Non-Cash	14	16.3%
Financial Statement Fraud	11	12.8%
Cash on Hand	10	11.6%
Check Tampering	10	11.6%
Skimming	10	11.6%
Cash Larceny	9	10.5%
Payroll	9	10.5%
Register Disbursements	5	5.8%

Figure 16: Scheme Types by Region—Middle East and North Africa

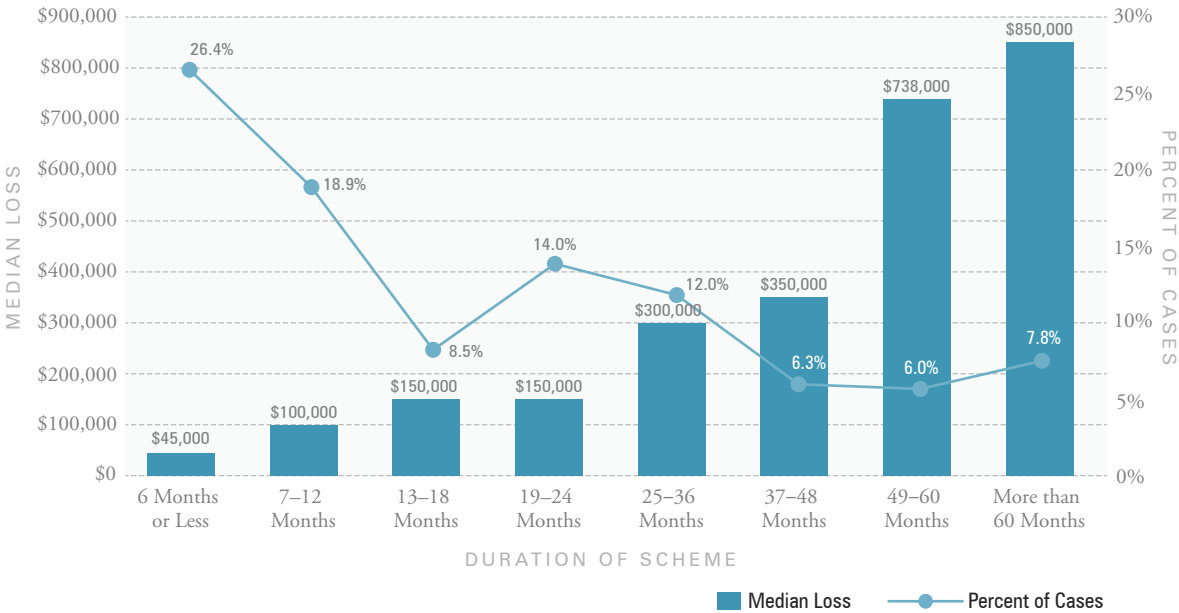
Scheme	Number of Cases	Percent of Cases
Corruption	45	57.0%
Non-Cash	21	26.6%
Cash on Hand	15	19.0%
Billing	12	15.2%
Expense Reimbursements	9	11.4%
Skimming	9	11.4%
Check Tampering	6	7.6%
Financial Statement Fraud	5	6.3%
Cash Larceny	4	5.1%
Payroll	2	2.5%
Register Disbursements	1	1.3%

Figure 17: Frequency and Median Loss of Corruption Cases by Region*



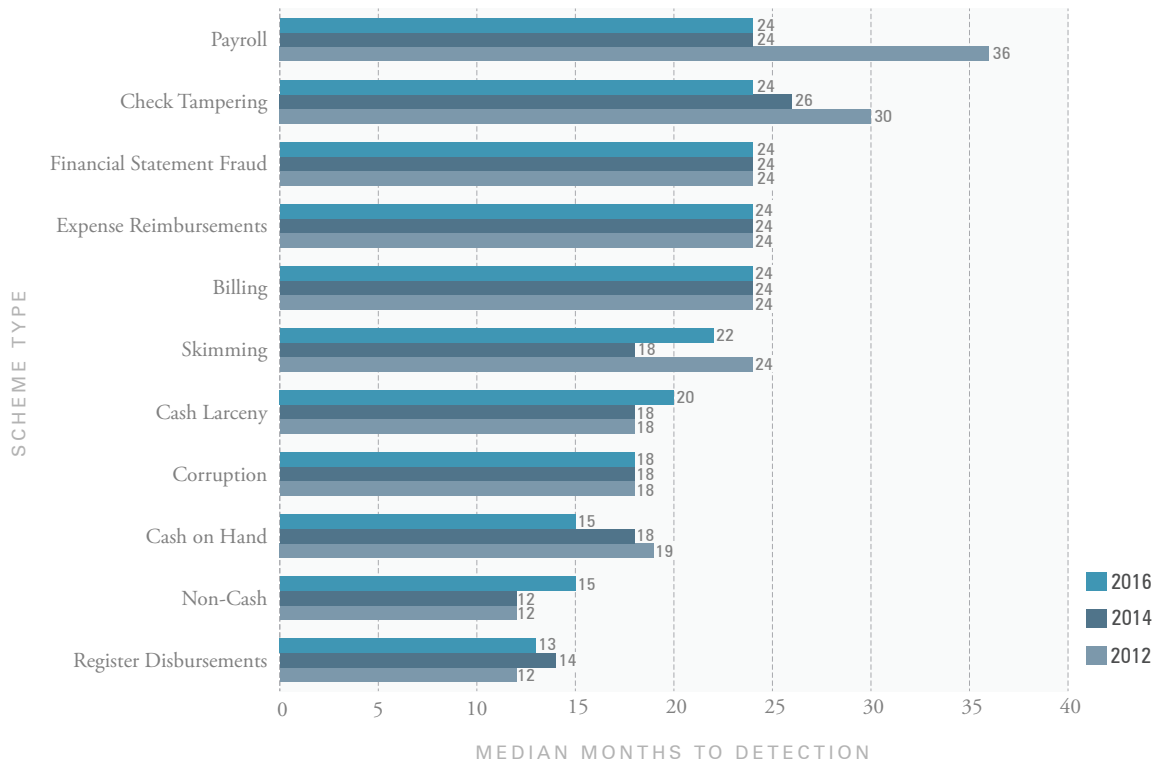
*For each region, the percentage shown indicates the proportion of cases in the region that involved corruption, and the dollar figure represents median loss for the corruption cases in the region.

Figure 18: Frequency and Median Loss Based on Duration of Fraud



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 19: Median Duration of Fraud Based on Scheme Type



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 20: Concealment Method by Scheme Type

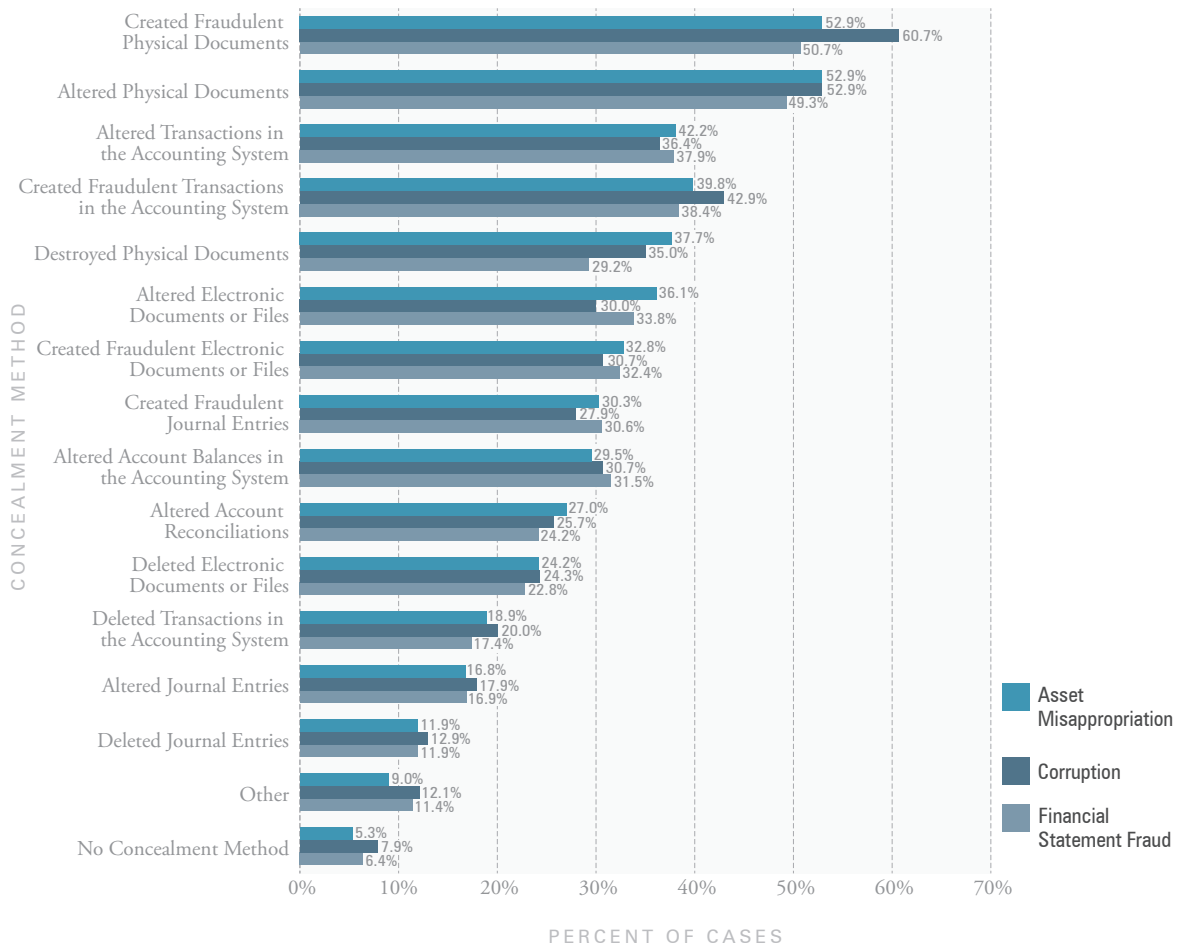


Figure 21: Initial Detection of Occupational Frauds

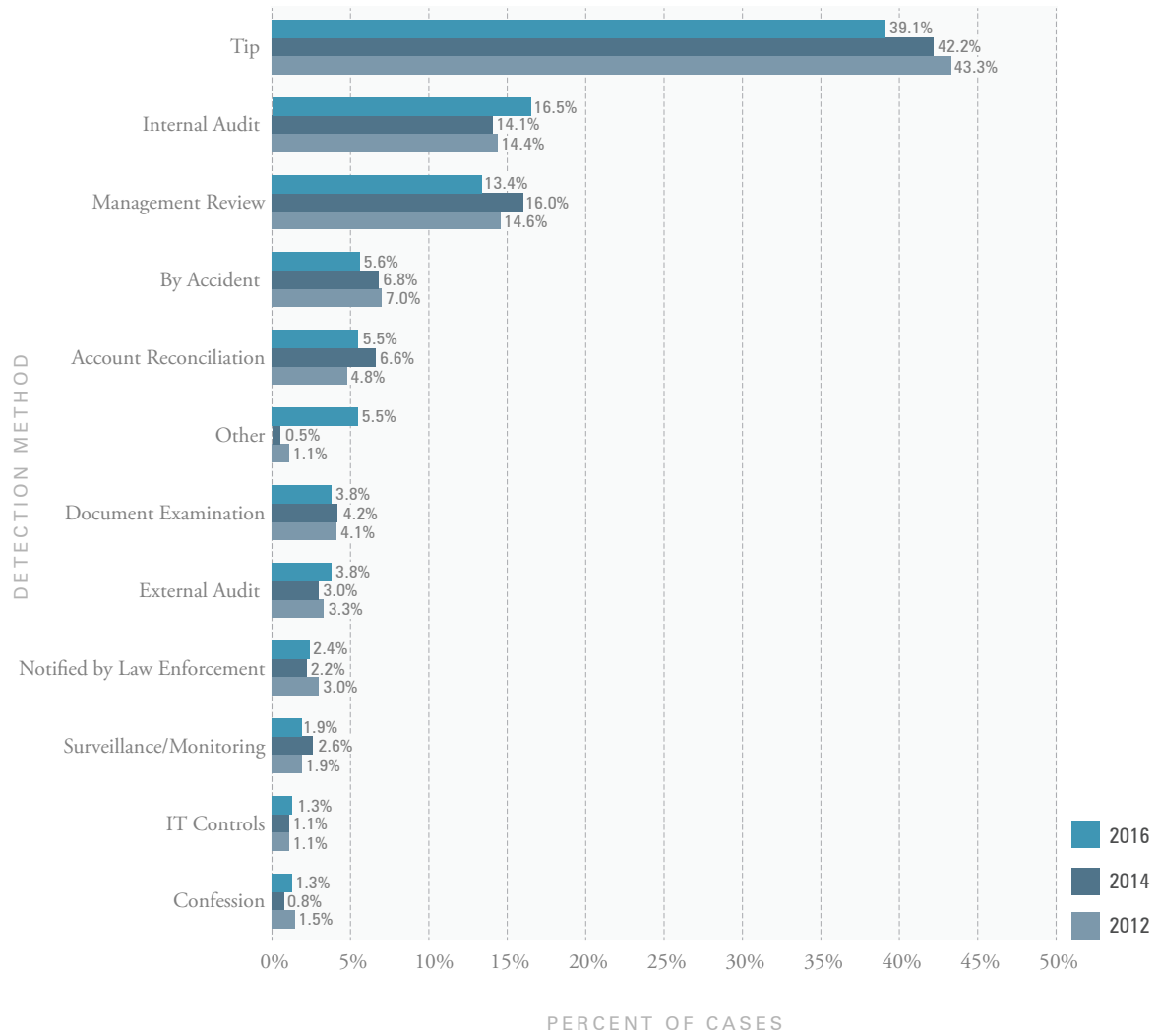
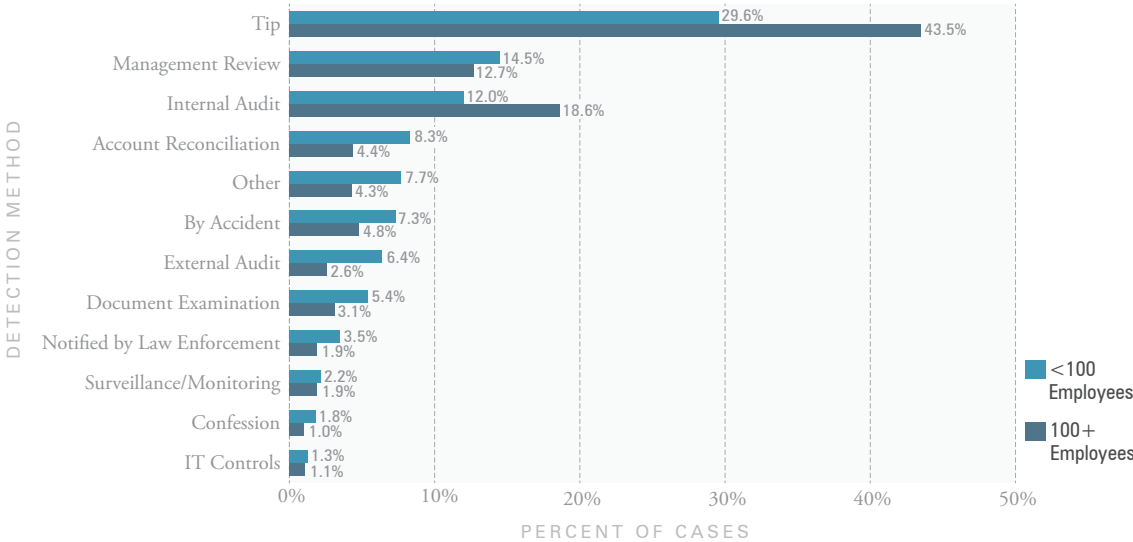


Figure 22: Detection Method by Size of Victim Organization



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 23: Detection Method by Region—United States

Detection Method	Percent of Cases
Tip	37.0%
Management Review	14.3%
Internal Audit	14.1%
By Accident	7.2%
Account Reconciliation	6.1%
Other	5.5%
Document Examination	4.8%
External Audit	4.0%
Notified by Law Enforcement	2.5%
Surveillance/Monitoring	1.9%
IT Controls	1.5%
Confession	1.2%

Figure 24: Detection Method by Region—Sub-Saharan Africa

Detection Method	Percent of Cases
Tip	37.3%
Internal Audit	16.2%
Management Review	10.2%
Account Reconciliation	7.4%
By Accident	5.3%
Other	4.9%
Document Examination	4.9%
External Audit	4.9%
IT Controls	3.2%
Notified by Law Enforcement	2.1%
Surveillance/Monitoring	2.1%
Confession	1.4%

Figure 25: Detection Method by Region—Asia-Pacific

Detection Method	Percent of Cases
Tip	45.2%
Internal Audit	15.8%
Management Review	13.1%
External Audit	5.9%
Account Reconciliation	5.0%
Notified by Law Enforcement	4.5%
Other	4.1%
By Accident	2.7%
Document Examination	1.4%
Surveillance/Monitoring	0.9%
IT Controls	0.9%
Confession	0.5%

Figure 26: Detection Method by Region—Latin America and the Caribbean

Detection Method	Percent of Cases
Tip	36.9%
Internal Audit	19.8%
Management Review	17.1%
Other	8.1%
Account Reconciliation	4.5%
By Accident	3.6%
Document Examination	2.7%
External Audit	2.7%
Surveillance/Monitoring	2.7%
Confession	1.8%
Notified by Law Enforcement	0.0%
IT Controls	0.0%

Figure 27: Detection Method by Region—Western Europe

Detection Method	Percent of Cases
Tip	40.9%
Internal Audit	16.4%
Management Review	11.8%
Other	8.2%
Document Examination	4.5%
External Audit	4.5%
By Accident	3.6%
Surveillance/Monitoring	3.6%
Notified by Law Enforcement	2.7%
Account Reconciliation	1.8%
Confession	1.8%
IT Controls	0.0%

Figure 28: Detection Method by Region—Eastern Europe and Western/Central Asia

Detection Method	Percent of Cases
Tip	47.4%
Internal Audit	20.6%
Management Review	12.4%
Other	6.2%
Account Reconciliation	4.1%
By Accident	2.1%
Confession	2.1%
Document Examination	1.0%
External Audit	1.0%
Notified by Law Enforcement	1.0%
Surveillance/Monitoring	1.0%
IT Controls	1.0%

Figure 29: Detection Method by Region—Southern Asia

Detection Method	Percent of Cases
Tip	53.1%
Internal Audit	21.9%
Management Review	9.4%
Account Reconciliation	5.2%
By Accident	4.2%
Surveillance/Monitoring	3.1%
Other	1.0%
External Audit	1.0%
Confession	1.0%
Document Examination	0.0%
Notified by Law Enforcement	0.0%
IT Controls	0.0%

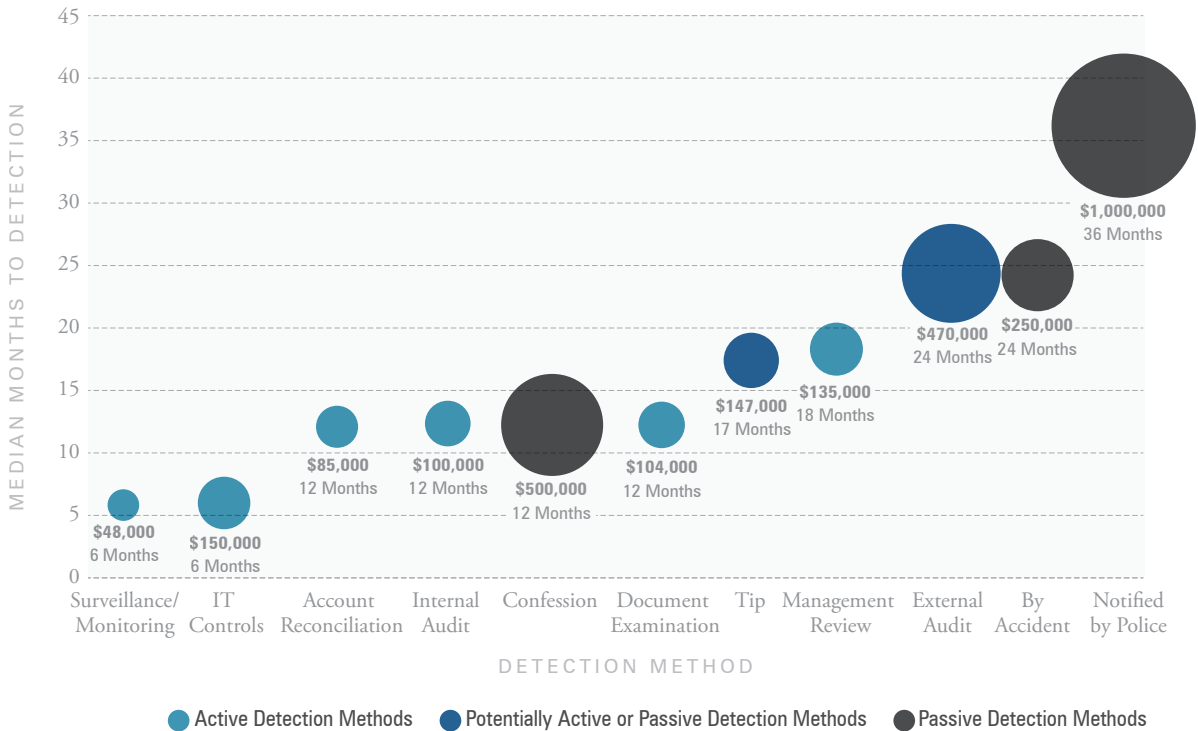
Figure 30: Detection Method by Region—Canada

Detection Method	Percent of Cases
Tip	32.6%
Management Review	20.9%
Internal Audit	16.3%
Other	9.3%
By Accident	7.0%
Account Reconciliation	3.5%
Document Examination	3.5%
External Audit	2.3%
Notified by Law Enforcement	2.3%
IT Controls	1.2%
Confession	1.2%
Surveillance/Monitoring	0.0%

Figure 31: Detection Method by Region—Middle East and North Africa

Detection Method	Percent of Cases
Tip	39.2%
Internal Audit	25.3%
Management Review	11.4%
Account Reconciliation	5.1%
Other	5.1%
By Accident	3.8%
Document Examination	3.8%
Surveillance/Monitoring	3.8%
External Audit	1.3%
Notified by Law Enforcement	1.3%
IT Controls	0.0%
Confession	0.0%

Figure 32: Median Loss and Median Duration by Detection Method



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 33: Source of Tips

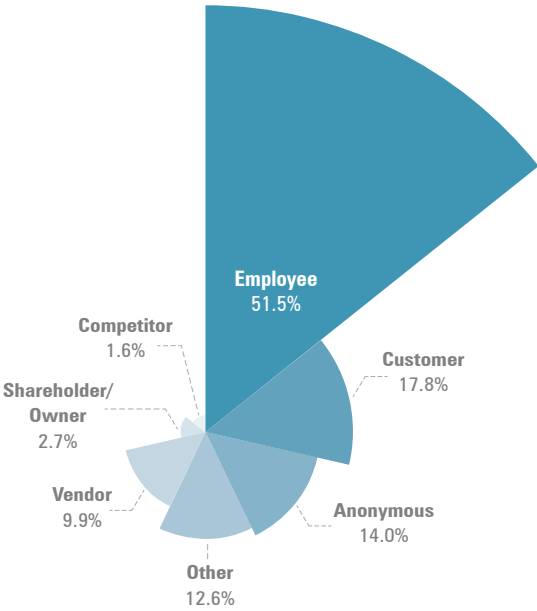
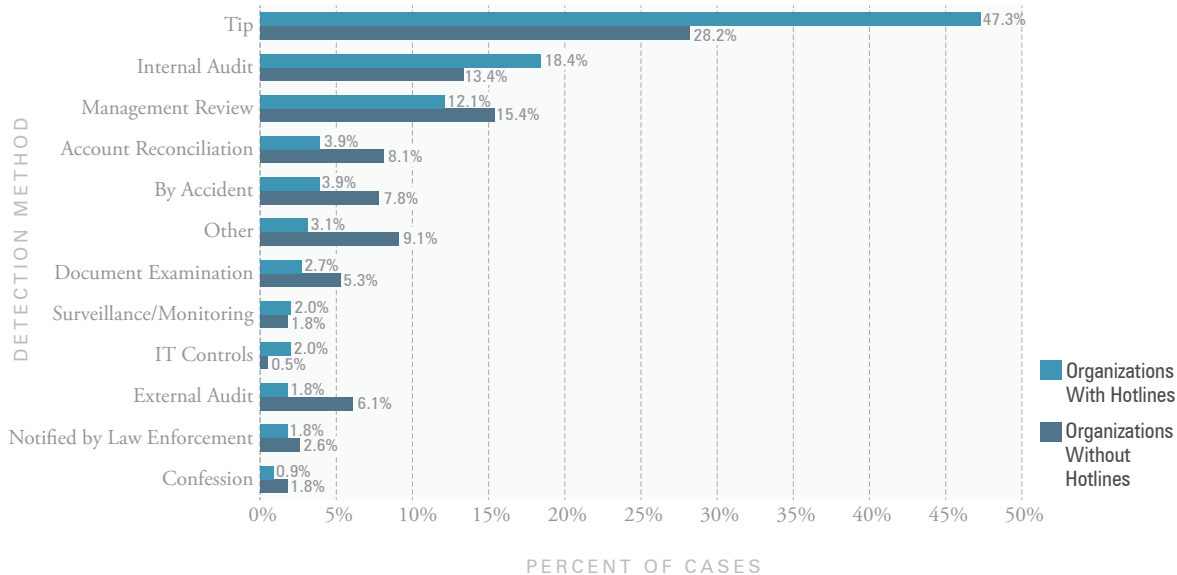
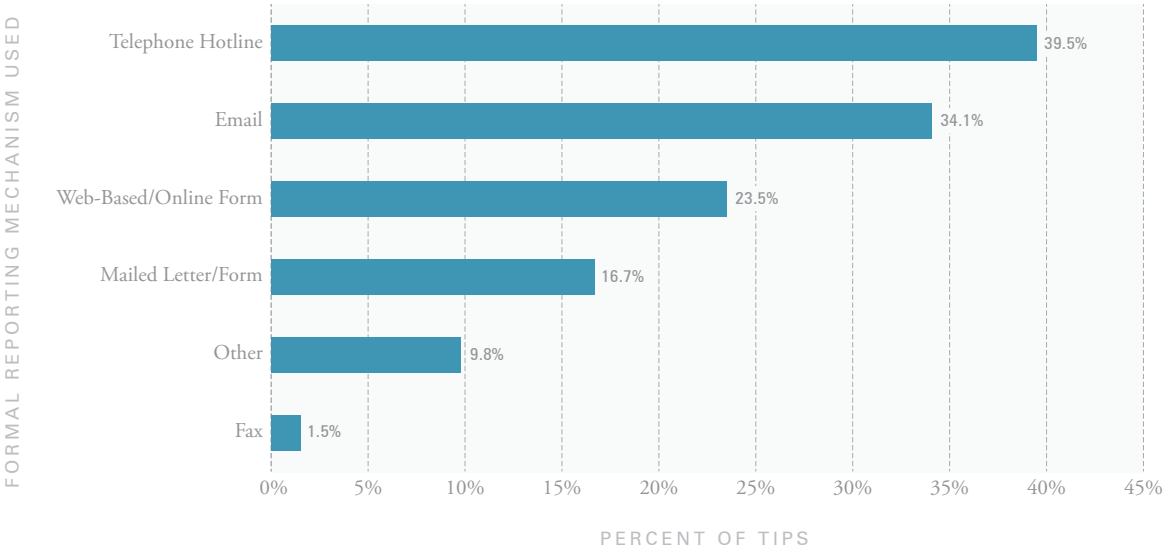


Figure 34: Impact of Hotlines



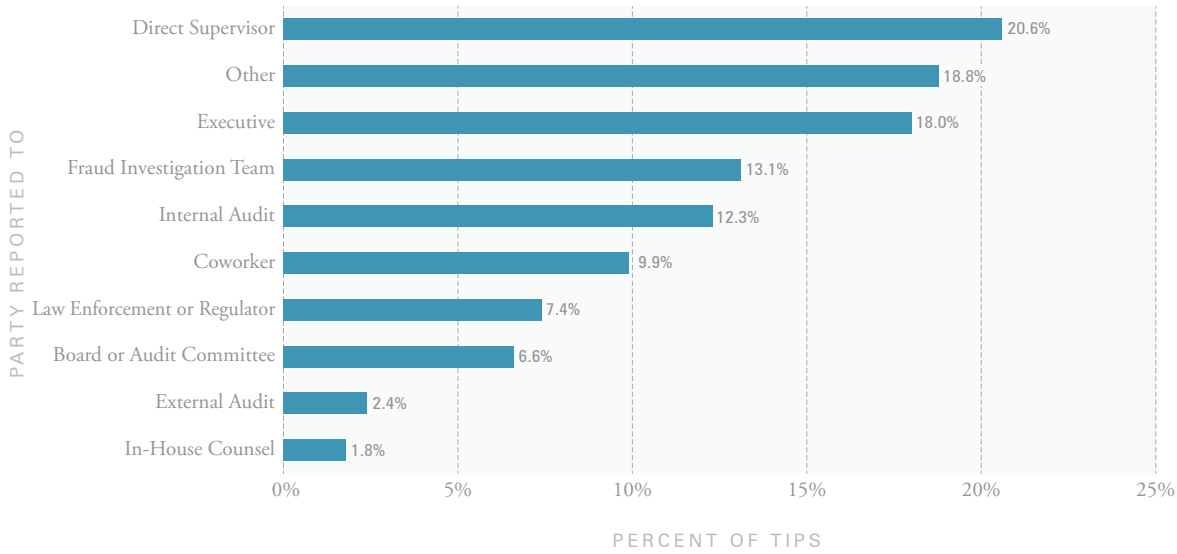
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 35: Formal Reporting Mechanism Used by Whistleblower



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 36: Party to Whom Whistleblower Initially Reported

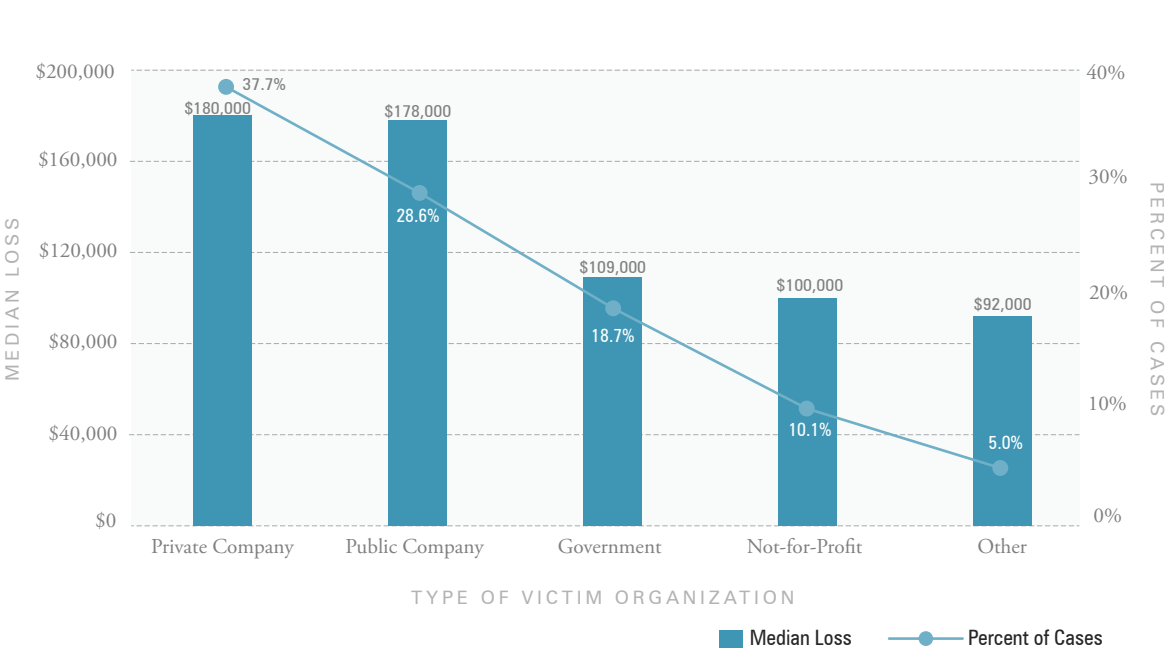


© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 37: Top Three Parties to Whom Tips Were Reported Based on Perpetrator’s Department

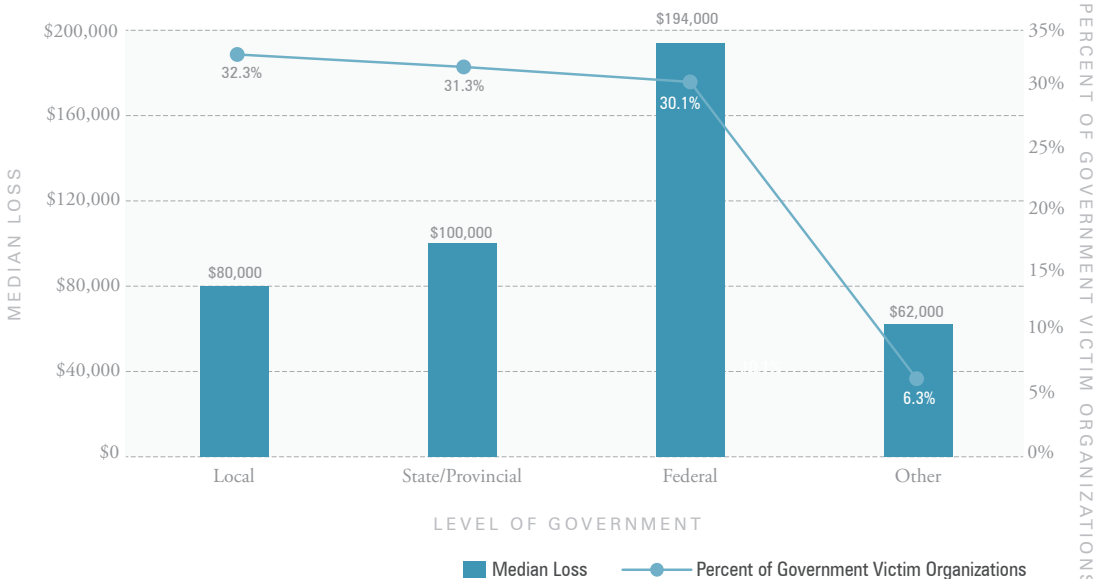
Operations	Accounting	Sales	Customer Service	Purchasing	Finance	Executive/Upper Management
Direct Supervisor (25.3%)	Executive (38.0%)	Direct Supervisor (26.4%)	Direct Supervisor (28.6%)	Executive (26.7%)	Direct Supervisor (21.1%)	Board or Audit Committee (22.2%)
Internal Audit (18.6%)	Direct Supervisor (27.1%)	Executive (20.8%)	Coworker (23.8%)	External Audit (26.7%)	Coworker (21.1%)	Law Enforcement or Regulator (20.4%)
Fraud Investigation Team or Executive (Both 15.7%)	Fraud Investigation Team (10.1%)	Fraud Investigation Team (17.0%)	Internal Audit (16.7%)	Direct Supervisor or Fraud Investigation Team (Both 16.7%)	Executive (21.1%)	Executive (18.5%)

Figure 38: Type of Victim Organization—Frequency and Median Loss



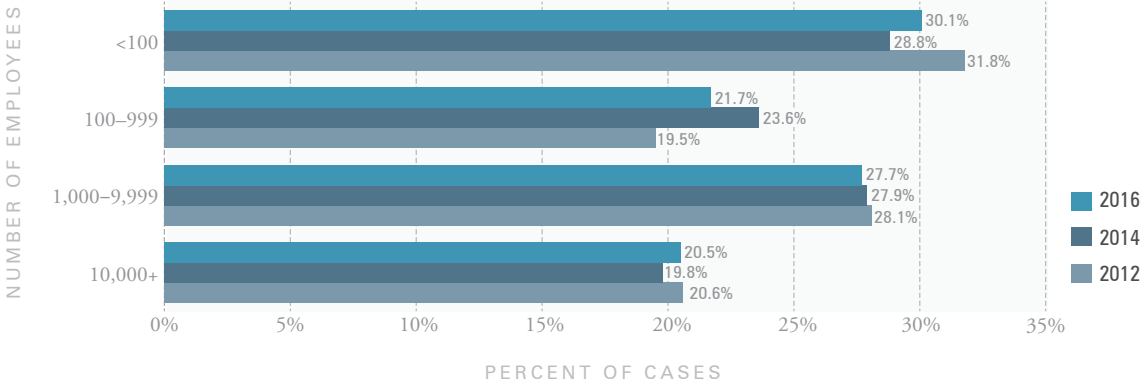
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 39: Level of Government—Frequency and Median Loss



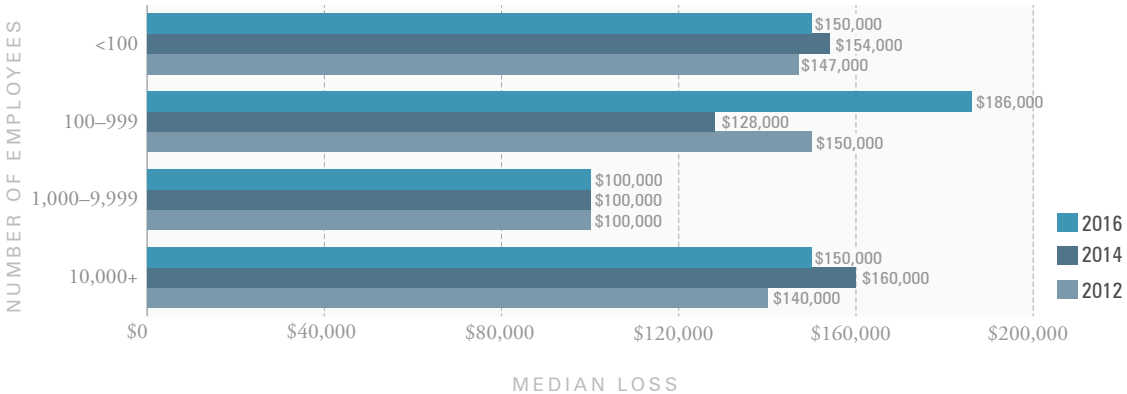
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 40: Size of Victim Organization—Frequency



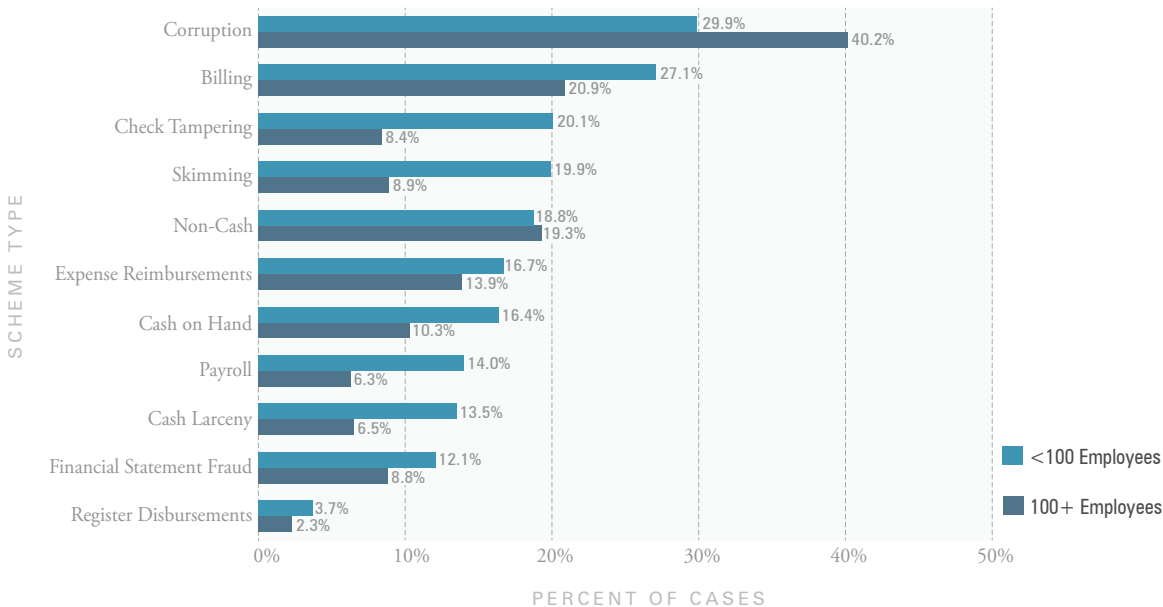
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 41: Size of Victim Organization—Median Loss



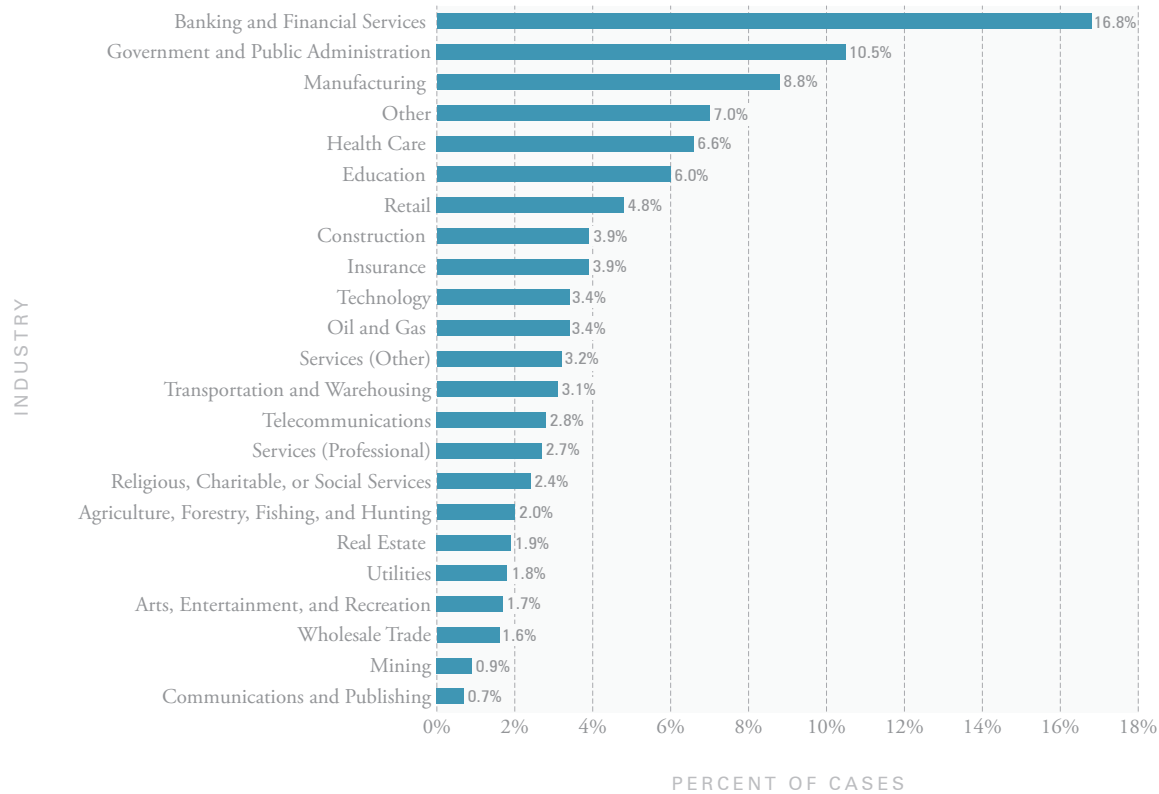
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 42: Scheme Type by Size of Victim Organization



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 43: Industry of Victim Organizations



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 44: Industry of Victim Organizations (Sorted by Median Loss)

Industry	Number of Cases	Percent of Cases	Median Loss
Mining	20	0.9%	\$500,000
Wholesale Trade	36	1.6%	\$450,000
Services (Professional)	60	2.7%	\$310,000
Agriculture, Forestry, Fishing, and Hunting	44	2.0%	\$300,000
Oil and Gas	74	3.4%	\$275,000
Construction	86	3.9%	\$259,000
Technology	74	3.4%	\$235,000
Communications and Publishing	16	0.7%	\$225,000
Real Estate	41	1.9%	\$200,000
Manufacturing	192	8.8%	\$194,000
Telecommunications	62	2.8%	\$194,000
Banking and Financial Services	368	16.8%	\$192,000
Transportation and Warehousing	68	3.1%	\$143,000
Government and Public Administration	229	10.5%	\$133,000
Health Care	144	6.6%	\$120,000
Insurance	85	3.9%	\$107,000
Utilities	40	1.8%	\$102,000
Other	153	7.0%	\$100,000
Services (Other)	70	3.2%	\$100,000
Retail	104	4.8%	\$85,000
Religious, Charitable, or Social Services	52	2.4%	\$82,000
Arts, Entertainment, and Recreation	37	1.7%	\$75,000
Education	132	6.0%	\$62,000

Figure 45: Frequency of Schemes Based on Industry

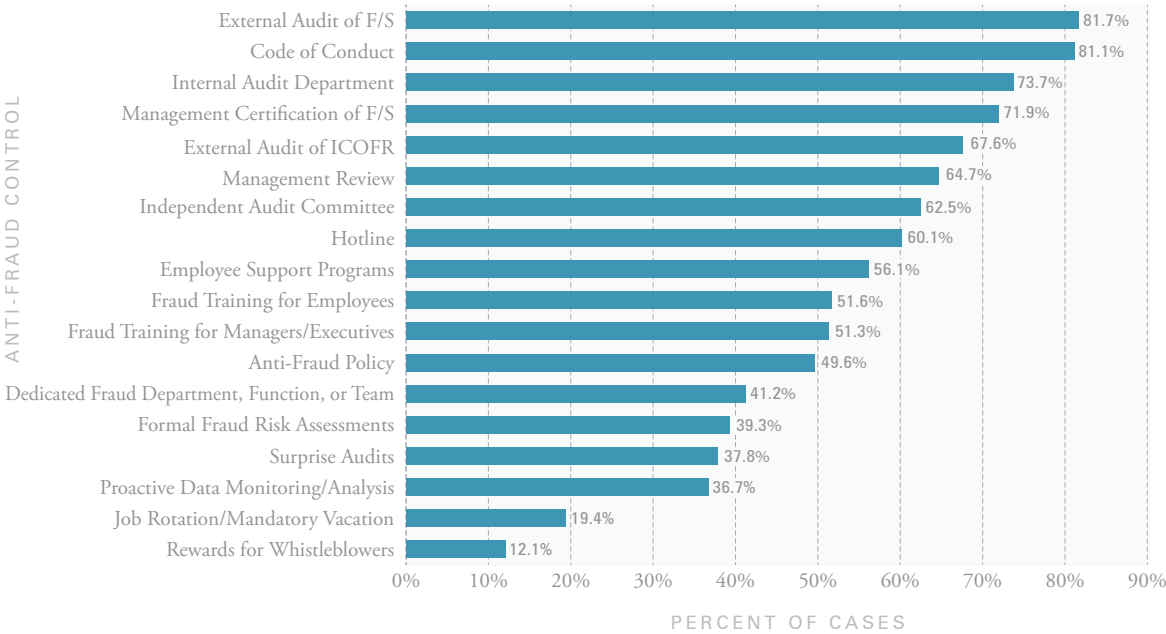
Industry/Scheme	Banking and Financial Services	Government and Public Administration	Manufacturing	Health Care	Education	Retail	Construction	Insurance	Oil and Gas	Technology	Services (Other)	Transportation and Warehousing	Telecommunications	Services (Professional)	Religious, Charitable, or Social Services
Cases	368	229	192	144	132	104	86	85	74	74	70	68	62	60	52
Billing	9.5%	25.3%	32.8%	31.3%	34.1%	15.4%	27.9%	17.6%	20.3%	29.7%	22.9%	22.1%	12.9%	26.7%	25.0%
Cash Larceny	11.1%	7.9%	5.2%	9.7%	13.6%	12.5%	8.1%	4.7%	4.1%	5.4%	15.7%	4.4%	1.6%	13.3%	9.6%
Cash on Hand	17.9%	10.5%	8.3%	11.1%	17.4%	11.5%	7.0%	4.7%	9.5%	8.1%	22.9%	5.9%	4.8%	20.0%	13.5%
Check Tampering	9.5%	9.2%	13.5%	14.6%	7.6%	9.6%	10.5%	17.6%	4.1%	5.4%	18.6%	10.3%	6.5%	31.7%	25.0%
Corruption	37.5%	38.4%	48.4%	30.6%	31.8%	32.7%	36.0%	28.2%	48.6%	44.6%	28.6%	51.5%	41.9%	16.7%	28.8%
Expense Reimbursements	5.4%	15.7%	22.9%	20.1%	15.9%	8.7%	20.9%	9.4%	10.8%	27.0%	12.9%	8.8%	19.4%	16.7%	25.0%
Financial Statement Fraud	12.0%	7.9%	10.9%	13.2%	5.3%	5.8%	17.4%	7.1%	6.8%	12.2%	17.1%	5.9%	9.7%	11.7%	3.8%
Non-Cash	10.6%	14.8%	30.2%	13.2%	17.4%	32.7%	22.1%	5.9%	17.6%	18.9%	22.9%	29.4%	38.7%	10.0%	13.5%
Payroll	3.8%	13.5%	11.5%	9.7%	7.6%	3.8%	16.3%	5.9%	8.1%	2.7%	11.4%	7.4%	3.2%	11.7%	13.5%
Register Disbursements	2.7%	1.7%	5.7%	2.1%	1.5%	8.7%	1.2%	0.0%	0.0%	1.4%	5.7%	2.9%	3.2%	1.7%	1.9%
Skimming	6.8%	14.0%	8.3%	12.5%	25.0%	17.3%	15.1%	10.6%	8.1%	5.4%	21.4%	11.8%	6.5%	18.3%	19.2%



Figure 46: Corruption Cases by Industry

Industry	Total Number of Cases	Number of Corruption Cases	Percent of Cases Involving Corruption
Mining	20	11	55.0%
Transportation and Warehousing	68	35	51.5%
Oil and Gas	74	36	48.6%
Manufacturing	192	93	48.4%
Technology	74	33	44.6%
Telecommunications	62	26	41.9%
Wholesale Trade	36	15	41.7%
Government and Public Administration	229	88	38.4%
Banking and Financial Services	368	138	37.5%
Communications and Publishing	16	6	37.5%
Other	153	57	37.3%
Agriculture, Forestry, Fishing, and Hunting	44	16	36.4%
Construction	86	31	36.0%
Utilities	40	14	35.0%
Real Estate	41	14	34.1%
Retail	104	34	32.7%
Education	132	42	31.8%
Health Care	144	44	30.6%
Arts, Entertainment, and Recreation	37	11	29.7%
Religious, Charitable, or Social Services	52	15	28.8%
Services (Other)	70	20	28.6%
Insurance	85	24	28.2%
Services (Professional)	60	10	16.7%

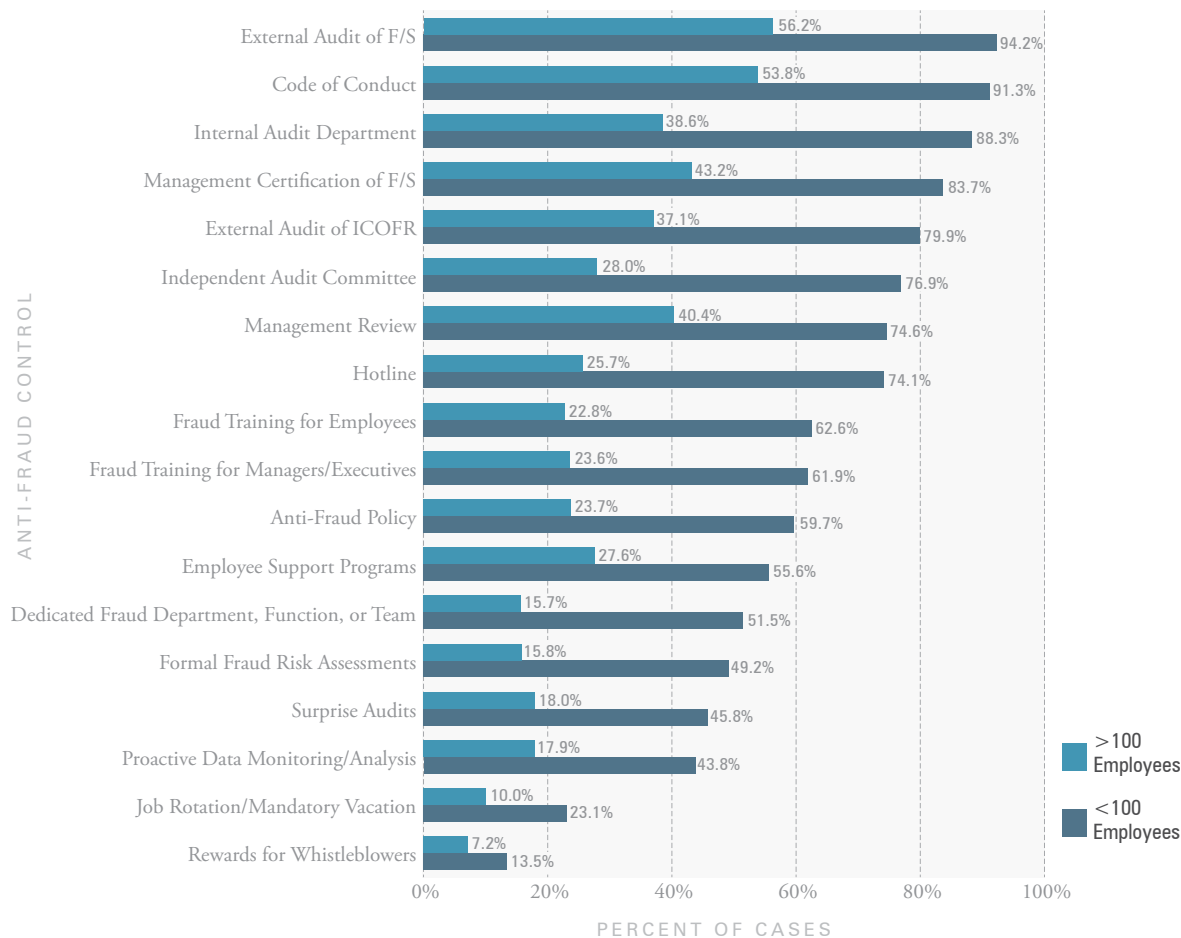
Figure 47: Frequency of Anti-Fraud Controls



Key:

External Audit of F/S = Independent External Audits of the Organization’s Financial Statements
 Management Certification of F/S = Management Certification of the Organization’s Financial Statements
 External Audit of ICOFR = Independent Audits of the Organization’s Internal Controls Over Financial Reporting

Figure 48: Frequency of Anti-Fraud Controls by Size of Victim Organization



Key:

External Audit of F/S = Independent external audits of the organization's financial statements

Management Certification of F/S = Management certification of the organization's financial statements

External Audit of ICOFR = Independent audits of the organization's internal controls over financial reporting

Figure 49: Change in Implementation Rates of Anti-Fraud Controls

Control	2010 Implementation Rate	2016 Implementation Rate	Change from 2010–2016
Hotline	51.2%	60.1%	8.9%
Fraud Training for Employees	44.0%	51.6%	7.6%
Anti-Fraud Policy	42.8%	49.6%	6.8%
Code of Conduct	74.8%	81.1%	6.3%
Management Review	58.8%	64.7%	5.9%
Surprise Audits	32.3%	37.8%	5.6%
Fraud Training for Managers/Executives	46.2%	51.3%	5.2%
Independent Audit Committee	58.4%	62.5%	4.1%
Management Certification of Financial Statements	67.9%	71.9%	4.0%
Rewards for Whistleblowers	8.6%	12.1%	3.5%
Job Rotation/Mandatory Vacation	16.6%	19.4%	2.8%
External Audit of Internal Controls over Financial Reporting	65.4%	67.6%	2.2%
Employee Support Programs	54.6%	56.1%	1.5%
External Audit of Financial Statements	80.9%	81.7%	0.8%

Figure 50: Frequency of Anti-Fraud Controls—United States

Control	Percent of Cases
Code of Conduct	74.6%
External Audit of Financial Statements	74.2%
Employee Support Programs	66.0%
Management Certification of Financial Statements	64.1%
Internal Audit Department	61.4%
External Audit of Internal Controls over Financial Reporting	59.8%
Management Review	57.3%
Hotline	54.5%
Independent Audit Committee	53.8%
Fraud Training for Managers/Executives	50.5%
Fraud Training for Employees	49.3%
Anti-Fraud Policy	45.2%
Formal Fraud Risk Assessments	36.5%
Dedicated Fraud Department, Function, or Team	36.4%
Proactive Data Monitoring/Analysis	35.5%
Surprise Audits	31.8%
Job Rotation/Mandatory Vacation	16.1%
Rewards for Whistleblowers	12.7%

Figure 51: Frequency of Anti-Fraud Controls—Sub-Saharan Africa

Control	Percent of Cases
Code of Conduct	91.9%
Internal Audit Department	91.6%
External Audit of Financial Statements	88.8%
Management Certification of Financial Statements	79.9%
External Audit of Internal Controls over Financial Reporting	77.6%
Management Review	70.8%
Independent Audit Committee	69.6%
Hotline	67.7%
Anti-Fraud Policy	59.2%
Fraud Training for Employees	55.0%
Fraud Training for Managers/Executives	55.0%
Surprise Audits	52.8%
Employee Support Programs	50.9%
Formal Fraud Risk Assessments	48.2%
Dedicated Fraud Department, Function, or Team	47.7%
Proactive Data Monitoring/Analysis	38.5%
Job Rotation/Mandatory Vacation	27.8%
Rewards for Whistleblowers	20.0%

Figure 52: Frequency of Anti-Fraud Controls—Asia-Pacific

Control	Percent of Cases
External Audit of Financial Statements	88.2%
Code of Conduct	85.2%
Internal Audit Department	83.6%
Management Certification of Financial Statements	80.2%
External Audit of Internal Controls over Financial Reporting	74.5%
Management Review	72.3%
Independent Audit Committee	68.1%
Hotline	65.7%
Fraud Training for Employees	53.3%
Fraud Training for Managers/Executives	50.8%
Employee Support Programs	48.3%
Anti-Fraud Policy	46.8%
Dedicated Fraud Department, Function, or Team	44.4%
Surprise Audits	41.8%
Proactive Data Monitoring/Analysis	34.4%
Formal Fraud Risk Assessments	32.6%
Job Rotation/Mandatory Vacation	24.6%
Rewards for Whistleblowers	7.8%

Figure 53: Frequency of Anti-Fraud Controls—Latin America and the Caribbean

Control	Percent of Cases
Code of Conduct	84.8%
External Audit of Financial Statements	82.2%
Internal Audit Department	80.7%
Management Certification of Financial Statements	70.3%
Hotline	68.5%
Management Review	68.0%
Independent Audit Committee	67.6%
External Audit of Internal Controls over Financial Reporting	66.7%
Fraud Training for Employees	54.4%
Fraud Training for Managers/Executives	53.9%
Anti-Fraud Policy	51.0%
Employee Support Programs	46.1%
Dedicated Fraud Department, Function, or Team	44.0%
Formal Fraud Risk Assessments	38.1%
Surprise Audits	31.0%
Proactive Data Monitoring/Analysis	26.7%
Job Rotation/Mandatory Vacation	17.0%
Rewards for Whistleblowers	6.1%

Figure 54: Frequency of Anti-Fraud Controls—Western Europe

Control	Percent of Cases
External Audit of Financial Statements	88.8%
Code of Conduct	83.7%
Internal Audit Department	80.7%
Management Certification of Financial Statements	76.9%
External Audit of Internal Controls over Financial Reporting	75.8%
Independent Audit Committee	75.7%
Management Review	74.7%
Hotline	63.8%
Anti-Fraud Policy	54.9%
Fraud Training for Employees	54.4%
Fraud Training for Managers/Executives	52.5%
Employee Support Programs	51.2%
Formal Fraud Risk Assessments	49.0%
Dedicated Fraud Department, Function, or Team	45.8%
Proactive Data Monitoring/Analysis	37.1%
Surprise Audits	27.4%
Job Rotation/Mandatory Vacation	17.7%
Rewards for Whistleblowers	6.1%

Figure 55: Frequency of Anti-Fraud Controls—Eastern Europe and Western/Central Asia

Control	Percent of Cases
Code of Conduct	90.9%
External Audit of Financial Statements	88.2%
Internal Audit Department	82.8%
Management Certification of Financial Statements	75.0%
Independent Audit Committee	70.3%
Management Review	70.1%
External Audit of Internal Controls over Financial Reporting	69.4%
Hotline	65.6%
Anti-Fraud Policy	61.4%
Fraud Training for Employees	60.5%
Fraud Training for Managers/Executives	56.8%
Dedicated Fraud Department, Function, or Team	50.0%
Formal Fraud Risk Assessments	45.3%
Proactive Data Monitoring/Analysis	39.0%
Surprise Audits	35.3%
Employee Support Programs	28.6%
Job Rotation/Mandatory Vacation	17.6%
Rewards for Whistleblowers	1.1%

Figure 56: Frequency of Anti-Fraud Controls—Southern Asia

Control	Percent of Cases
External Audit of Financial Statements	96.5%
Internal Audit Department	94.7%
Management Certification of Financial Statements	91.6%
Code of Conduct	89.0%
External Audit of Internal Controls over Financial Reporting	86.7%
Independent Audit Committee	82.6%
Management Review	79.8%
Hotline	70.5%
Fraud Training for Managers/Executives	61.2%
Anti-Fraud Policy	58.1%
Surprise Audits	57.1%
Fraud Training for Employees	54.9%
Dedicated Fraud Department, Function, or Team	53.8%
Proactive Data Monitoring/Analysis	44.7%
Formal Fraud Risk Assessments	44.6%
Employee Support Programs	34.6%
Job Rotation/Mandatory Vacation	23.5%
Rewards for Whistleblowers	20.3%

Figure 57: Frequency of Anti-Fraud Controls—Canada

Control	Percent of Cases
External Audit of Financial Statements	83.3%
Management Certification of Financial Statements	79.7%
Code of Conduct	79.2%
Employee Support Programs	77.0%
External Audit of Internal Controls over Financial Reporting	65.8%
Internal Audit Department	64.7%
Management Review	61.5%
Independent Audit Committee	59.2%
Hotline	52.5%
Anti-Fraud Policy	39.0%
Dedicated Fraud Department, Function, or Team	38.6%
Fraud Training for Employees	38.0%
Proactive Data Monitoring/Analysis	37.2%
Formal Fraud Risk Assessments	35.5%
Fraud Training for Managers/Executives	35.4%
Surprise Audits	31.1%
Job Rotation/Mandatory Vacation	16.2%
Rewards for Whistleblowers	8.0%

Figure 58: Frequency of Anti-Fraud Controls—Middle East and North Africa

Control	Percent of Cases
External Audit of Financial Statements	95.9%
Internal Audit Department	90.9%
Management Certification of Financial Statements	82.4%
Code of Conduct	81.1%
External Audit of Internal Controls over Financial Reporting	80.6%
Independent Audit Committee	75.7%
Management Review	73.2%
Hotline	62.2%
Surprise Audits	61.6%
Anti-Fraud Policy	50.7%
Fraud Training for Employees	47.9%
Proactive Data Monitoring/Analysis	46.5%
Dedicated Fraud Department, Function, or Team	44.6%
Fraud Training for Managers/Executives	44.4%
Formal Fraud Risk Assessments	41.7%
Employee Support Programs	25.4%
Job Rotation/Mandatory Vacation	24.6%
Rewards for Whistleblowers	14.9%

Figure 59: Median Loss Based on Presence of Anti-Fraud Controls

Control	Percent of Cases	Control in Place	Control Not in Place	Percent Reduction
Proactive Data Monitoring/Analysis	36.7%	\$92,000	\$200,000	54.0%
Management Review	64.7%	\$100,000	\$200,000	50.0%
Hotline	60.1%	\$100,000	\$200,000	50.0%
Management Certification of Financial Statements	71.9%	\$104,000	\$205,000	49.3%
Surprise Audits	37.8%	\$100,000	\$195,000	48.7%
Dedicated Fraud Department, Function, or Team	41.2%	\$100,000	\$192,000	47.9%
Job Rotation/Mandatory Vacation	19.4%	\$89,000	\$170,000	47.6%
External Audit of Internal Controls over Financial Reporting	67.6%	\$105,000	\$200,000	47.5%
Fraud Training for Managers/Executives	51.3%	\$100,000	\$190,000	47.4%
Fraud Training for Employees	51.6%	\$100,000	\$188,000	46.8%
Formal Fraud Risk Assessments	39.3%	\$100,000	\$187,000	46.5%
Employee Support Programs	56.1%	\$100,000	\$183,000	45.4%
Anti-Fraud Policy	49.6%	\$100,000	\$175,000	42.9%
Internal Audit Department	73.7%	\$123,000	\$215,000	42.8%
Code of Conduct	81.1%	\$120,000	\$200,000	40.0%
Rewards for Whistleblowers	12.1%	\$100,000	\$163,000	38.7%
Independent Audit Committee	62.5%	\$114,000	\$180,000	36.7%
External Audit of Financial Statements	81.7%	\$150,000	\$175,000	14.3%

Figure 60: Median Duration of Fraud Based on Presence of Anti-Fraud Controls

Control	Percent of Cases	Control in Place	Control Not in Place	Percent Reduction
Surprise Audits	37.8%	12 Months	24 Months	50.0%
Proactive Data Monitoring/Analysis	36.7%	12 Months	24 Months	50.0%
Dedicated Fraud Department, Function, or Team	41.2%	12 Months	24 Months	50.0%
Hotline	60.1%	12 Months	24 Months	50.0%
Formal Fraud Risk Assessments	39.3%	12 Months	24 Months	50.0%
Management Review	64.7%	12 Months	24 Months	50.0%
Independent Audit Committee	62.5%	12 Months	24 Months	50.0%
Internal Audit Department	73.7%	12 Months	24 Months	50.0%
External Audit of Internal Controls over Financial Reporting	67.6%	12 Months	24 Months	50.0%
Management Certification of Financial Statements	71.9%	12 Months	24 Months	50.0%
Code of Conduct	81.1%	13 Months	24 Months	45.8%
Job Rotation/Mandatory Vacation	19.4%	10 Months	18 Months	44.4%
Anti-Fraud Policy	49.6%	12 Months	21 Months	42.9%
Fraud Training for Employees	51.6%	12 Months	20 Months	40.0%
Fraud Training for Managers/Executives	51.3%	12 Months	20 Months	40.0%
Rewards for Whistleblowers	12.1%	11 Months	18 Months	38.9%
External Audit of Financial Statements	81.7%	15 Months	24 Months	37.5%
Employee Support Programs	56.1%	12 Months	18 Months	33.3%

Figure 61: Background Check Run on Perpetrator Before Being Hired

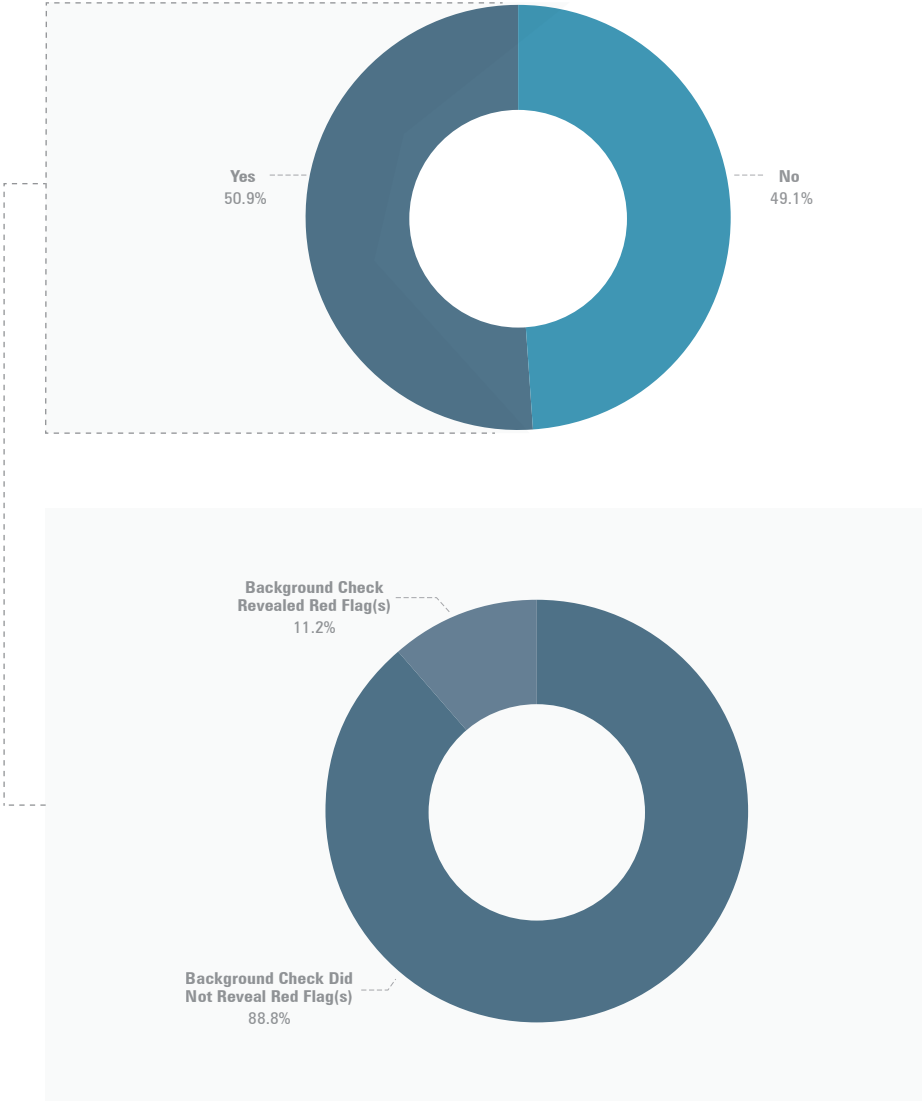
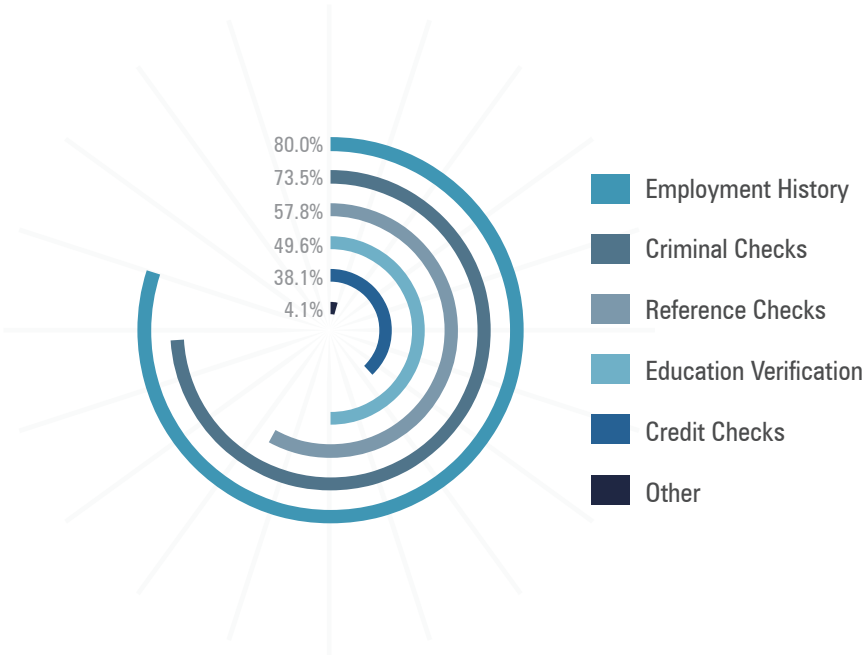
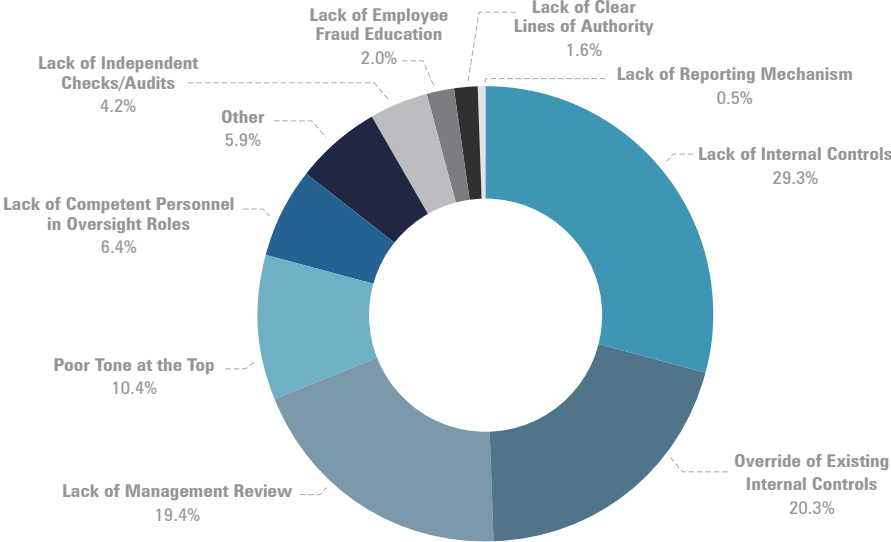


Figure 62: Type(s) of Background Checks Run on Perpetrator Before Being Hired



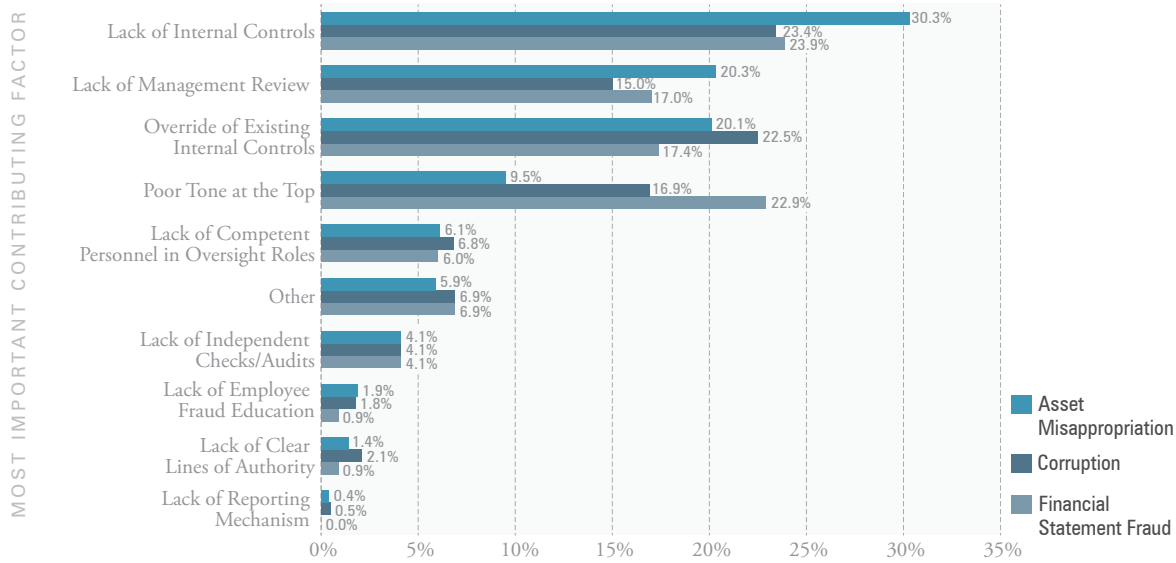
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 63: Primary Internal Control Weakness Observed by CFE



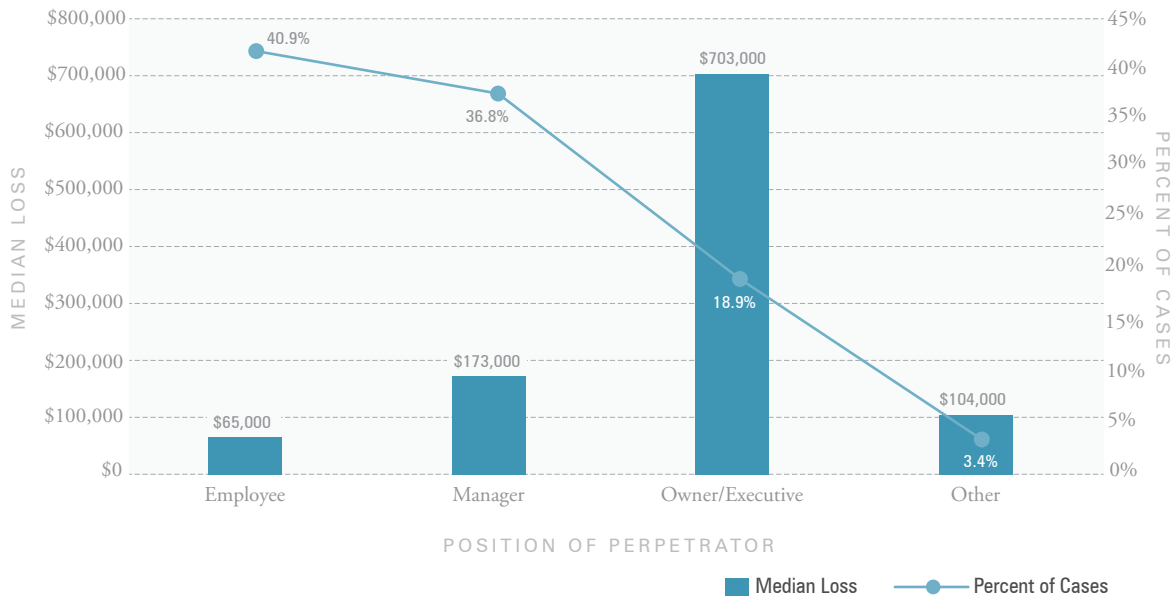
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 64: Primary Internal Control Weakness by Scheme Type



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 65: Position of Perpetrator—Frequency and Median Loss

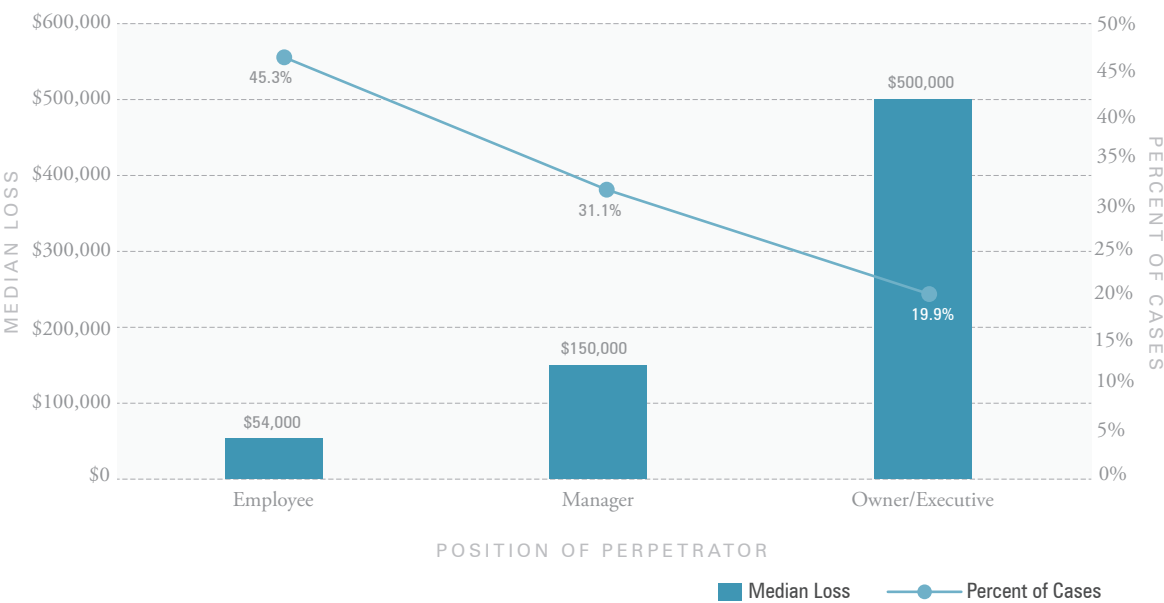


© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 66: Median Duration of Fraud Based on Position

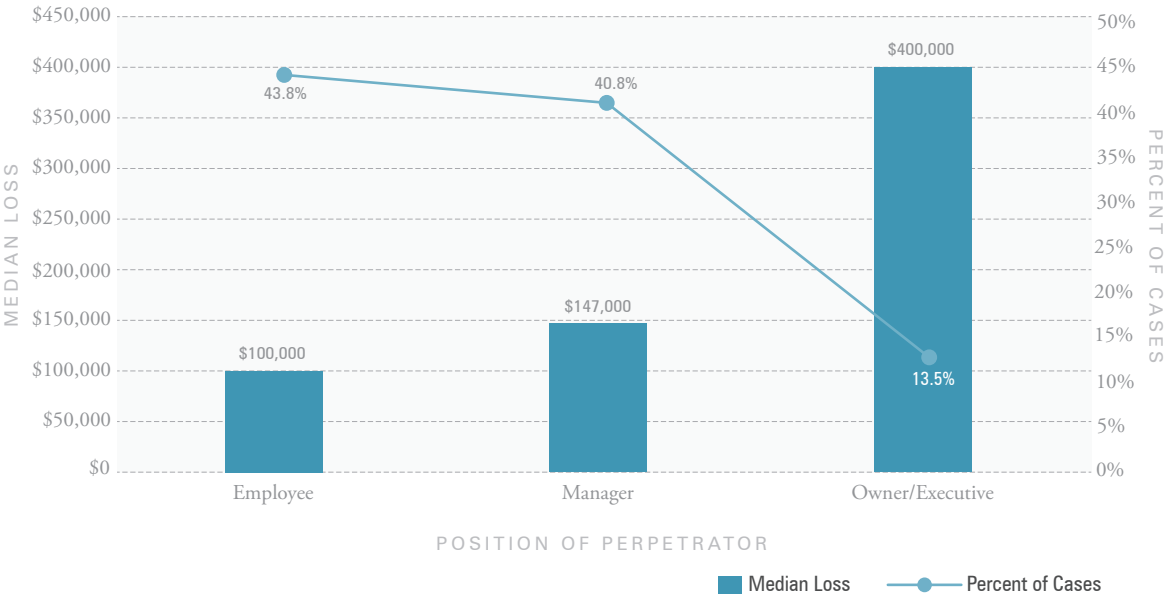
Position	Median Months to Detect
Employee	12
Manager	18
Owner/Executive	24
Other	18

Figure 67: Frequency and Median Loss Based on Position of Perpetrator—United States



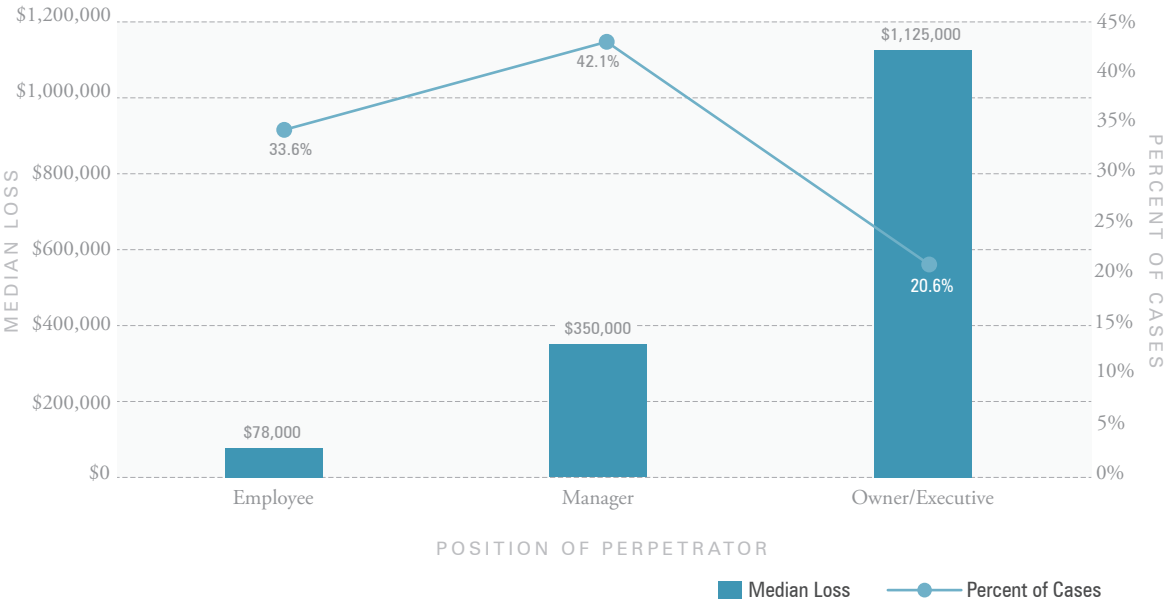
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 68: Frequency and Median Loss Based on Position of Perpetrator—Sub-Saharan Africa



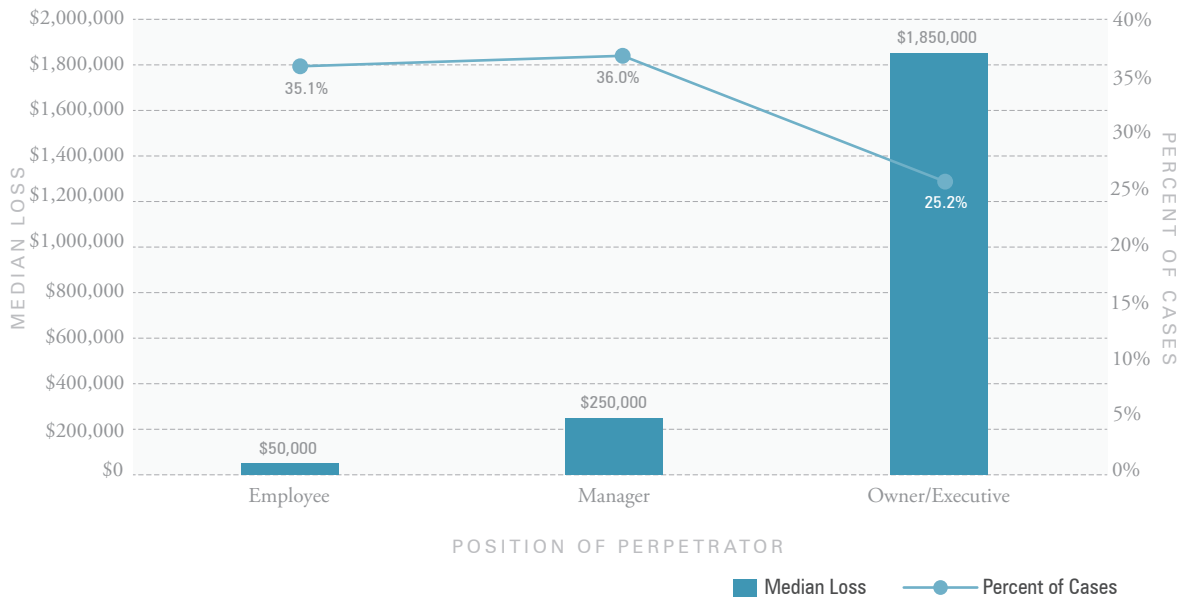
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 69: Frequency and Median Loss Based on Position of Perpetrator—Asia-Pacific



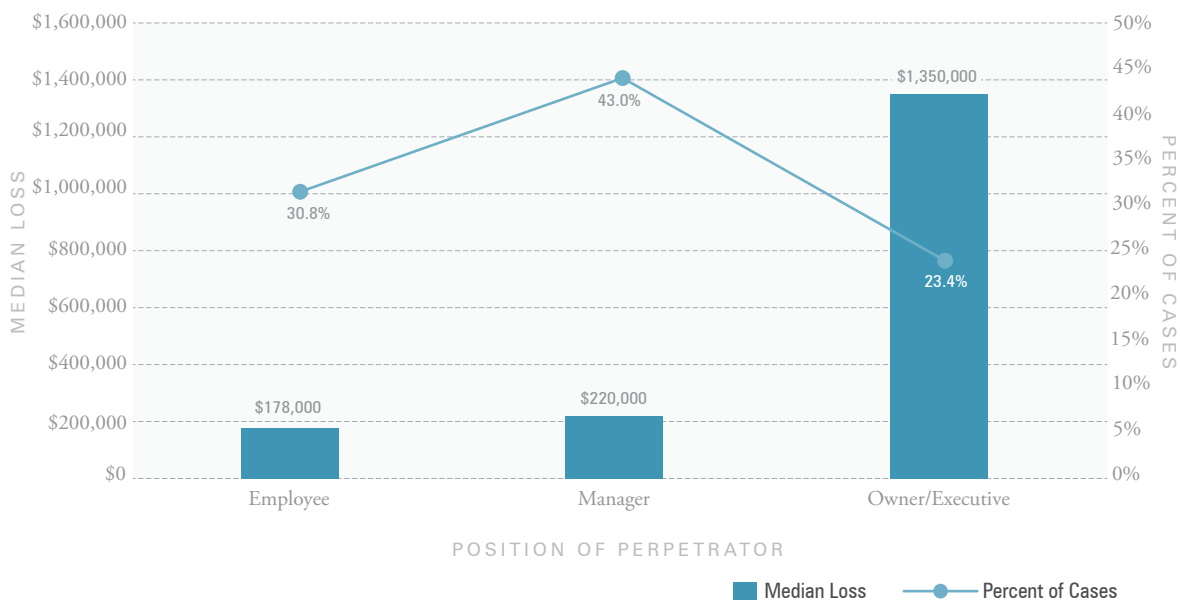
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 70: Frequency and Median Loss Based on Position of Perpetrator—Latin America and the Caribbean



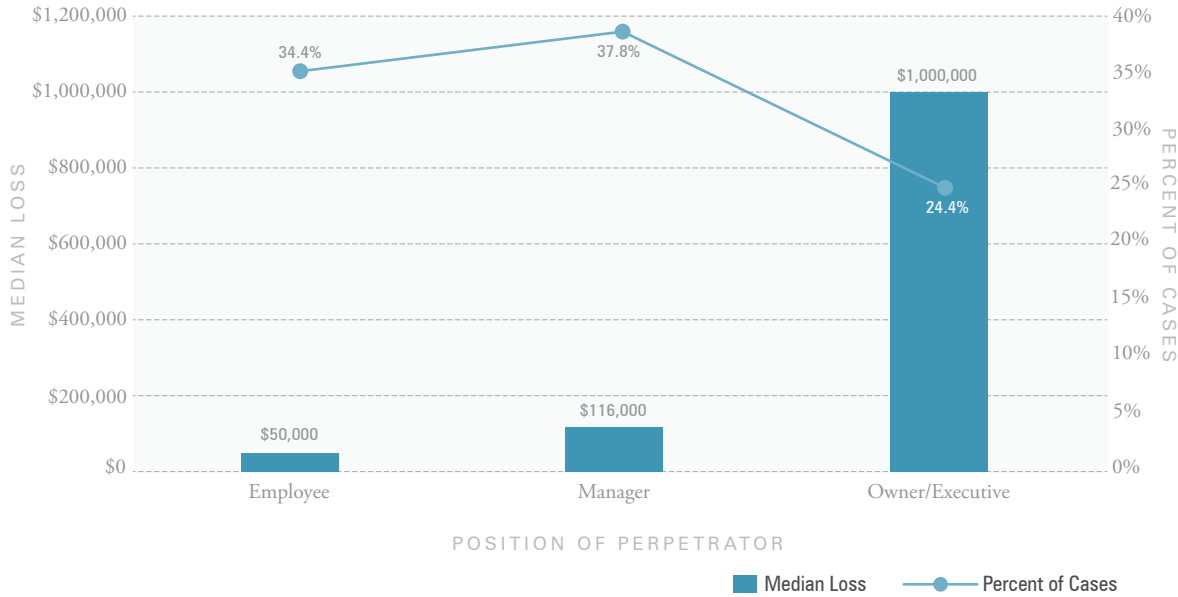
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 71: Frequency and Median Loss Based on Position of Perpetrator—Western Europe



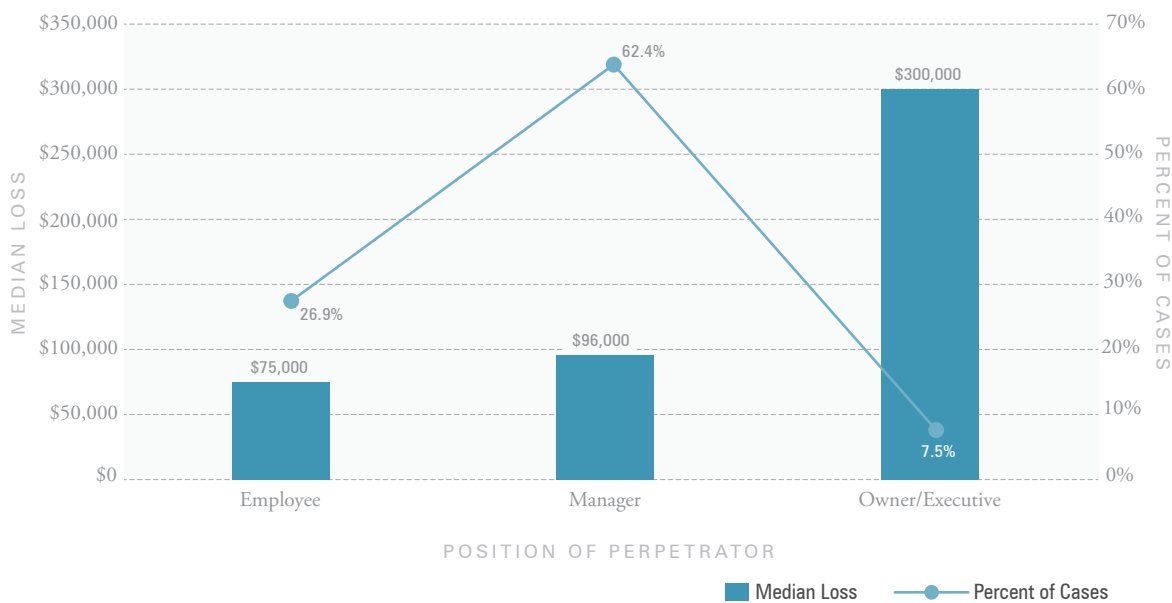
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 72: Frequency and Median Loss Based on Position of Perpetrator—Eastern Europe and Western/Central Asia



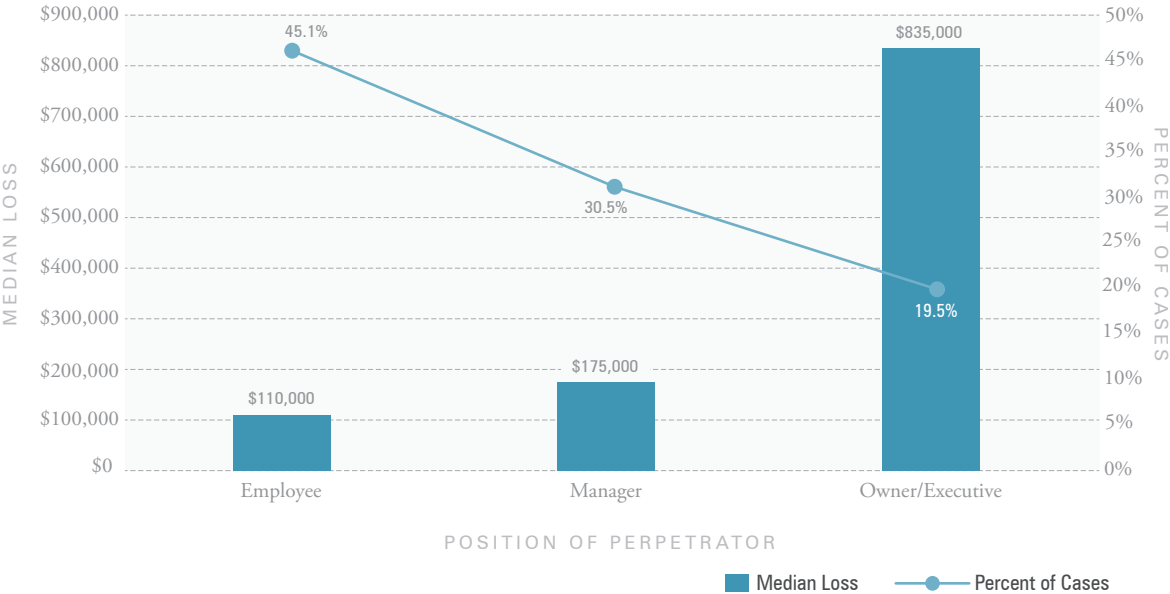
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 73: Frequency and Median Loss Based on Position of Perpetrator—Southern Asia



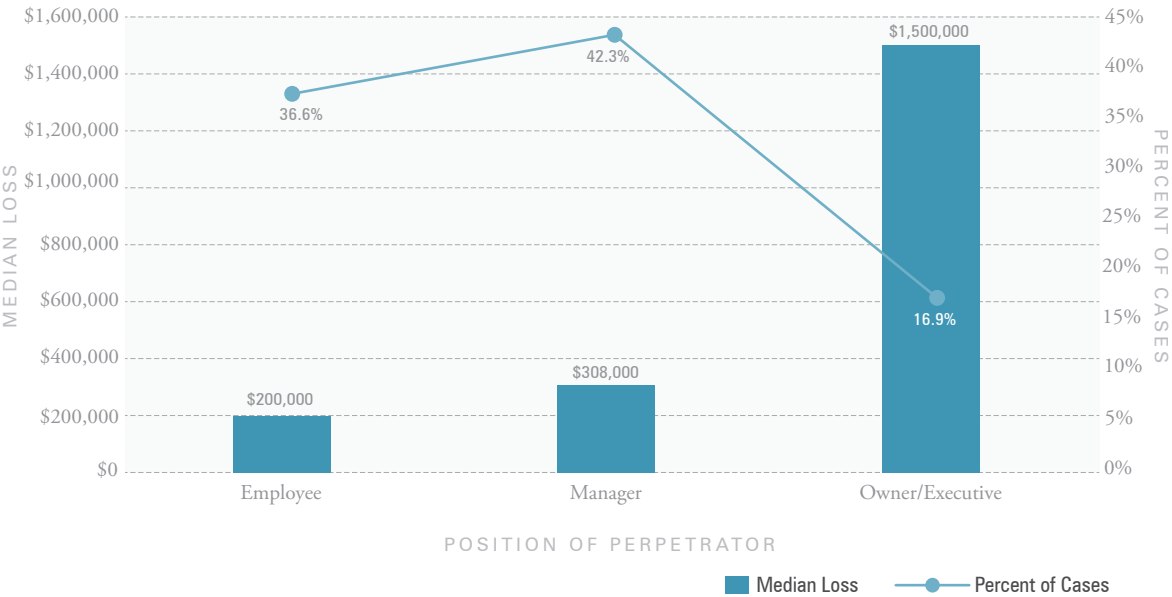
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 74: Frequency and Median Loss Based on Position of Perpetrator—Canada



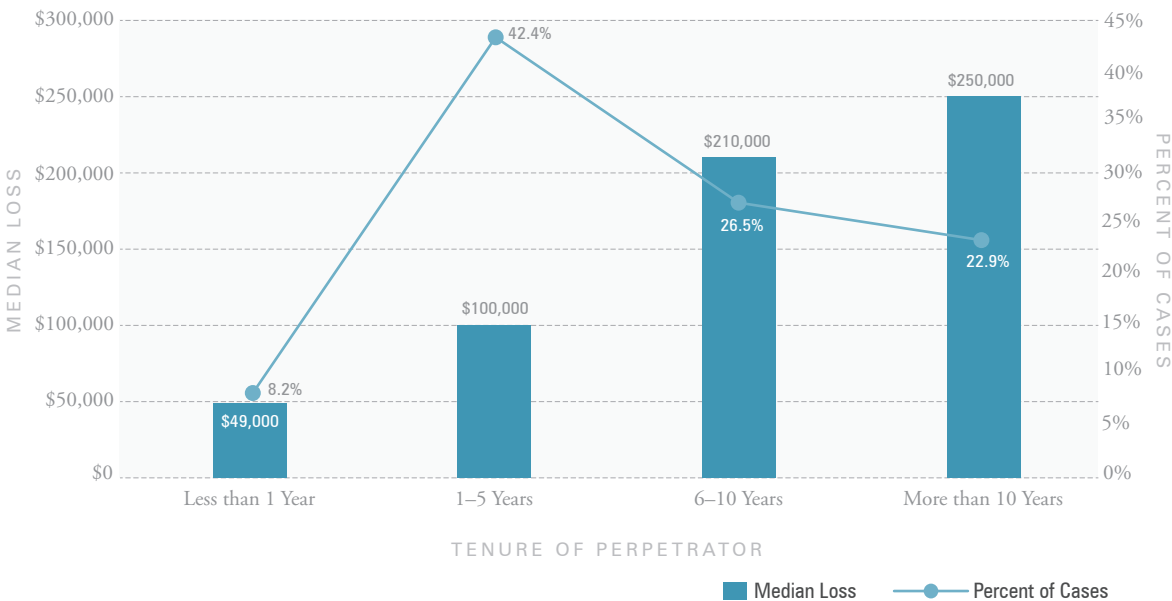
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 75: Frequency and Median Loss Based on Position of Perpetrator—Middle East and North Africa



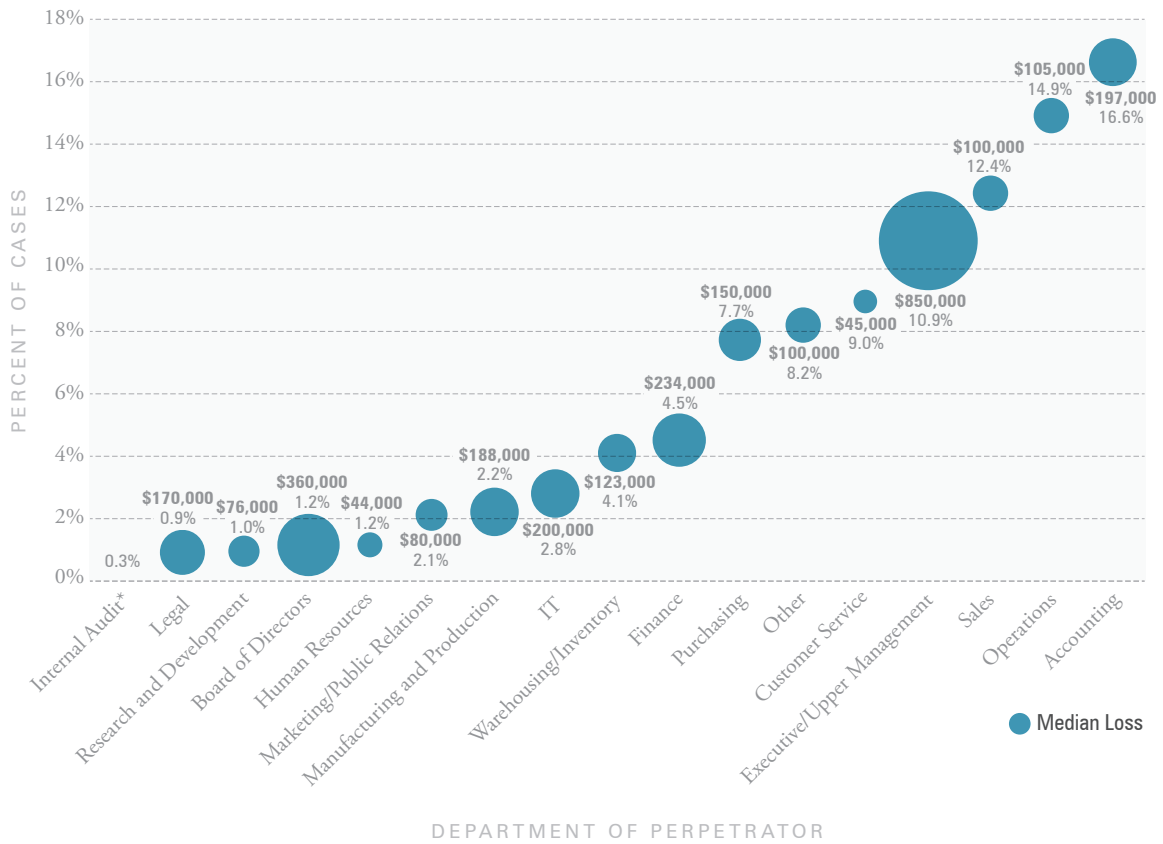
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 76: Tenure of Perpetrator—Frequency and Median Loss



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 77: Department of Perpetrator—Frequency and Median Loss



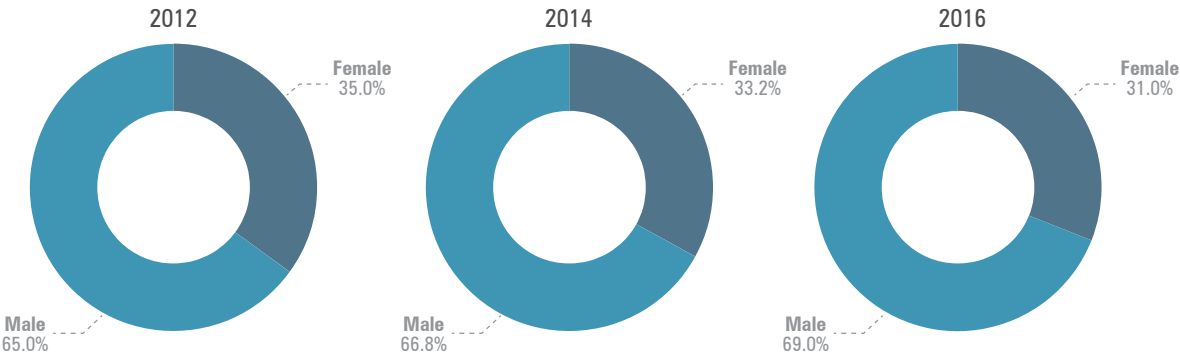
*Internal Audit category had insufficient responses for median loss calculation.

Figure 78: Frequency of Schemes Based on Perpetrator's Department

Department/ Scheme	Accounting	Operations	Sales	Executive/Upper Management	Customer Service	Purchasing	Finance	Warehousing/ Inventory
Cases	348	312	260	228	189	161	94	86
Billing	27.0%	21.5%	14.2%	36.8%	9.5%	25.5%	24.5%	9.3%
Cash Larceny	14.9%	7.7%	8.1%	10.1%	14.3%	3.7%	18.1%	0.0%
Cash on Hand	15.5%	13.8%	6.5%	12.3%	18.5%	13.0%	22.3%	5.8%
Check Tampering	30.5%	9.3%	2.7%	13.6%	7.4%	6.2%	24.5%	1.2%
Corruption	21.6%	34.9%	34.6%	50.9%	25.4%	68.9%	37.2%	32.6%
Expense Reimbursements	15.8%	12.2%	14.2%	23.7%	5.8%	14.9%	14.9%	3.5%
Financial Statement Fraud	12.9%	5.4%	7.3%	30.3%	3.7%	3.1%	23.4%	9.3%
Non-Cash	7.2%	19.6%	20.4%	24.6%	16.4%	18.6%	13.8%	57.0%
Payroll	21.6%	6.4%	1.5%	10.1%	3.7%	5.0%	7.4%	2.3%
Register Disbursements	3.2%	4.2%	5.0%	1.8%	3.2%	4.3%	3.2%	0.0%
Skimming	17.5%	12.8%	11.9%	11.8%	16.9%	7.5%	12.8%	5.8%

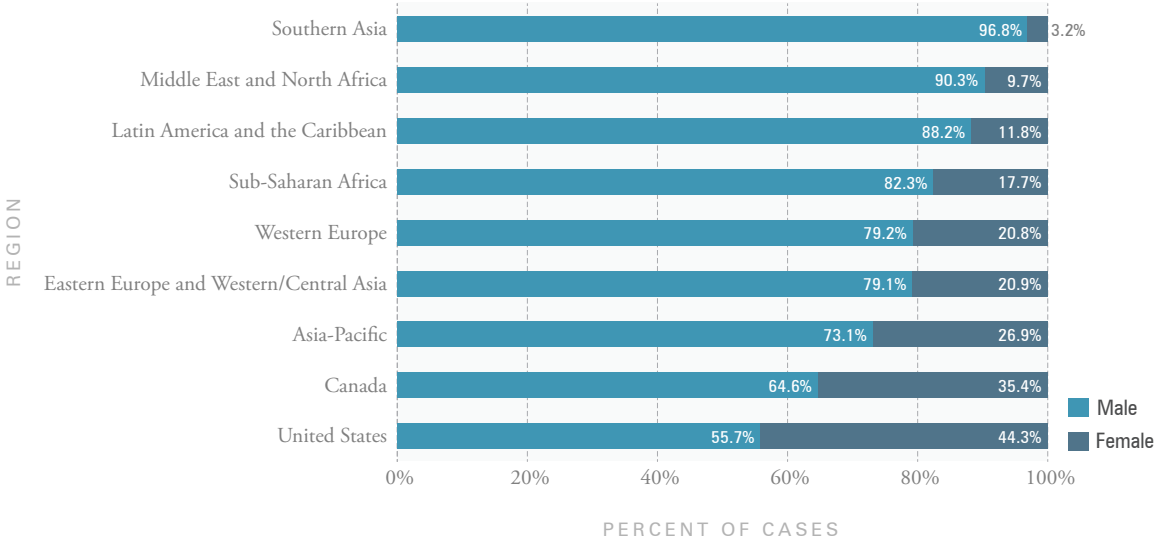


Figure 79: Gender of Perpetrator—Frequency



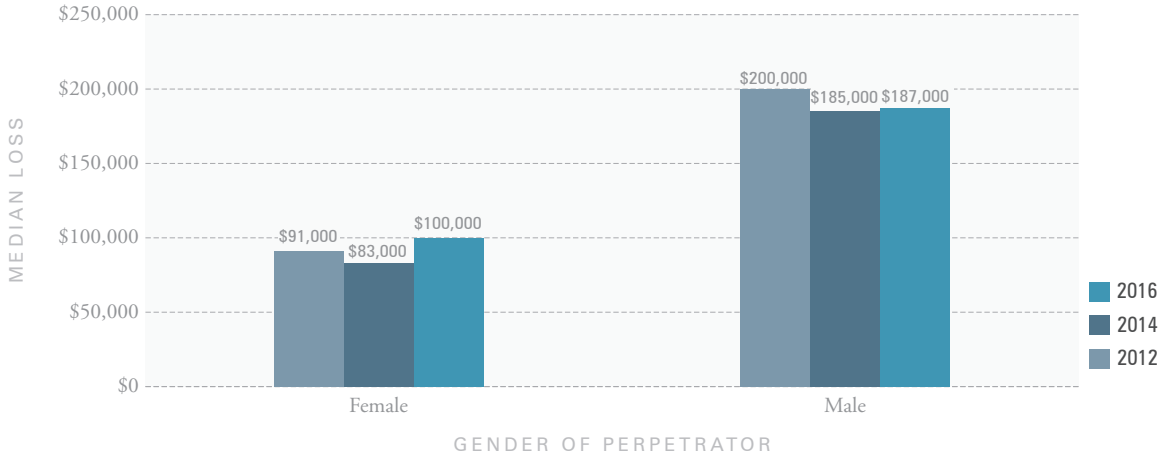
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 80: Gender of Perpetrator Based on Region



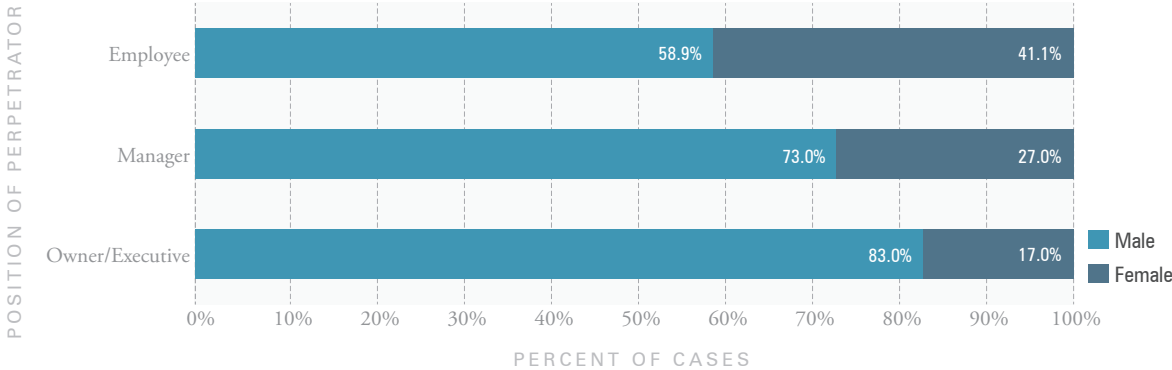
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 81: Gender of Perpetrator—Median Loss



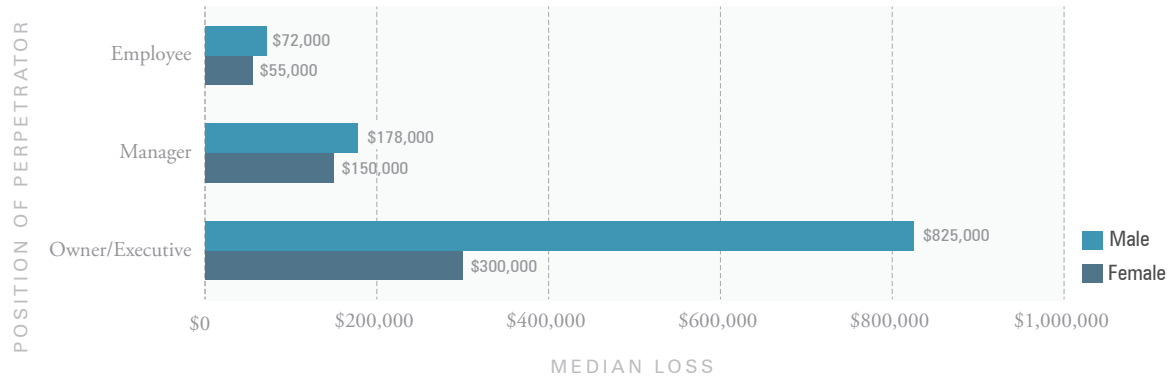
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 82: Position of Perpetrator Based on Gender



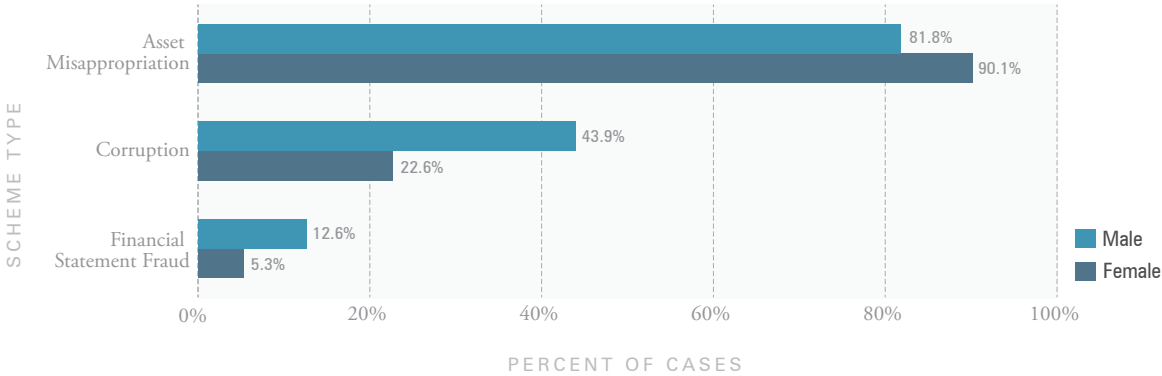
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 83: Position of Perpetrator—Median Loss Based on Gender



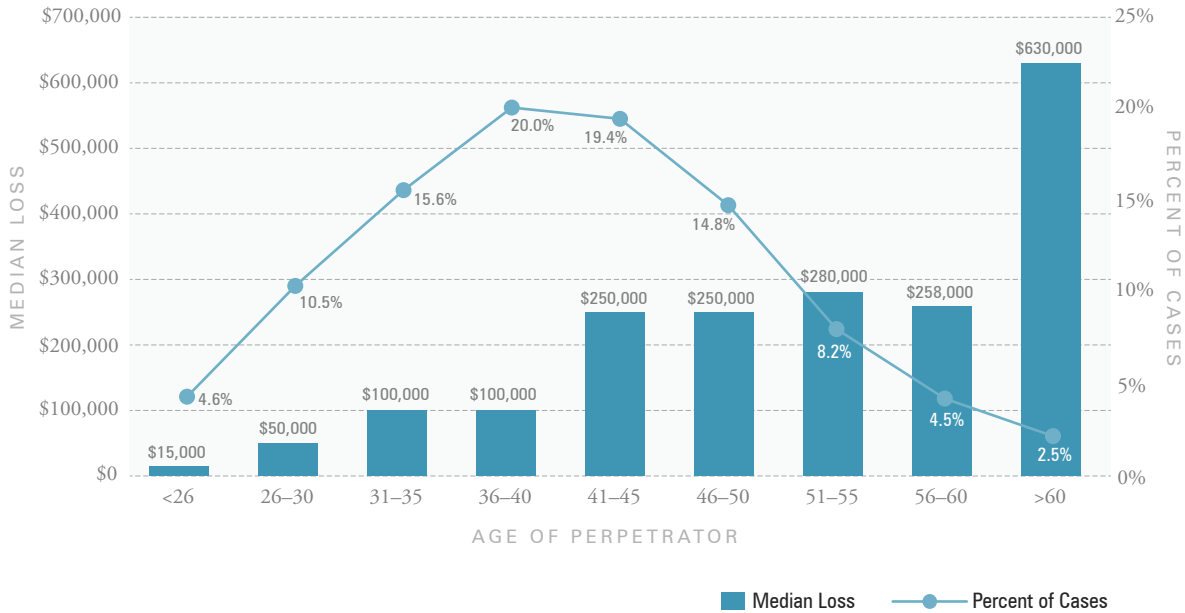
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 84: Frequency of Fraud Schemes Based on Gender



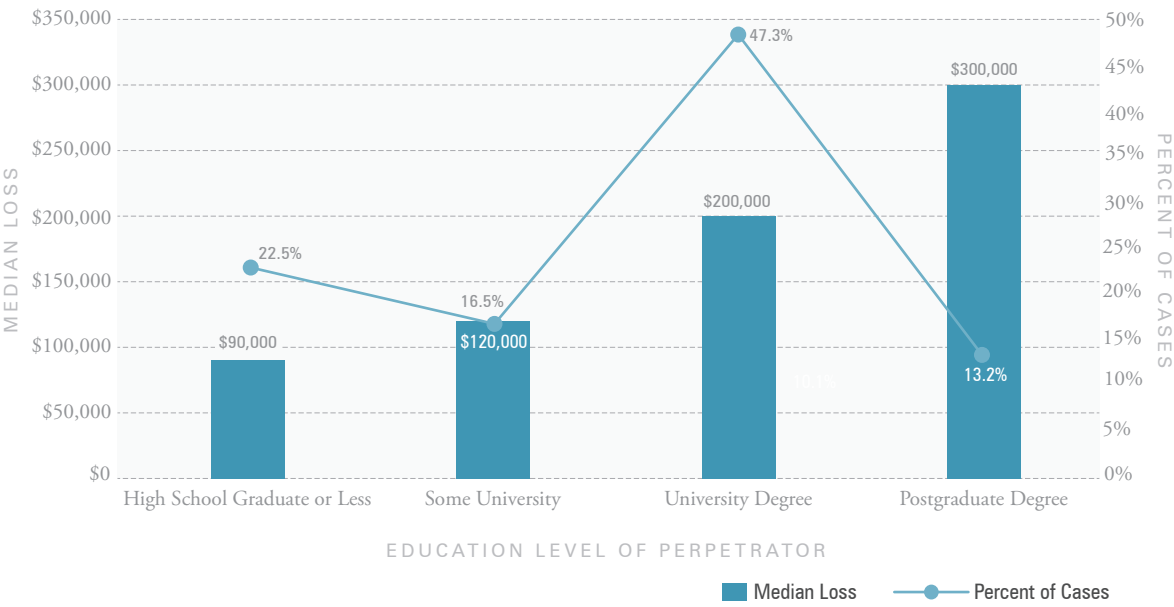
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 85: Age of Perpetrator—Frequency and Median Loss



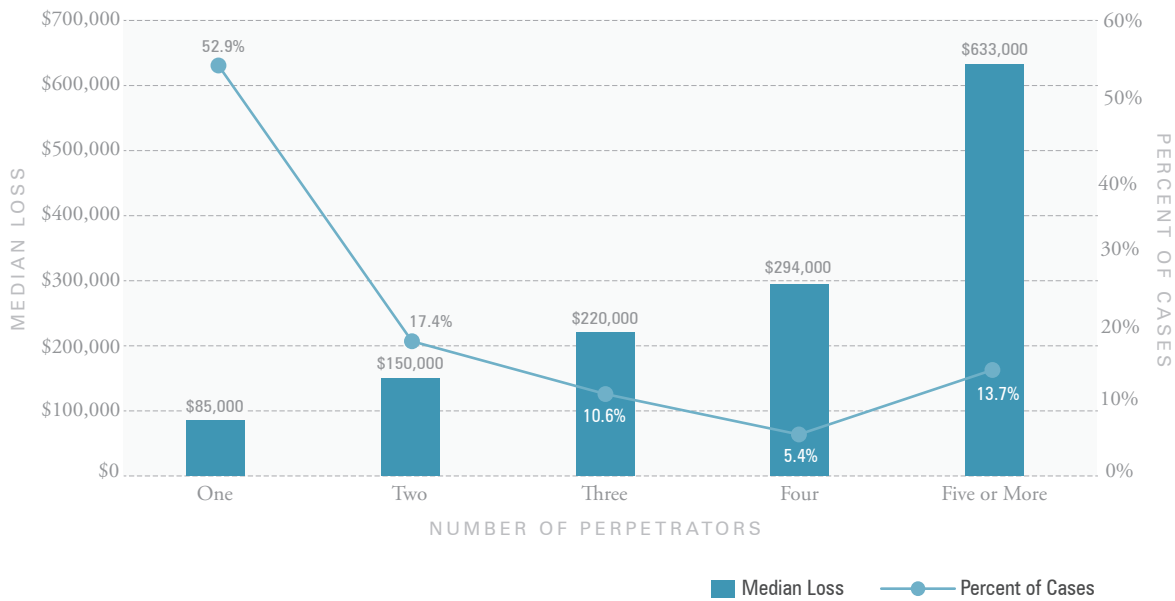
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 86: Education Level of Perpetrator—Frequency and Median Loss



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 87: Number of Perpetrators—Frequency and Median Loss

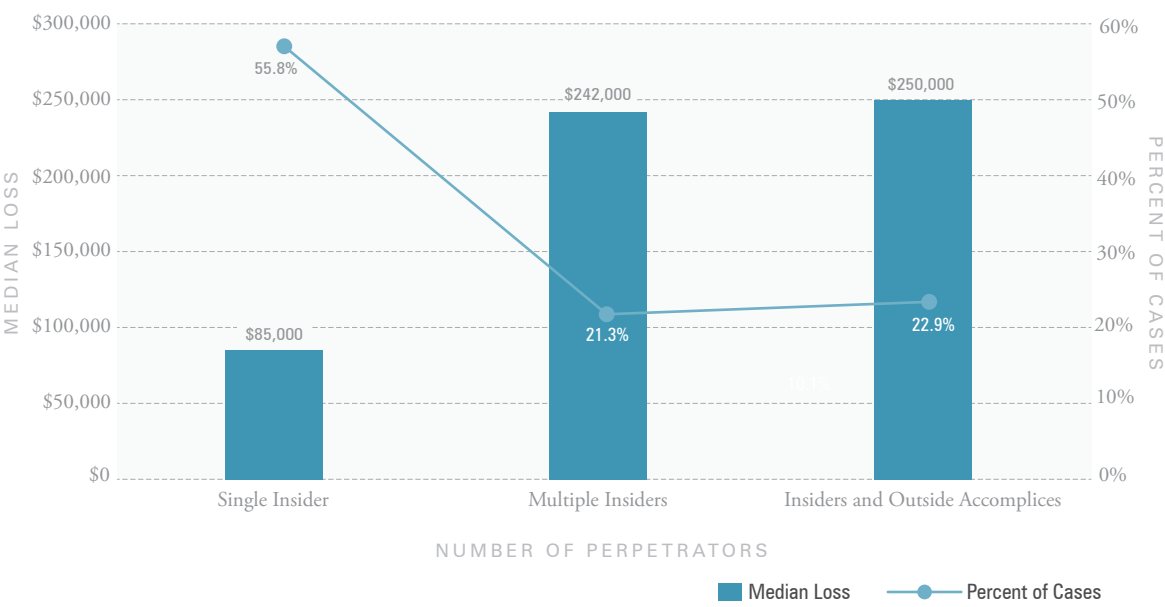


© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 88: Median Duration of Fraud Based on Number of Perpetrators

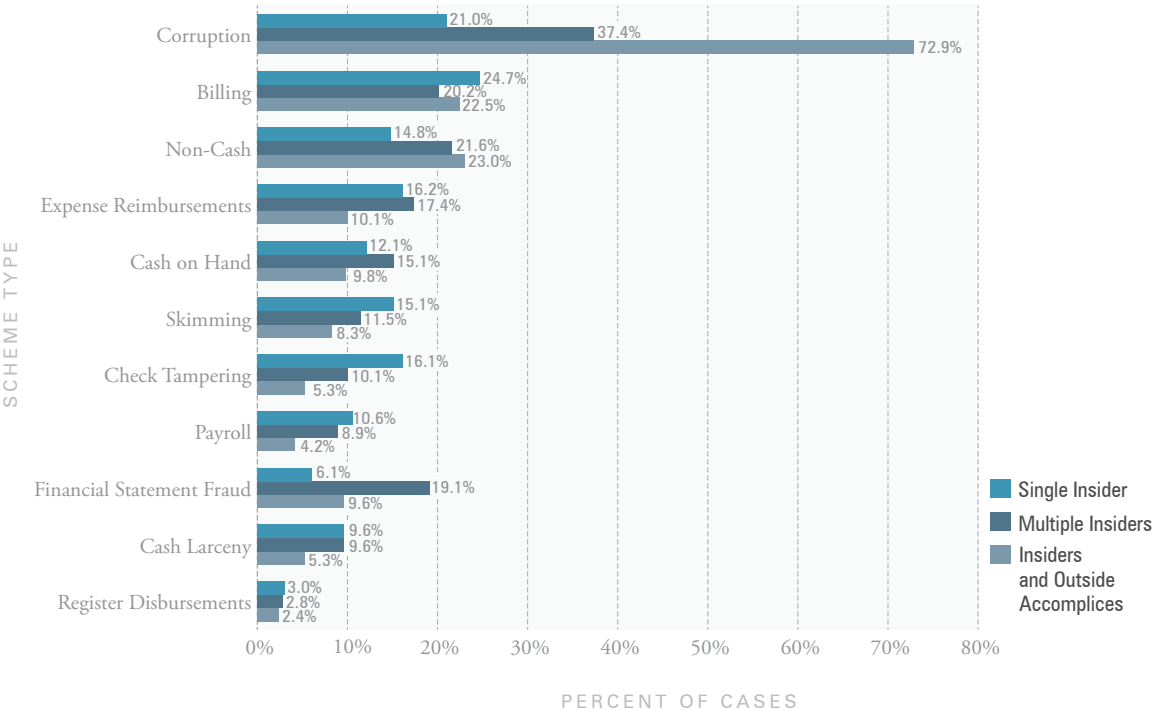
Number	Median Moths to Detect
One	16
Two or More	18

Figure 89: Collusion—Frequency and Median Loss Based on Perpetrators’ Relationship to Victim



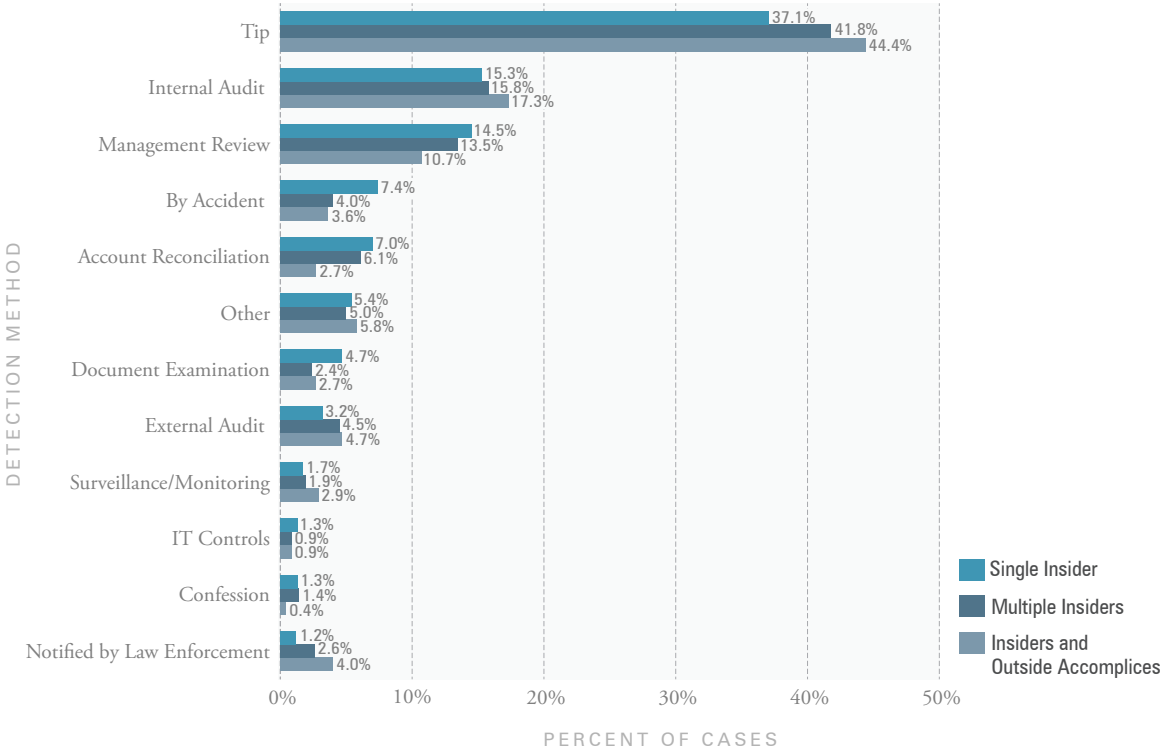
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 90: Scheme Type Based on Perpetrators' Relationship to Victim



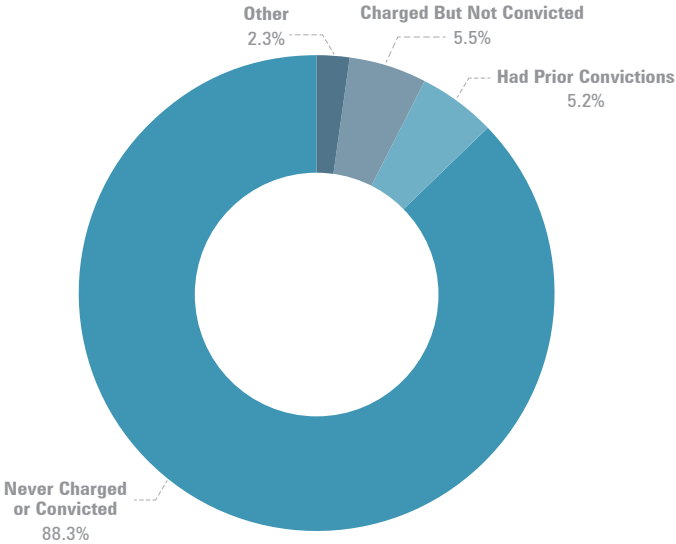
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 91: Detection Method by Perpetrators' Relationship to Victim



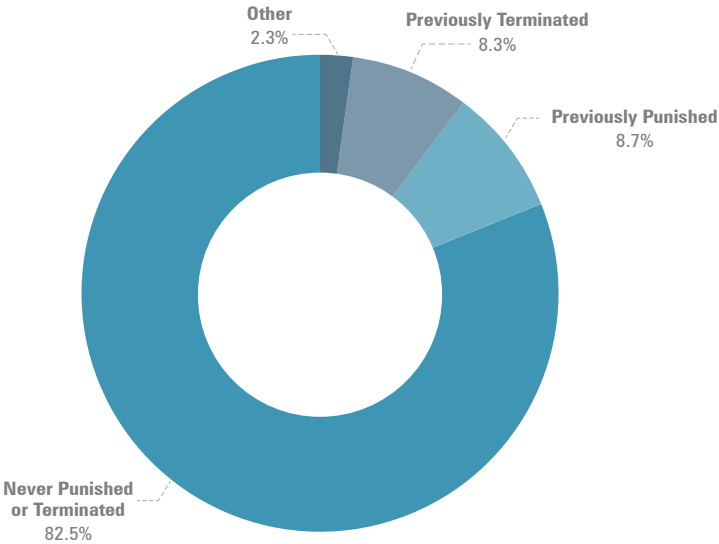
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 92: Criminal Background of Perpetrator



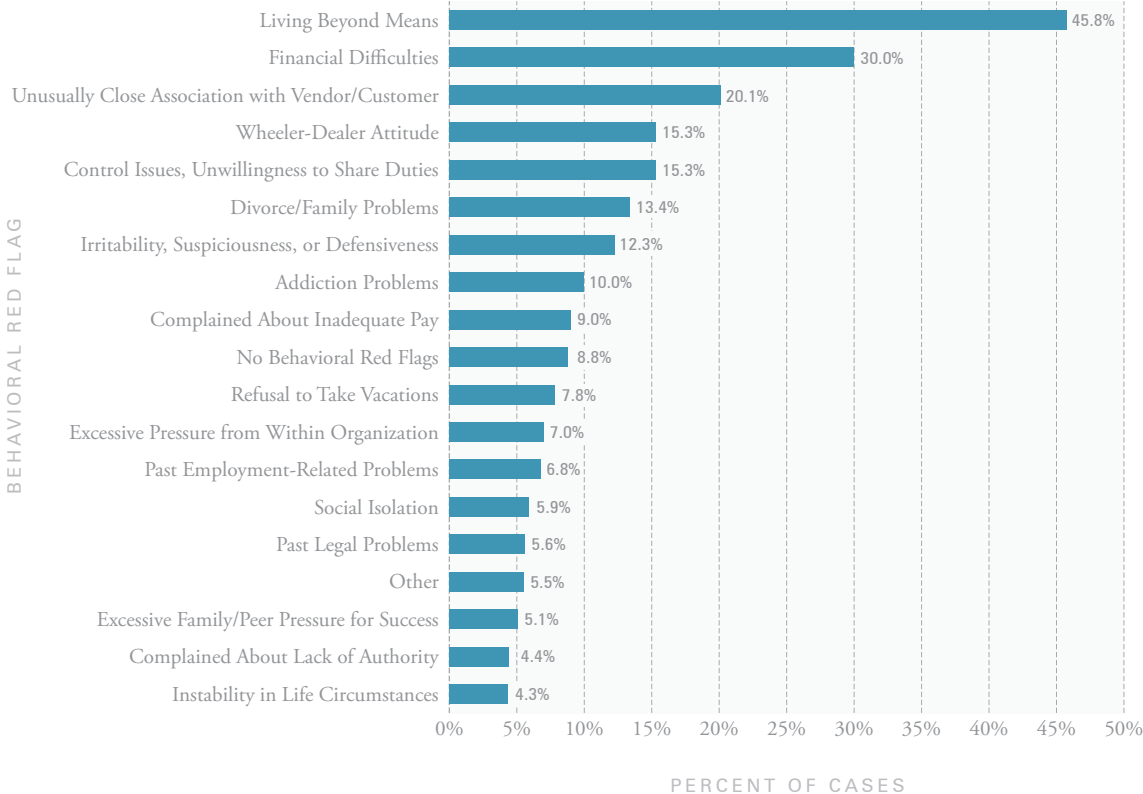
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 93: Employment Background of Perpetrator



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 94: Behavioral Red Flags Displayed by Perpetrators



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 95: Behavioral Red Flags Based on Perpetrator's Position

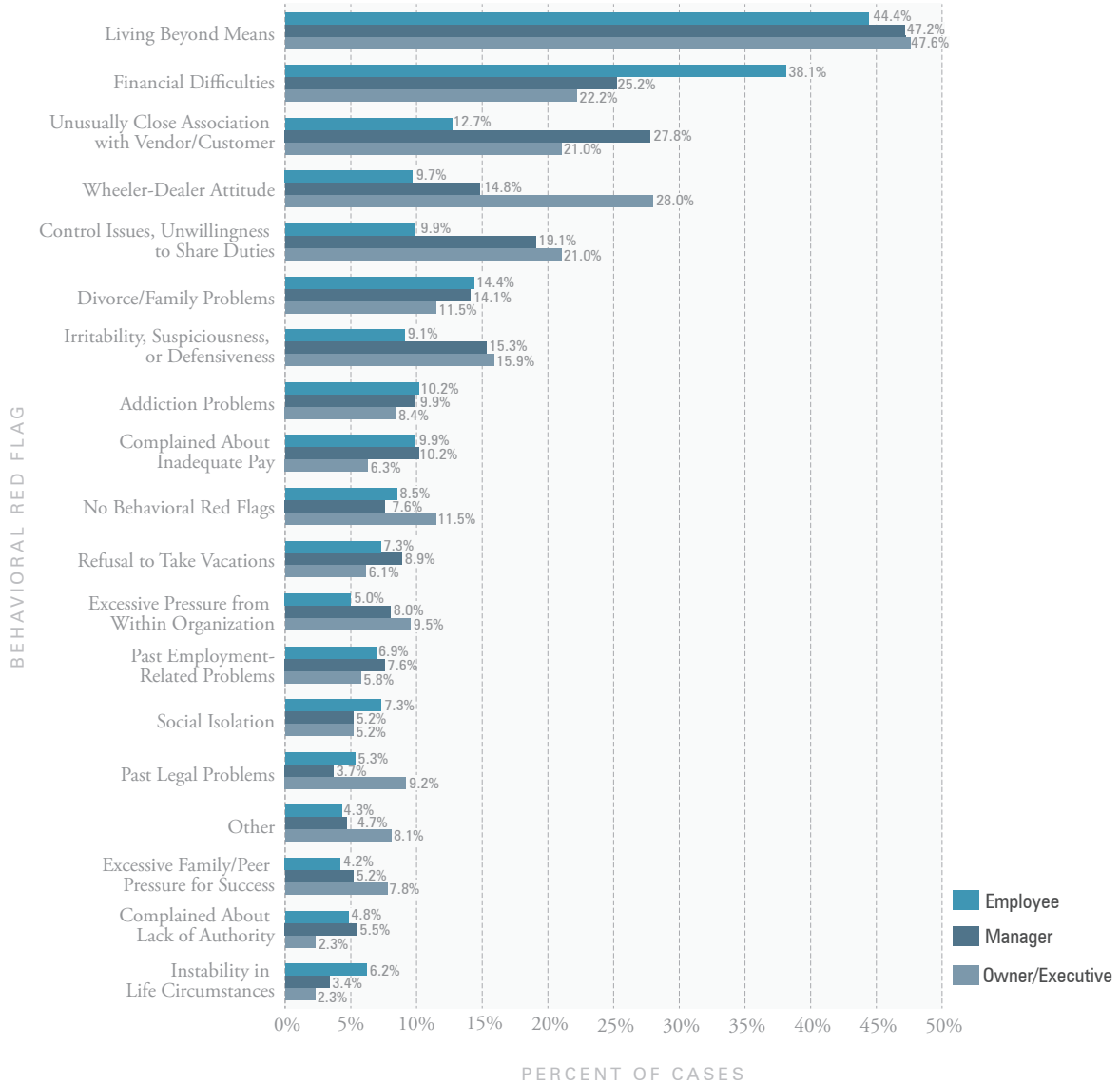


Figure 96: Behavioral Red Flags Based on Scheme Type

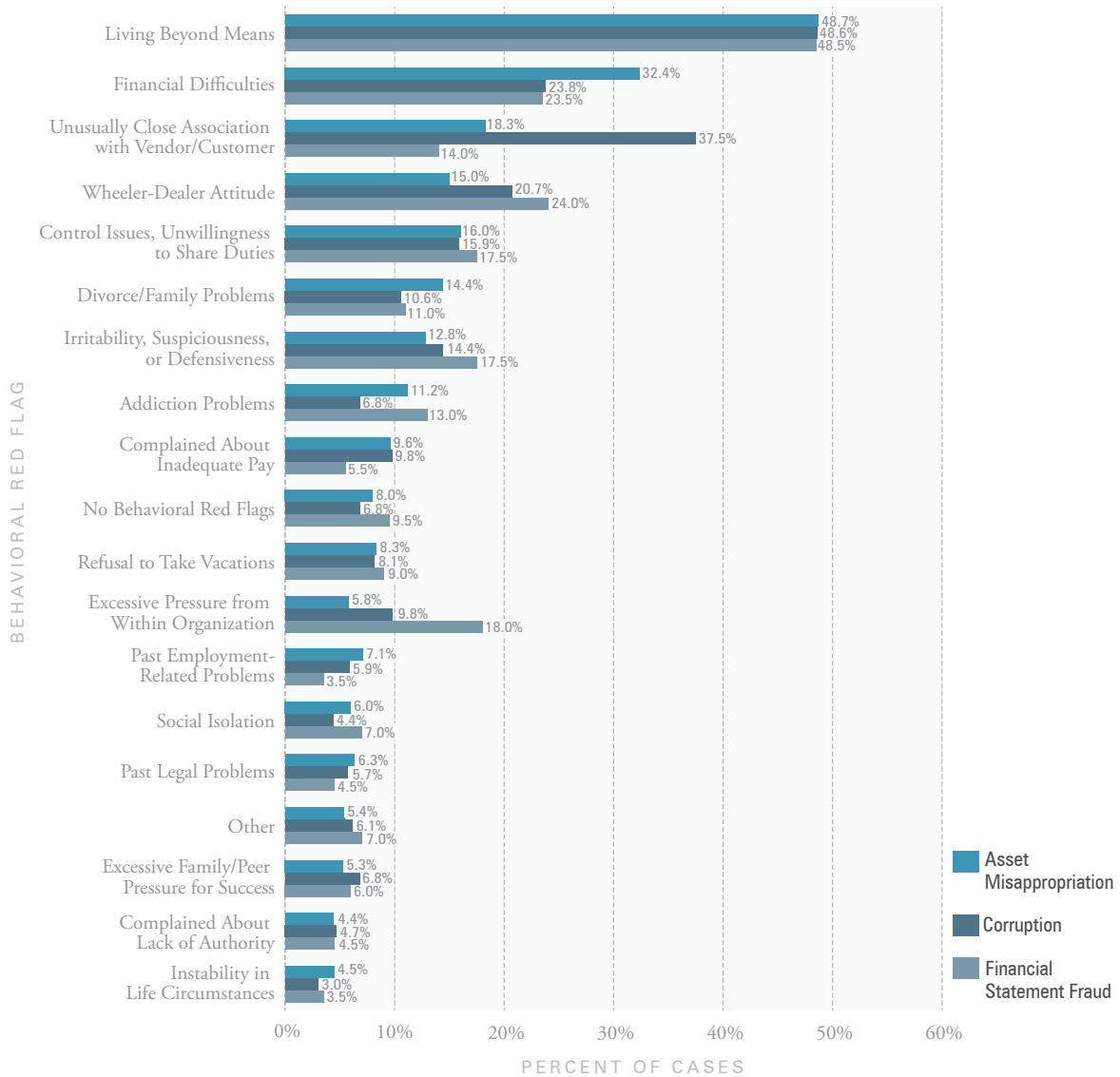


Figure 97: Behavioral Red Flags Based on Perpetrator's Gender

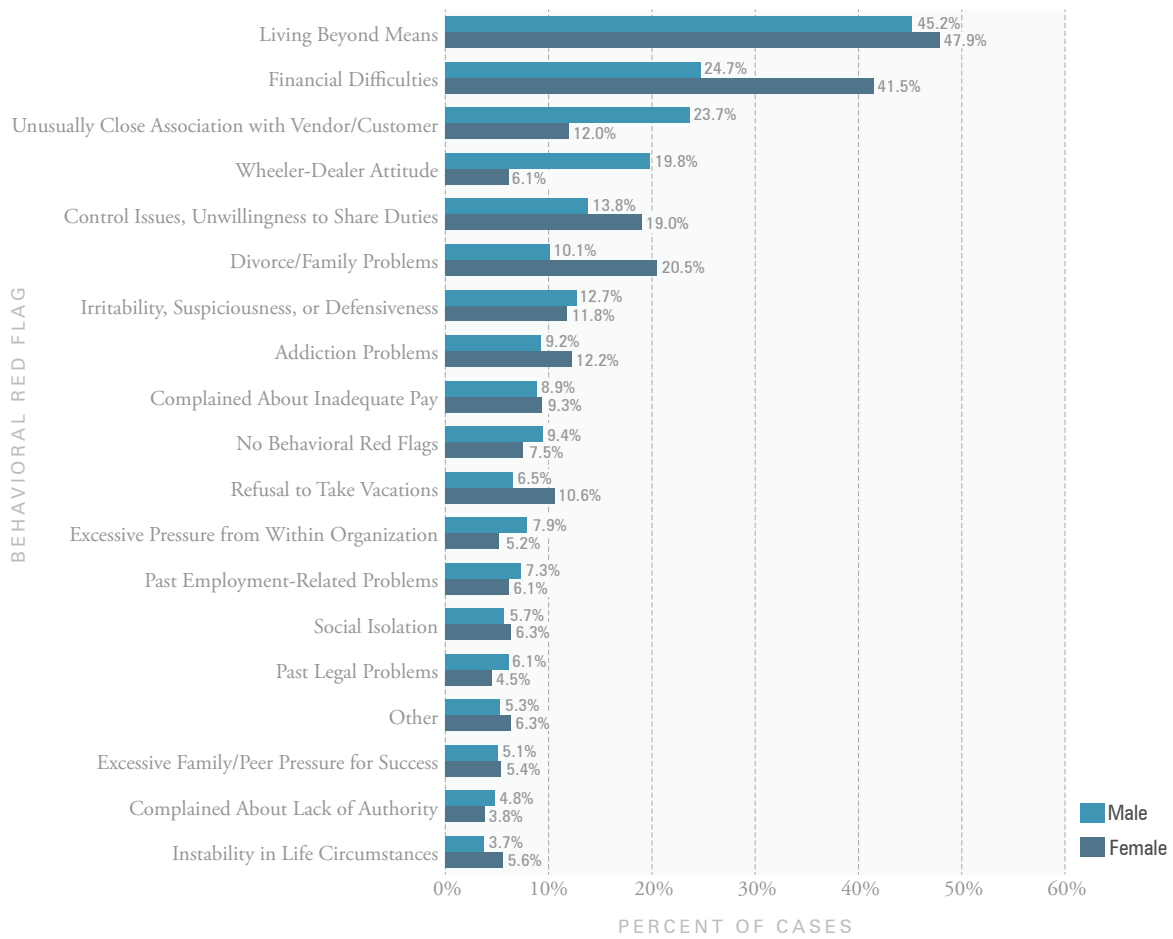


Figure 98: Non-Fraud-Related Misconduct

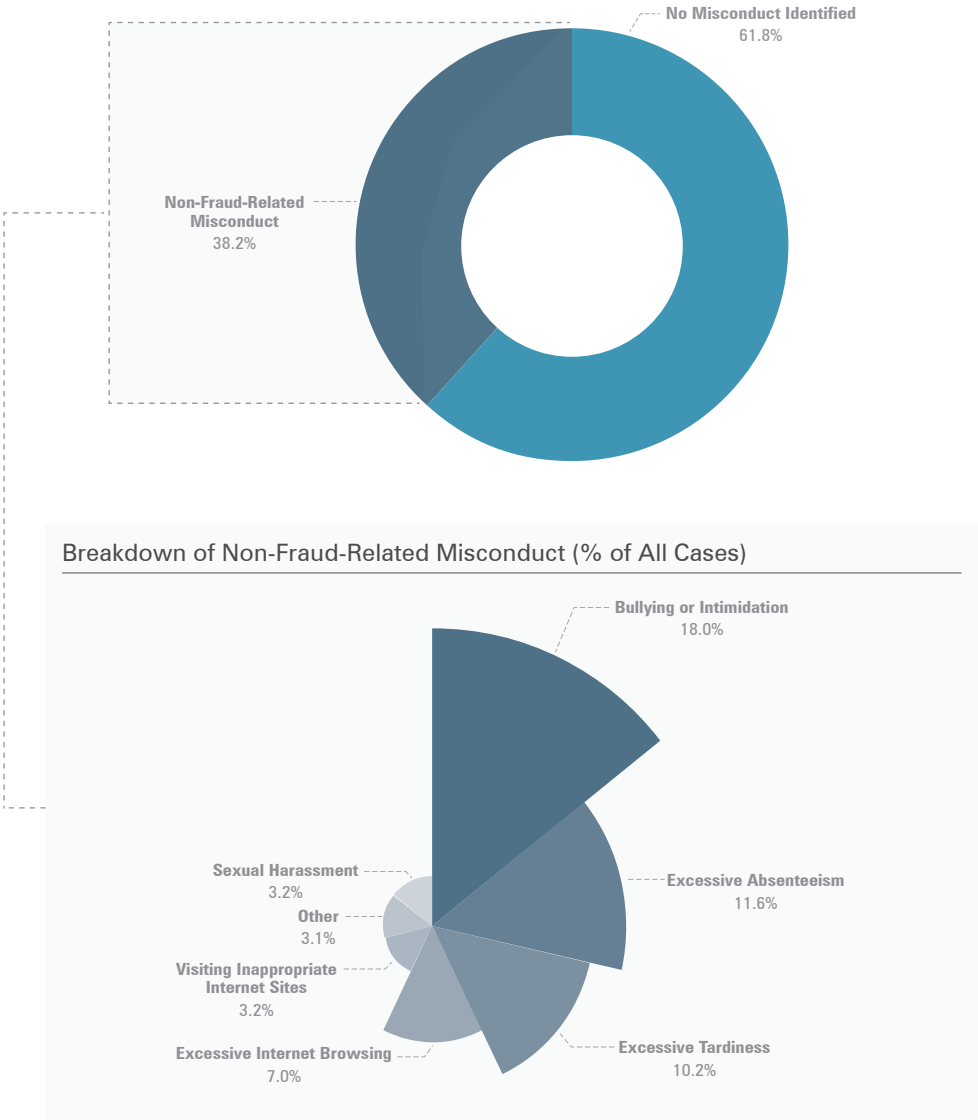
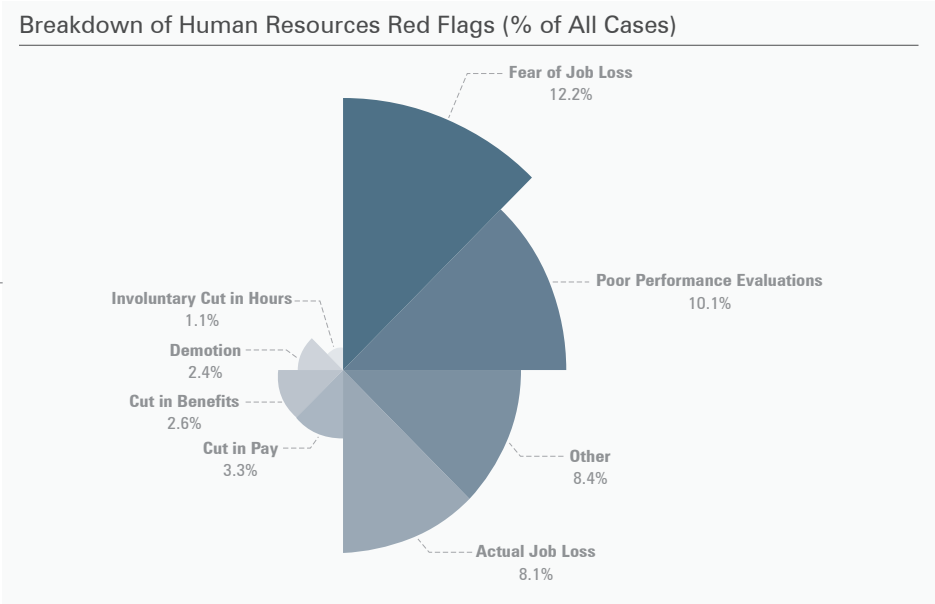
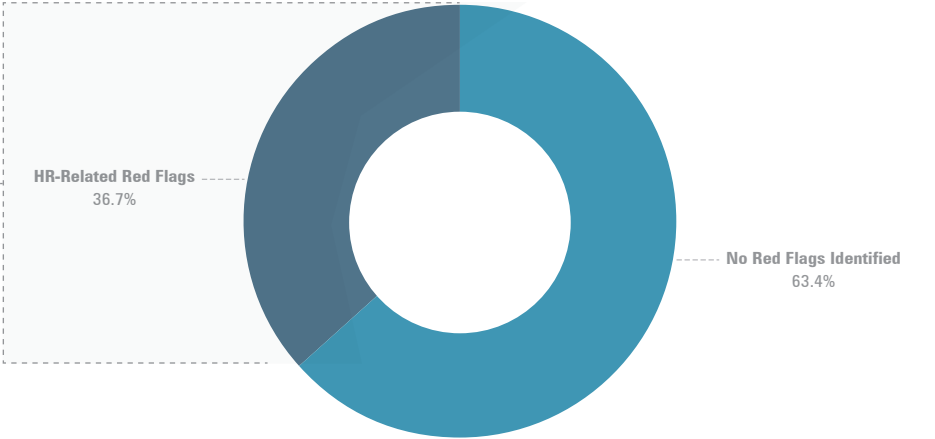
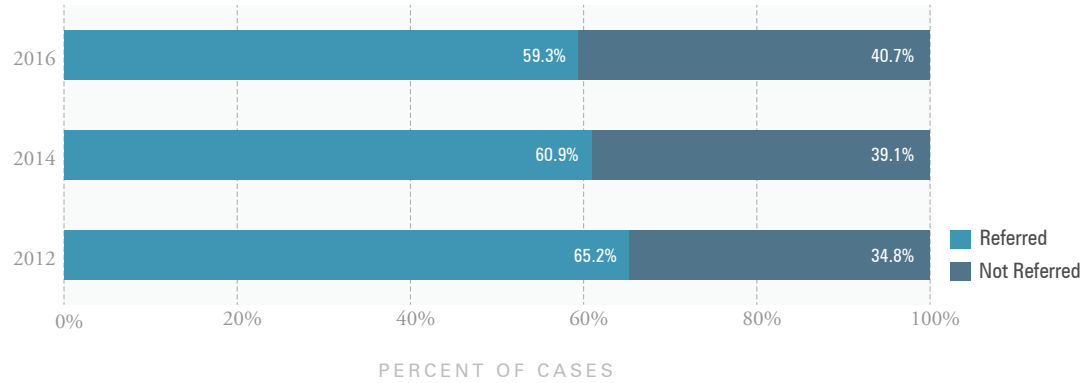


Figure 99: Human Resources-Related Red Flags



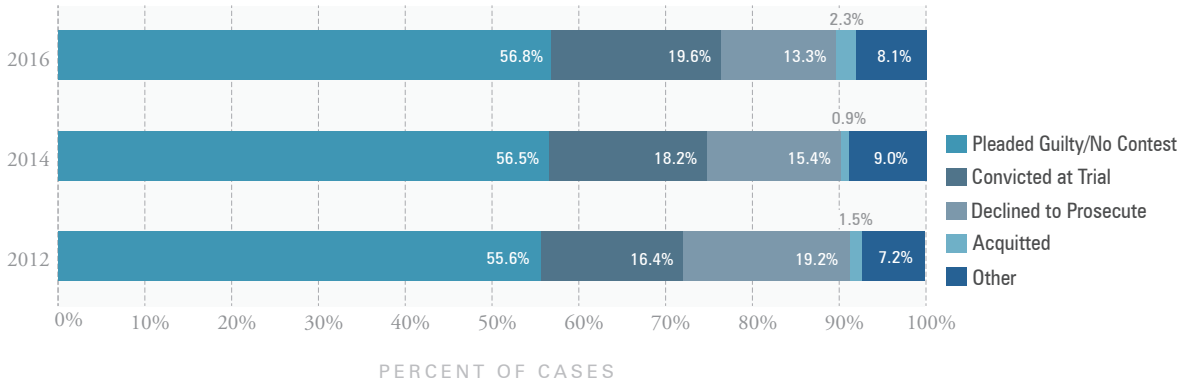
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 100: Cases Referred to Law Enforcement



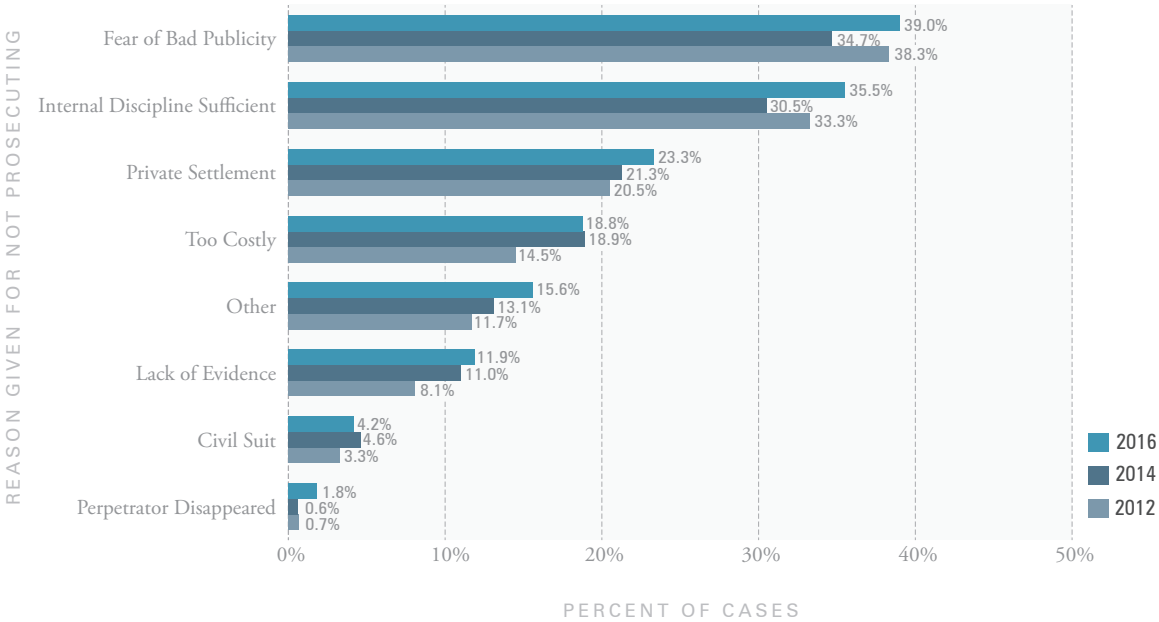
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 101: Results of Cases Referred to Law Enforcement



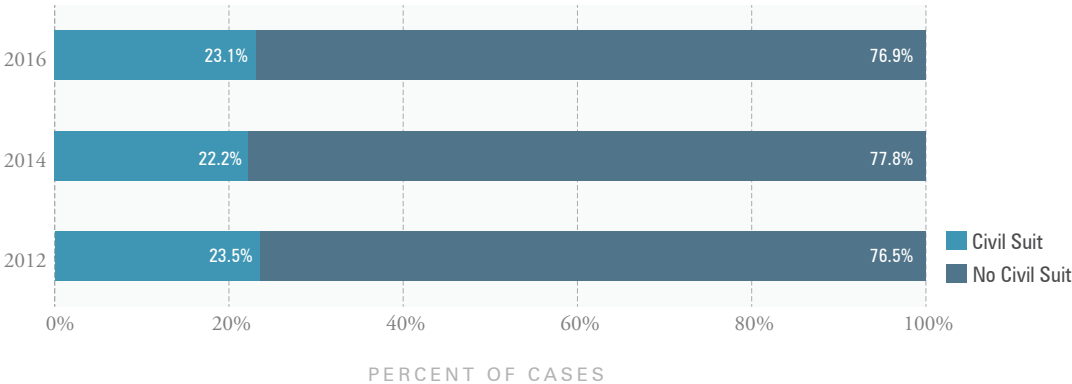
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 102: Reason(s) Case Not Referred to Law Enforcement



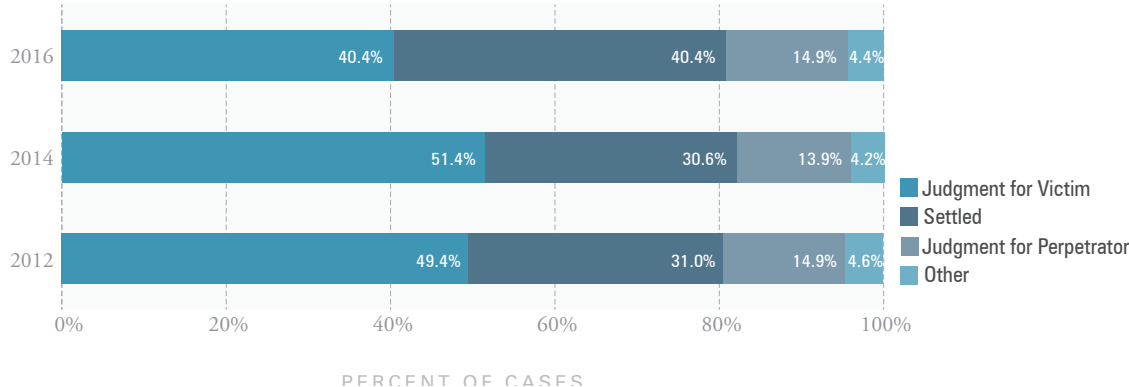
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 103: Cases Resulting in Civil Suit



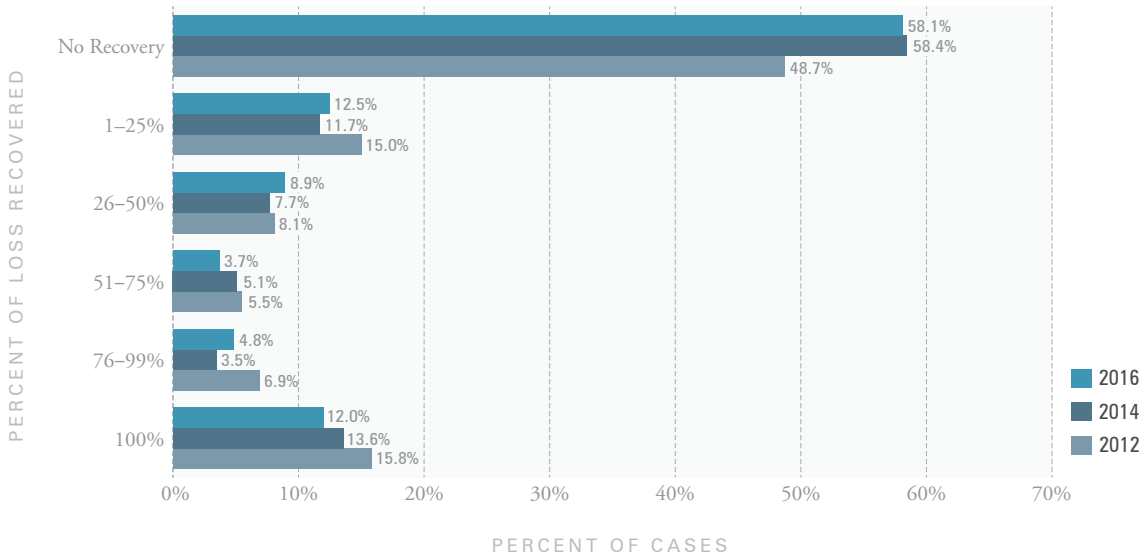
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 104: Results of Civil Suits



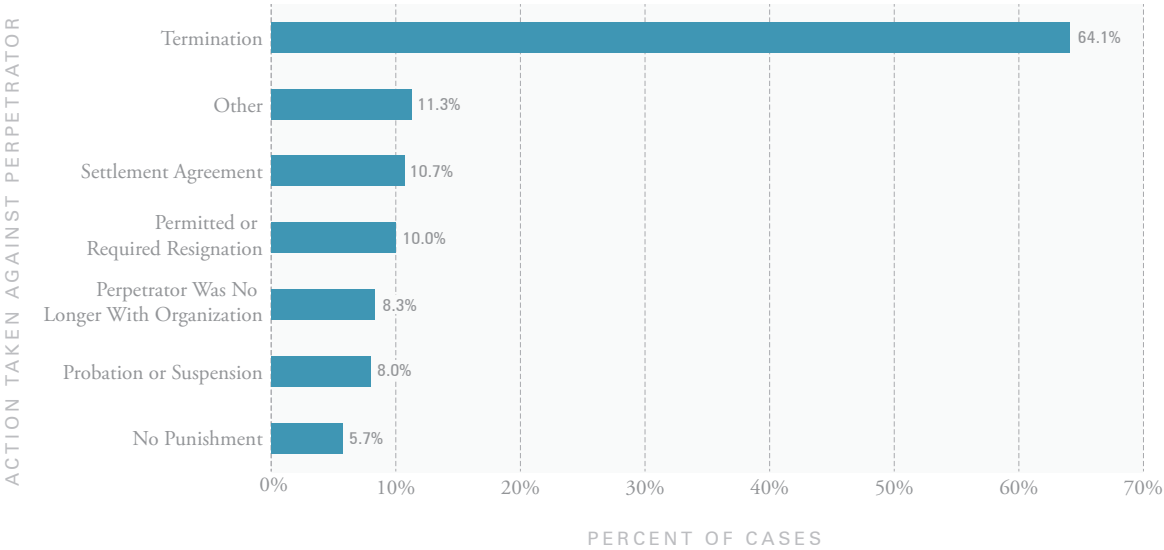
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 105: Recovery of Victim Organization's Losses



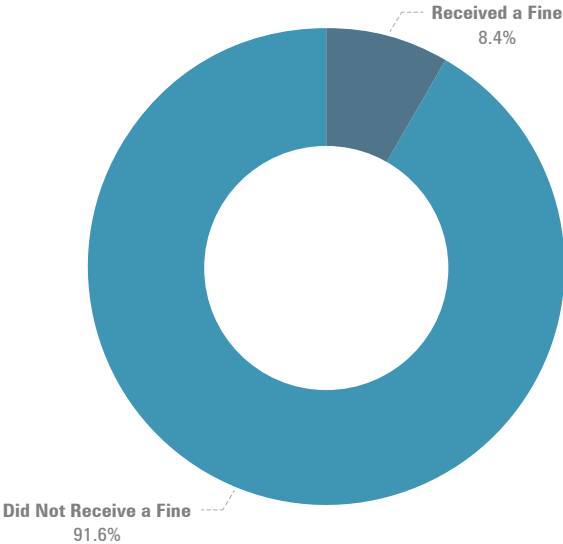
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 106: Action Taken Against Perpetrator



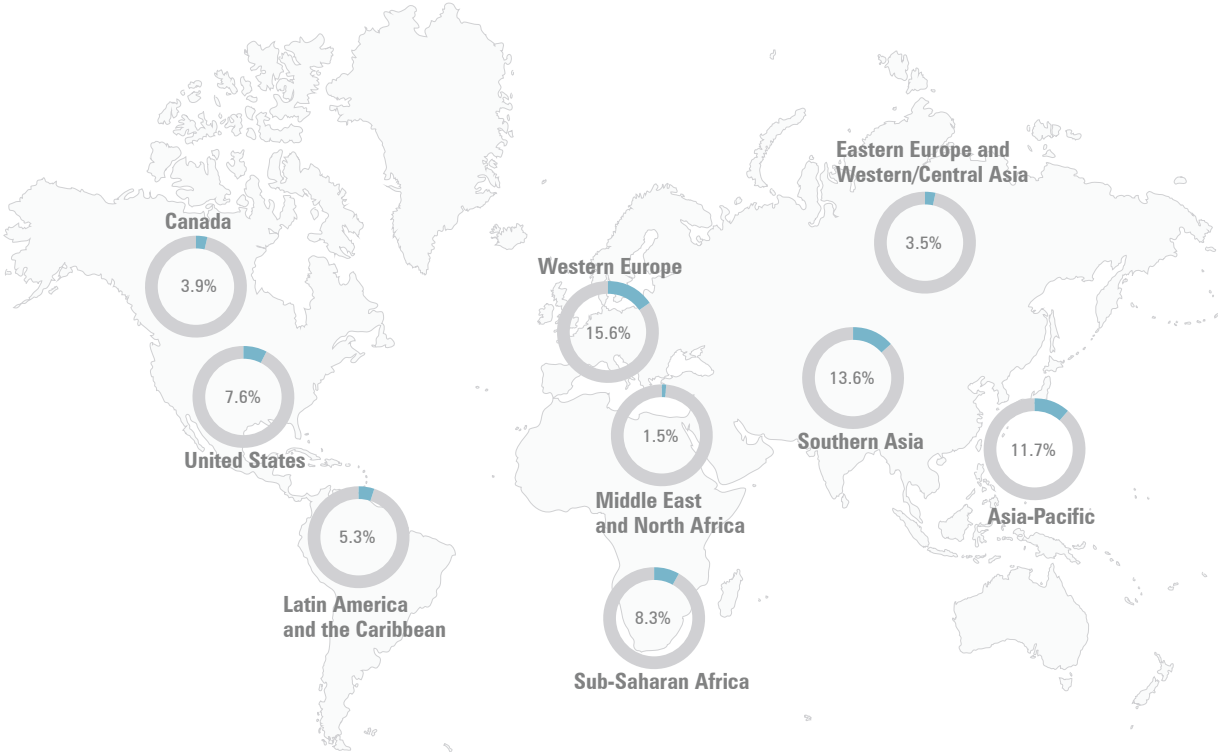
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 107: Fines Against Victim Organizations



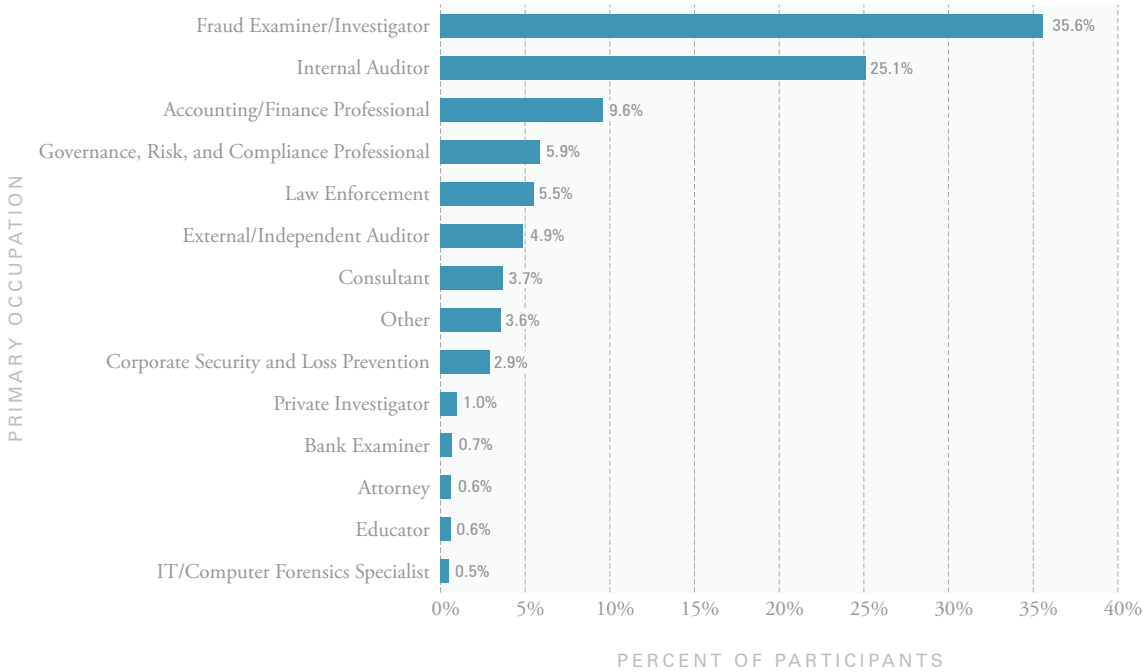
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 108: Fines Against Victim Organization by Region



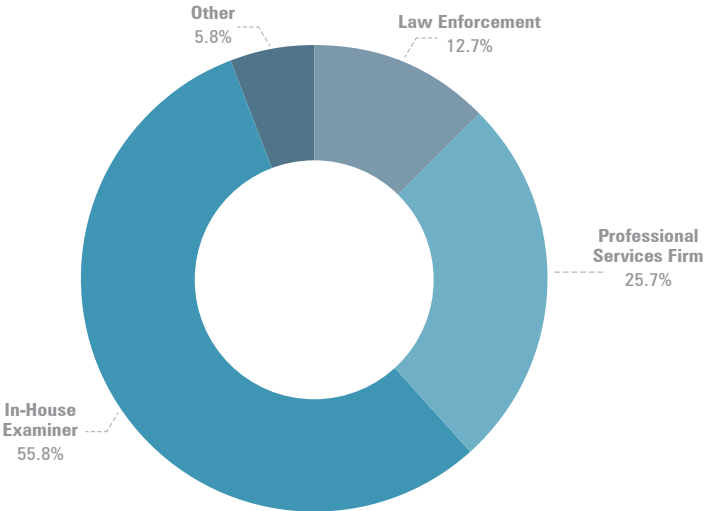
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 109: Primary Occupation of Survey Participants



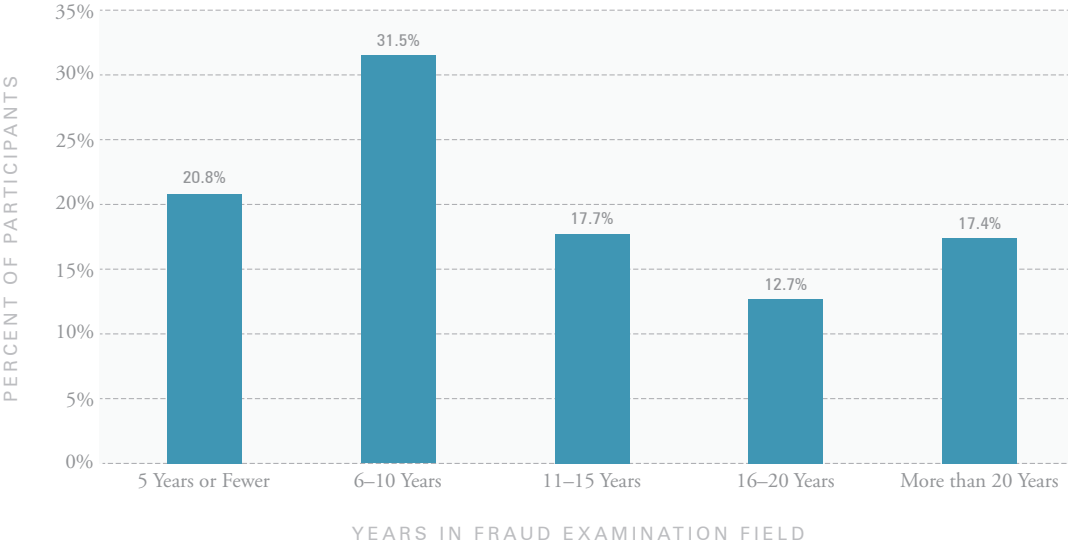
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 110: Nature of Survey Participants' Fraud Examination Work



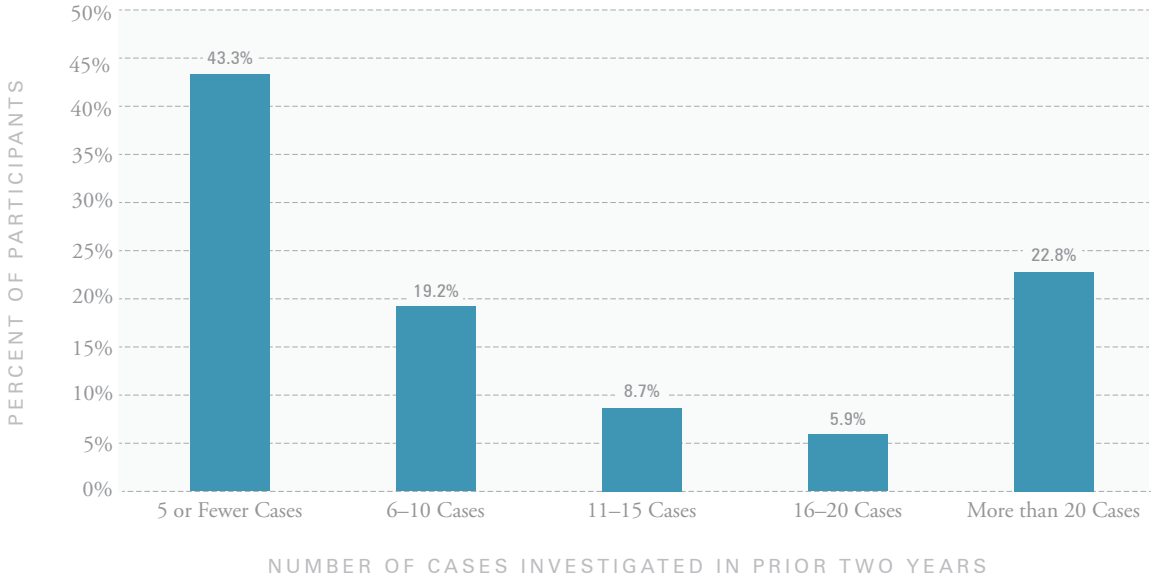
© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 111: Experience of Survey Participants



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

Figure 112: Cases Investigated by Survey Participants



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.

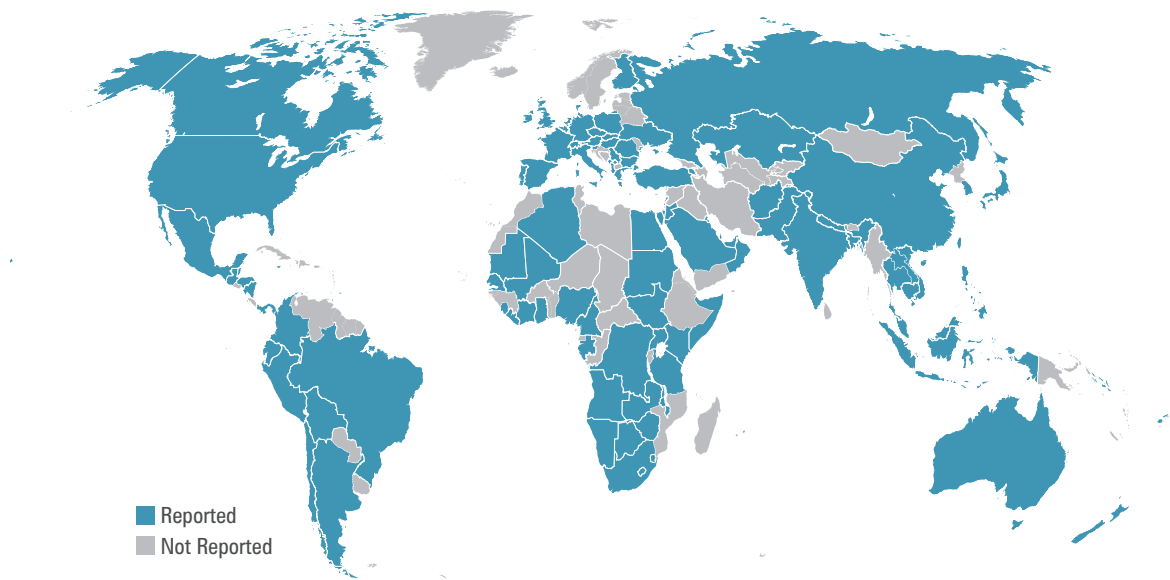
Figure 113 (Part 1): Breakdown of Geographic Regions by Country

Asia-Pacific (221 Cases)		Eastern Europe and Western/Central Asia (98 Cases)	
Country	Number of Cases	Country	Number of Cases
Australia	26	Albania	1
Cambodia	1	Armenia	3
China	64	Bulgaria	5
East Timor	2	Czech Republic	8
Fiji	2	Hungary	2
Indonesia	42	Kazakhstan	5
Japan	3	Kosovo	1
Laos	1	Montenegro	2
Malaysia	11	Poland	8
New Zealand	10	Romania	11
Philippines	29	Russia	21
Samoa	3	Serbia	4
Singapore	14	Slovakia	8
Solomon Islands	1	Slovenia	2
South Korea	3	Turkey	15
Taiwan	3	Ukraine	2
Thailand	4		
Vietnam	2		
Latin America and the Caribbean (112 Cases)		Middle East and North Africa (79 Cases)	
Antigua and Barbuda	2	Algeria	1
Argentina	12	Bahrain	3
Bahamas	2	Cyprus	3
Barbados	1	Egypt	5
Belize	1	Israel	2
Bolivia	1	Jordan	2
Brazil	18	Kuwait	4
Chile	4	Lebanon	5
Colombia	14	Oman	7
Ecuador	2	Qatar	7
Grenada	1	Saudi Arabia	13
Guatemala	1	United Arab Emirates	27
Honduras	1		
Jamaica	2		
Mexico	36		
Nicaragua	1		
Panama	2		
Peru	4		
Trinidad and Tobago	7		

Figure 113 (Part 2): Breakdown of Geographic Regions by Country

Southern Asia (98 Cases)		Sub-Saharan Africa (285 Cases)	
Country	Number of Cases	Country	Number of Cases
Afghanistan	4	Angola	4
Bangladesh	4	Botswana	2
India	77	Cameroon	2
Nepal	2	Congo, Democratic Republic of the	4
Pakistan	11	Cote d'Ivoire (Ivory Coast)	2
Western Europe (110 Cases)		Gabon	1
Austria	4	Gambia	1
Belgium	4	Ghana	11
Denmark	2	Kenya	41
Finland	3	Lesotho	1
France	7	Liberia	5
Germany	15	Malawi	3
Greece	7	Mali	1
Ireland	2	Mauritania	2
Italy	9	Mauritius	4
Netherlands	7	Namibia	1
Portugal	5	Nigeria	70
Spain	6	Senegal	3
Switzerland	9	Sierra Leone	1
United Kingdom	30	Somalia	1
		South Africa	87
		South Sudan	1
		Sudan	1
		Swaziland	1
		Tanzania	8
		Uganda	11
		Zambia	7
		Zimbabwe	9

Figure 114: Countries with Reported Cases



© 2016 Association of Certified Fraud Examiners, Inc. All rights reserved.