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INTERNAL FRAUD & EMBEZZLEMENT: STRATEGIES TO MITIGATE RISK



## AGENDA

**// Recent Trends in Fraud – 2016 Report to the Nations**

**// Fraud “War Stories”**

**// Ways to Mitigate the Risk**

# REPORT TO THE NATIONS

ON OCCUPATIONAL FRAUD AND ABUSE

2016 GLOBAL FRAUD STUDY



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**THIS REPORT CONTAINS AN ANALYSIS OF 2,410 CASES**  
OF OCCUPATIONAL FRAUD THAT WERE INVESTIGATED  
BETWEEN JANUARY 2014 AND OCTOBER 2015. THE  
FRAUDS IN THIS STUDY TOOK PLACE IN **114 DIFFERENT**  
**COUNTRIES** THROUGHOUT THE WORLD.

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**\$6.3**  
**BILLION**  
IN TOTAL LOSSES



OF CASES CAUSED LOSSES OF  
**\$1 MILLION OR MORE**

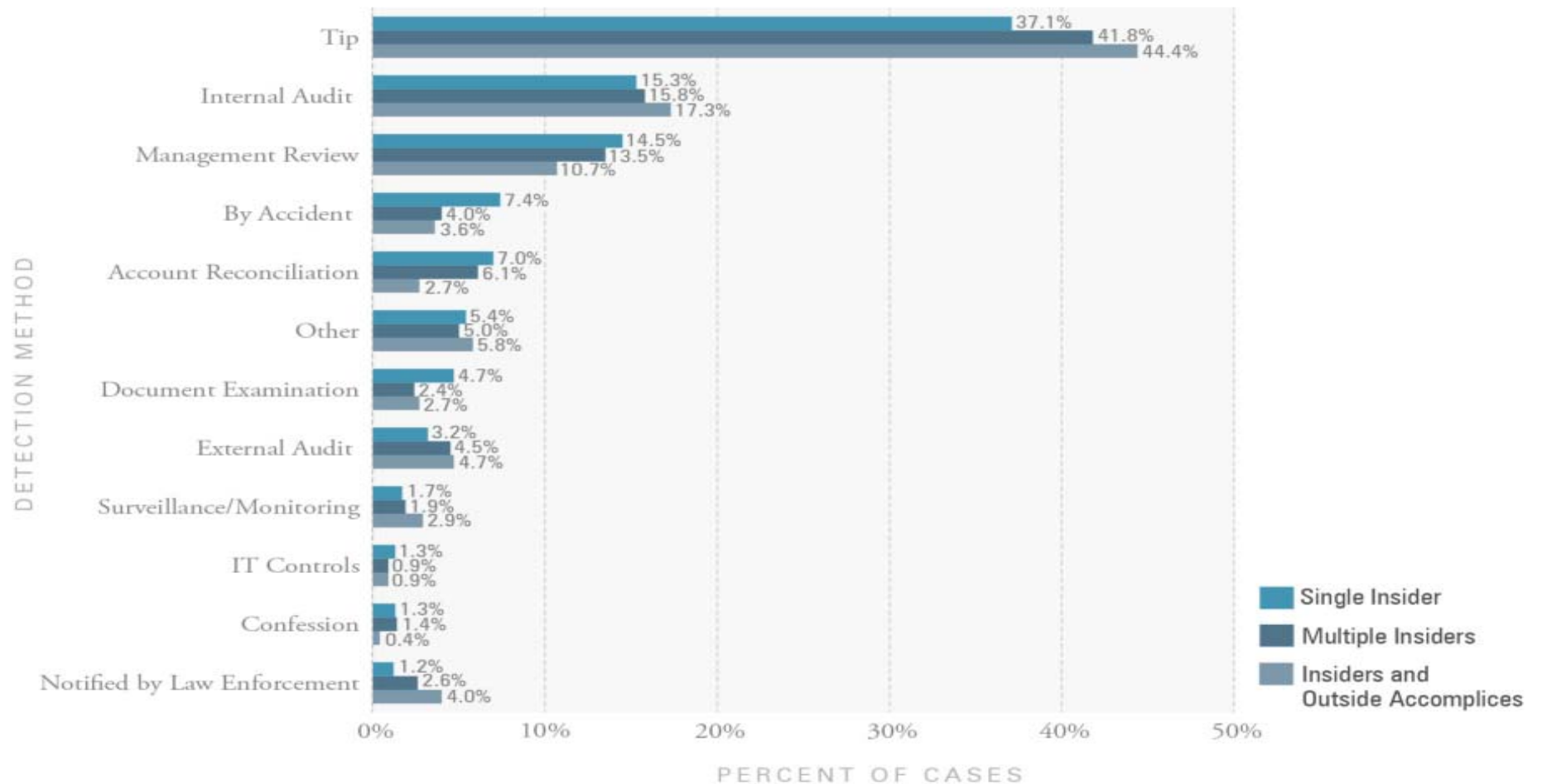


**\$150,000**  
MEDIAN LOSS PER CASE

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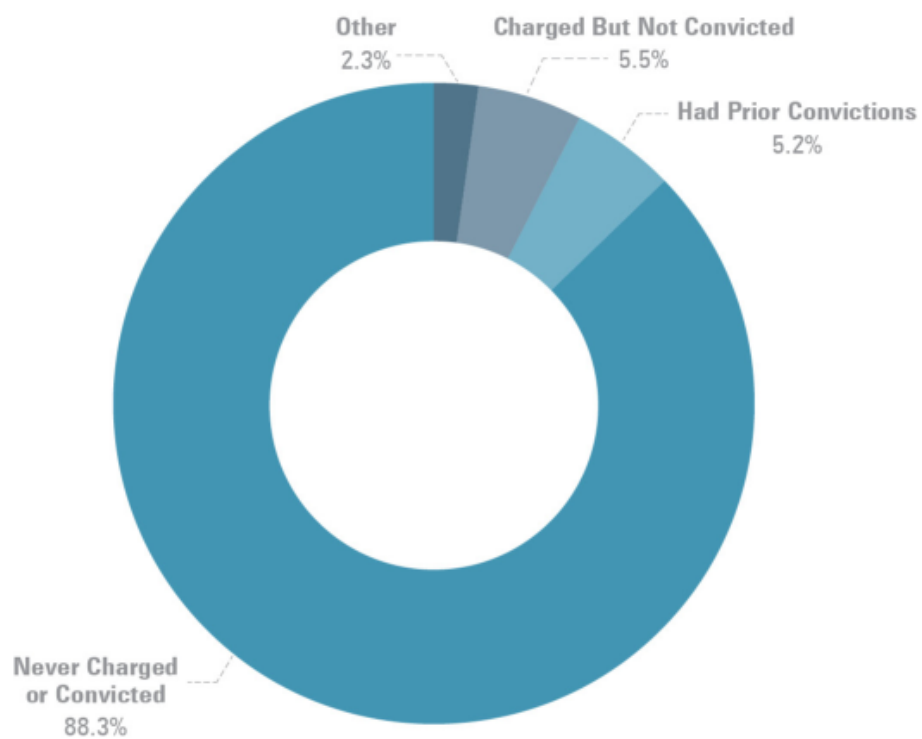
**Figure 91: Detection Method by Perpetrators' Relationship to Victim**



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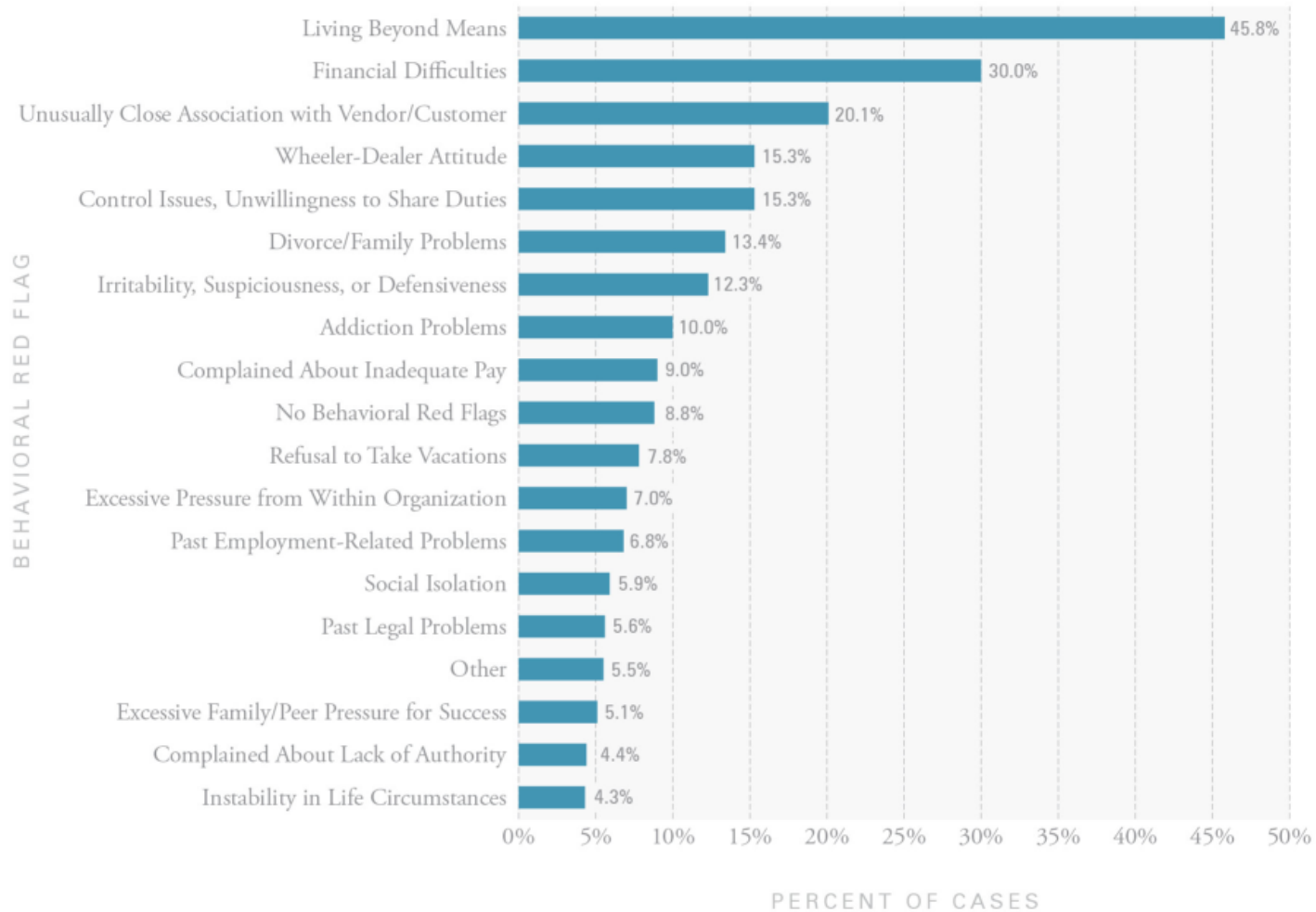


**Figure 92: Criminal Background of Perpetrator**



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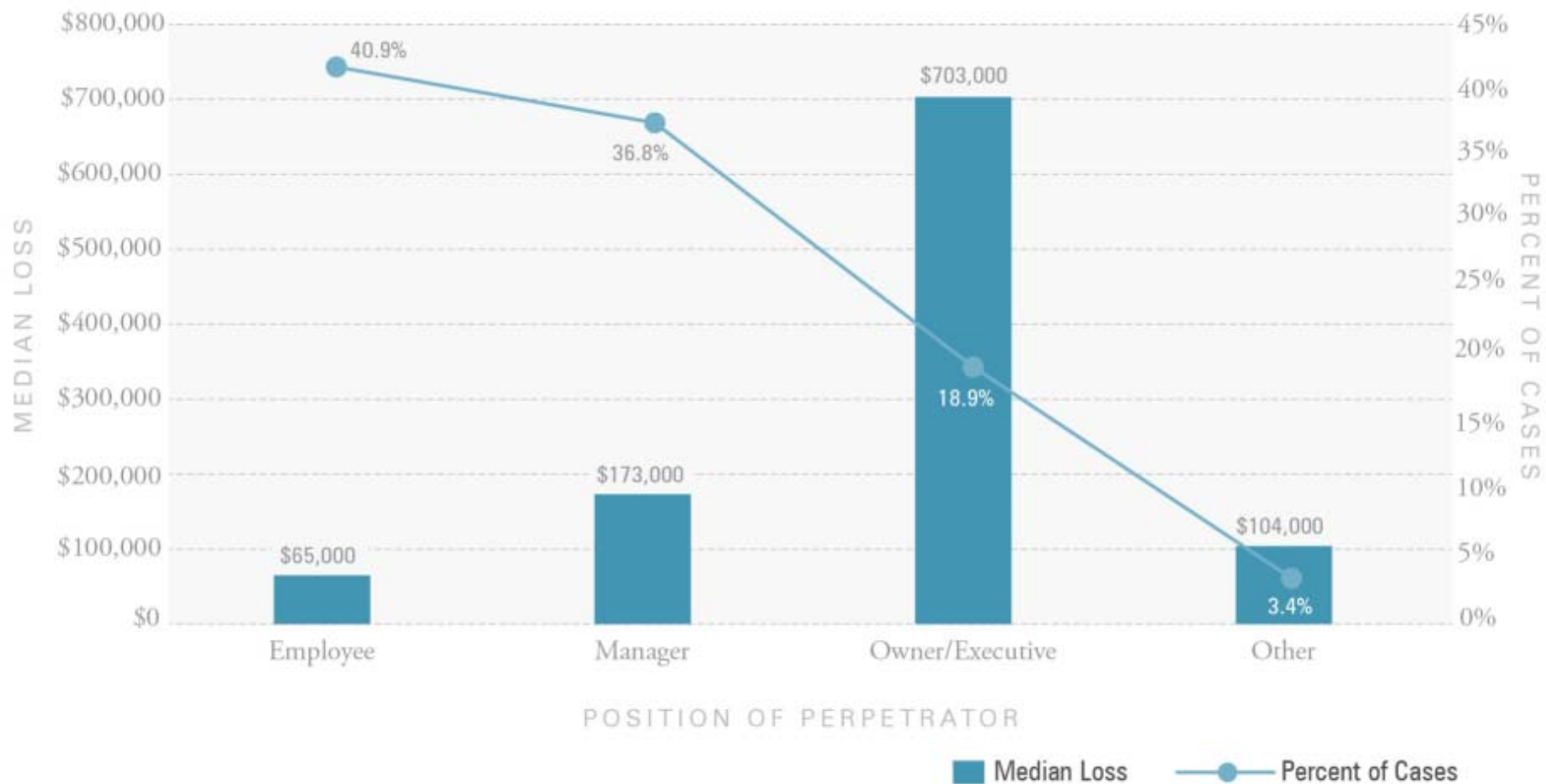
**Figure 94: Behavioral Red Flags Displayed by Perpetrators**



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Figure 65: Position of Perpetrator—Frequency and Median Loss

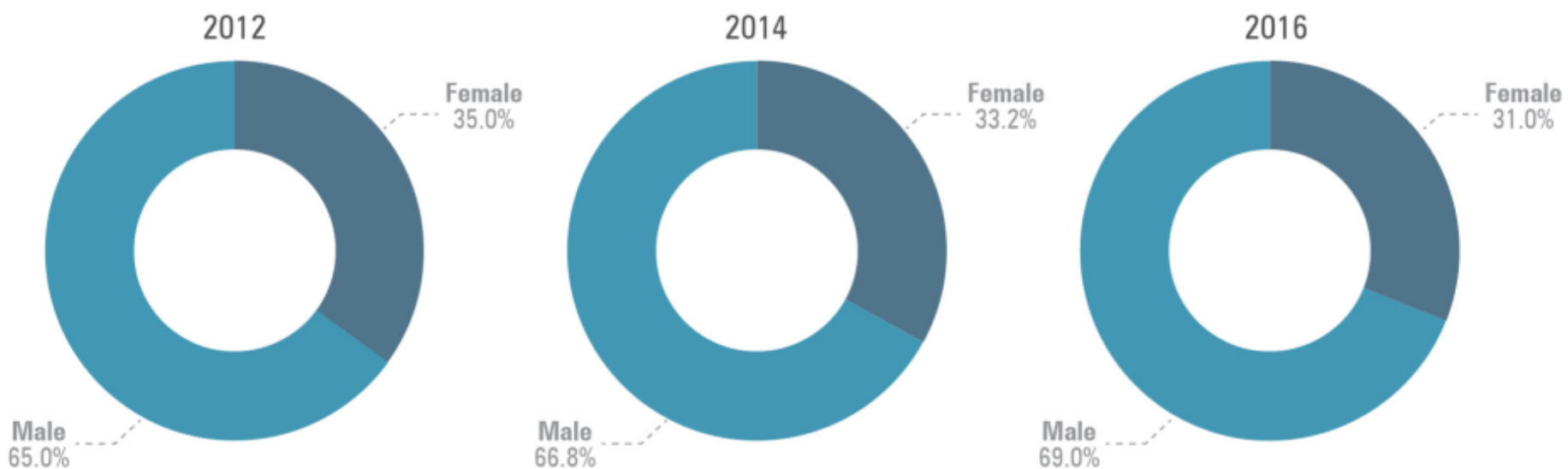


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**Figure 79:** Gender of Perpetrator—Frequency



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

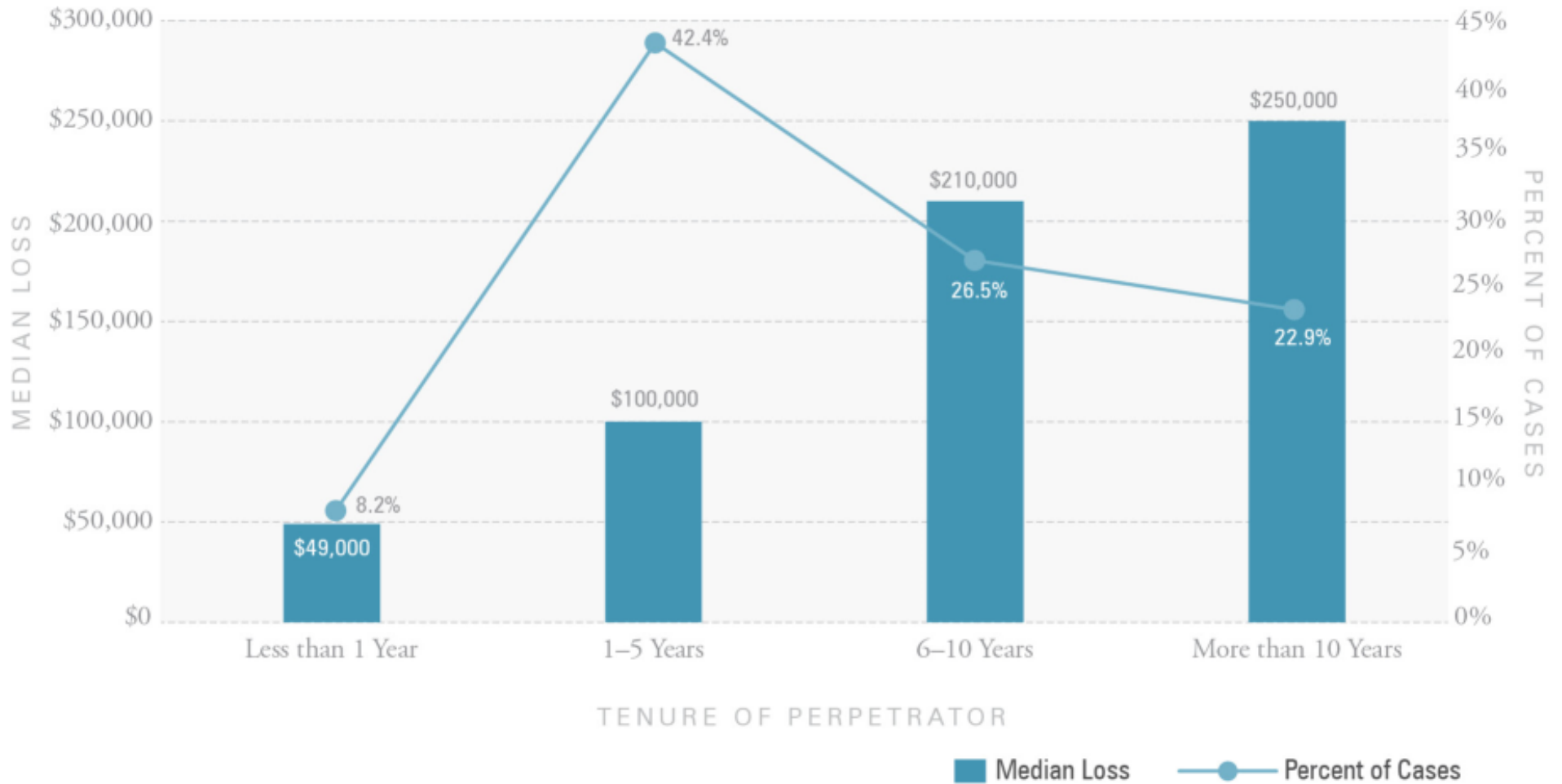
Department/ Scheme	Accounting	Operations	Sales	Executive/Upper Management	Customer Service	Purchasing	Finance	Warehousing/ Inventory
Cases	348	312	260	228	189	161	94	86
Billing	27.0%	21.5%	14.2%	36.8%	9.5%	25.5%	24.5%	9.3%
Cash Larceny	14.9%	7.7%	8.1%	10.1%	14.3%	3.7%	18.1%	0.0%
Cash on Hand	15.5%	13.8%	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%



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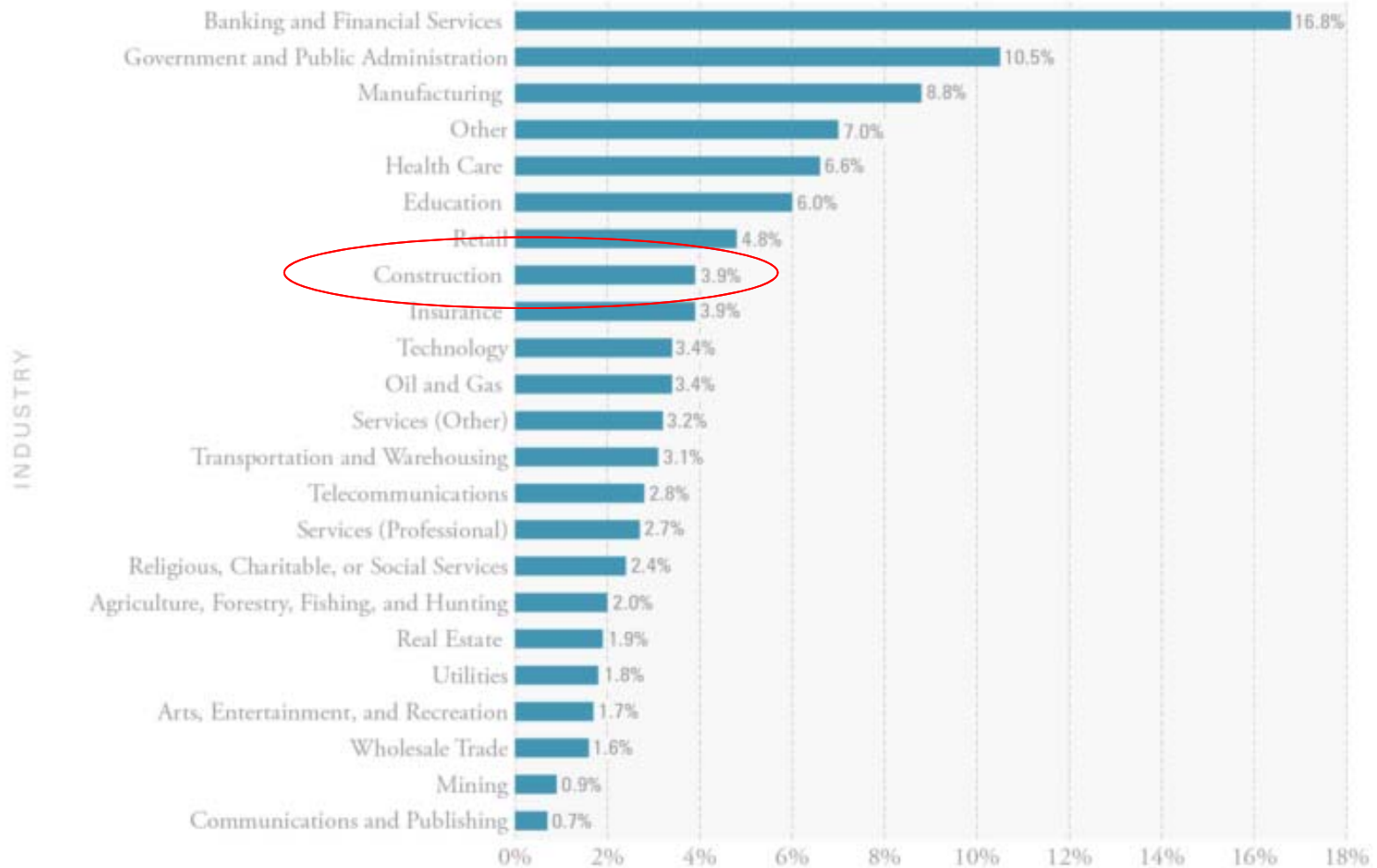


**Figure 76: Tenure of Perpetrator—Frequency and Median Loss**



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Figure 43: Industry of Victim Organizations



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**Figure 45: Frequency of Schemes Based on Industry**

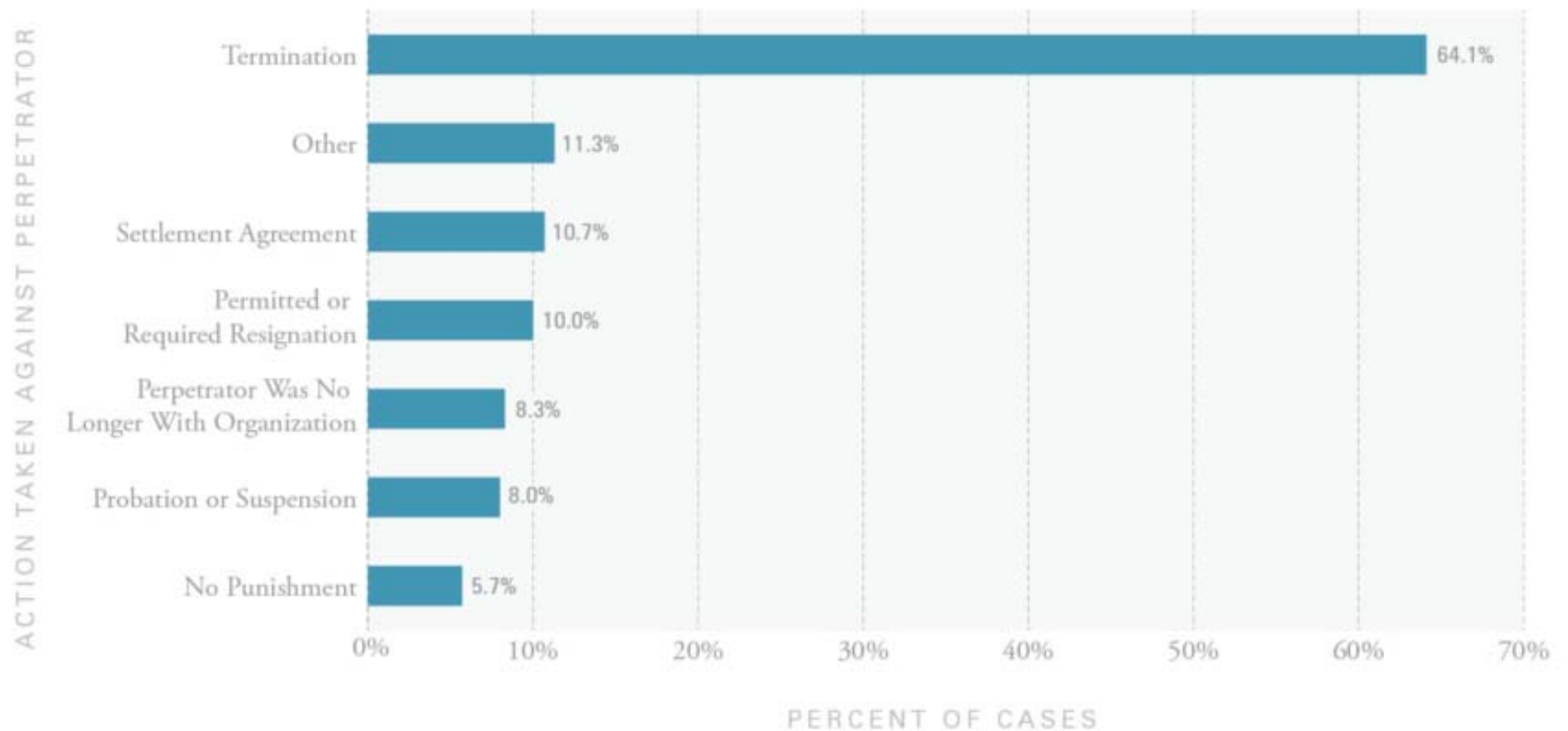


Industry/Scheme	Banking and Financial Services	Government and Public Administration	Manufacturing	Health Care	Education	Retail	Construction	Insurance	Oil and Gas	Technology	Services (Other)	Transportation and Warehousing	Telecommunications	Services (Professional)	Religious, Charitable, or Social Services
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%	46.4%	30.6%	31.8%	32.7%	36.0%	28.2%	48.0%	44.0%	28.6%	51.0%	41.8%	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 106: Action Taken Against Perpetrator**



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**Figure 100:** Cases Referred to Law Enforcement



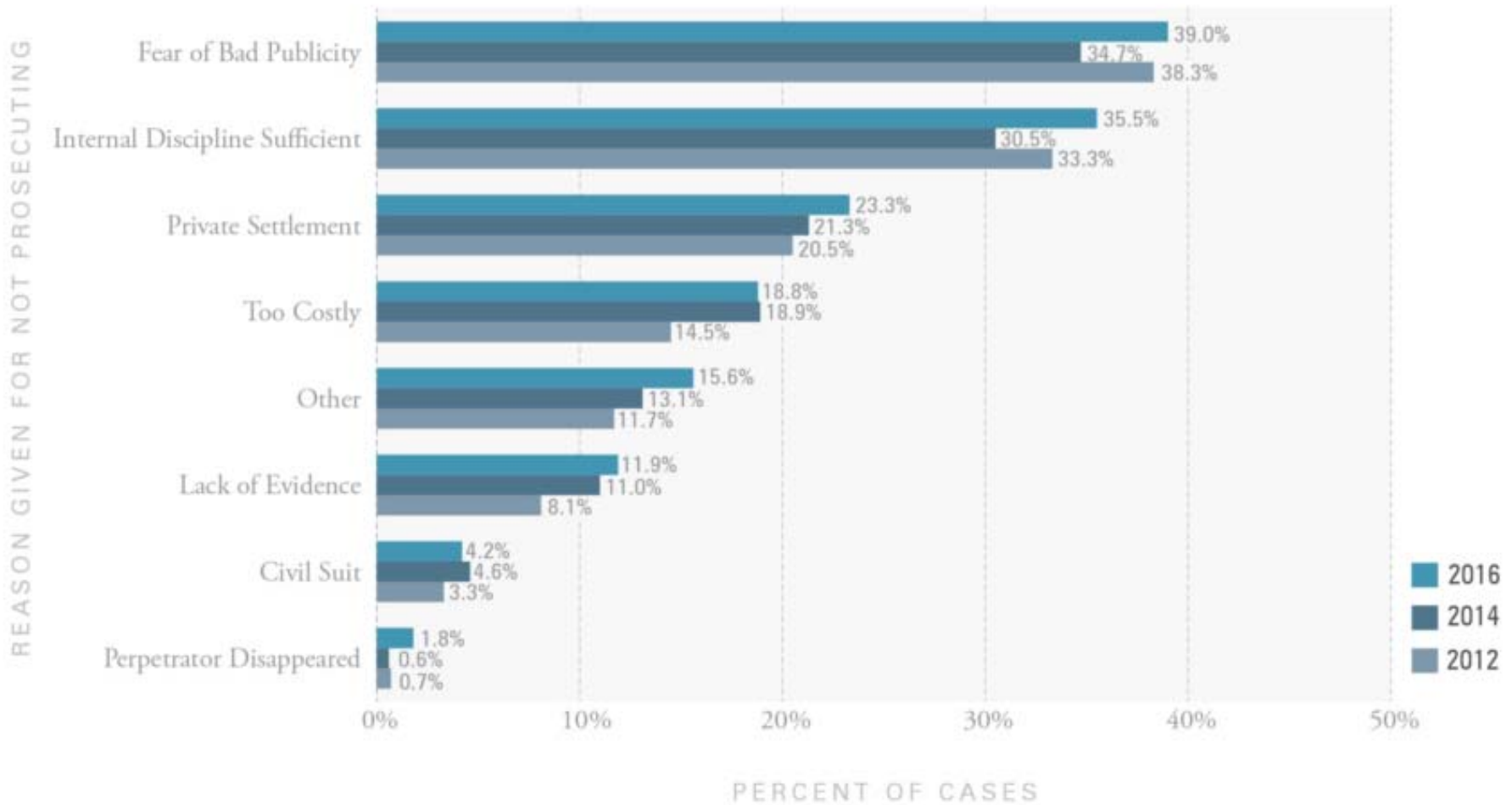
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**Figure 101: Results of Cases Referred to Law Enforcement**



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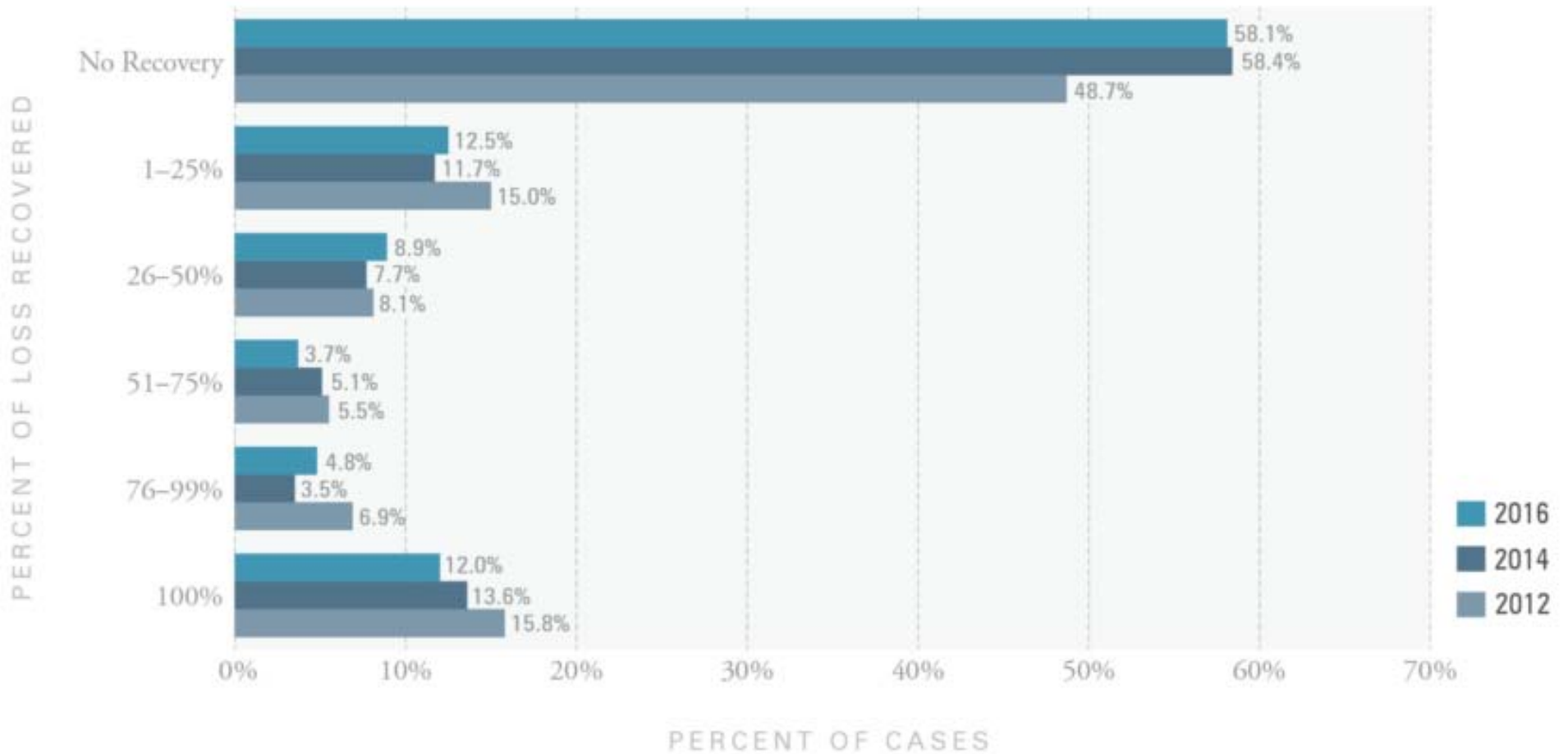
**Figure 102: Reason(s) Case Not Referred to Law Enforcement**



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**Figure 105: Recovery of Victim Organization's Losses**



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## PROFILE OF FRAUD PERPETRATOR



- // No prior criminal history (5%)
- // Well liked by co-workers
- // Likes to give gifts/compulsive shopper
- // Gambling problems not unusual
- // Long-term employee
- // Rationalizes, starts small or “borrows”
- // Lifestyle clues

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## REAL EXAMPLE #1



- Acted alone
- Did not have credit card in his name
- Used his supervisor's card (memorized #)
- Long-term employee
- Red flags noted
- Amount

## Red Flags Abound



- Contractor had no website
- No one knew the owner (he was fake)
- Simple address check revealed small home
- Phone # connected to a cell (no one answered)
- Executive living beyond means

## A Few Vendor/Subcontractor Verification Tips



- A fake company might be a “real” company (registered w/secretary of state)
- Free and easy internet resources – use them
  - Secretary of State websites are great
  - Google Maps/Streetview
  - Hit the vendor/subcontractor website
  - Look at the principals behind the company
- Use caution with fee based searches on internet



# DATA ANALYTICS BASICS

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# Definitions



## Big Data

*Information of extreme size, diversity and complexity.*

- Gartner, Inc.

Source: <http://www.gartner.com/technology/topics/big-data.jsp>

## Data Analytics

*...processes and activities designed to obtain and evaluate data to extract **useful information** and **answer strategic questions**...*

**Figure 37: 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	34.8%	\$73,000	\$181,000	59.7%
Employee Support Programs	52.4%	\$90,000	\$200,000	55.0%
Management Review	62.6%	\$100,000	\$208,000	51.9%
Code of Conduct	77.4%	\$100,000	\$200,000	50.0%
Internal Audit Department	70.6%	\$100,000	\$180,000	44.4%
Formal Fraud Risk Assessments	33.5%	\$94,000	\$168,000	44.0%
Surprise Audits	33.2%	\$93,000	\$164,000	43.3%
External Audit of ICOFR	65.2%	\$103,000	\$180,000	42.8%
Fraud Training for Managers/Executives	47.8%	\$100,000	\$168,000	40.5%
Hotline	54.1%	\$100,000	\$168,000	40.5%
Dedicated Fraud Department, Function or Team	38.6%	\$100,000	\$164,000	39.0%
Fraud Training for Employees	47.8%	\$100,000	\$164,000	39.0%
Anti-Fraud Policy	45.4%	\$100,000	\$155,000	35.5%
Management Certification of F/S	70.0%	\$120,000	\$184,000	34.8%
Job Rotation/Mandatory Vacation	19.9%	\$100,000	\$150,000	33.3%
External Audit of F/S	81.4%	\$125,000	\$186,000	32.8%
Rewards for Whistleblowers	10.5%	\$100,000	\$135,000	25.9%
Independent Audit Committee	62.0%	\$120,000	\$150,000	20.0%

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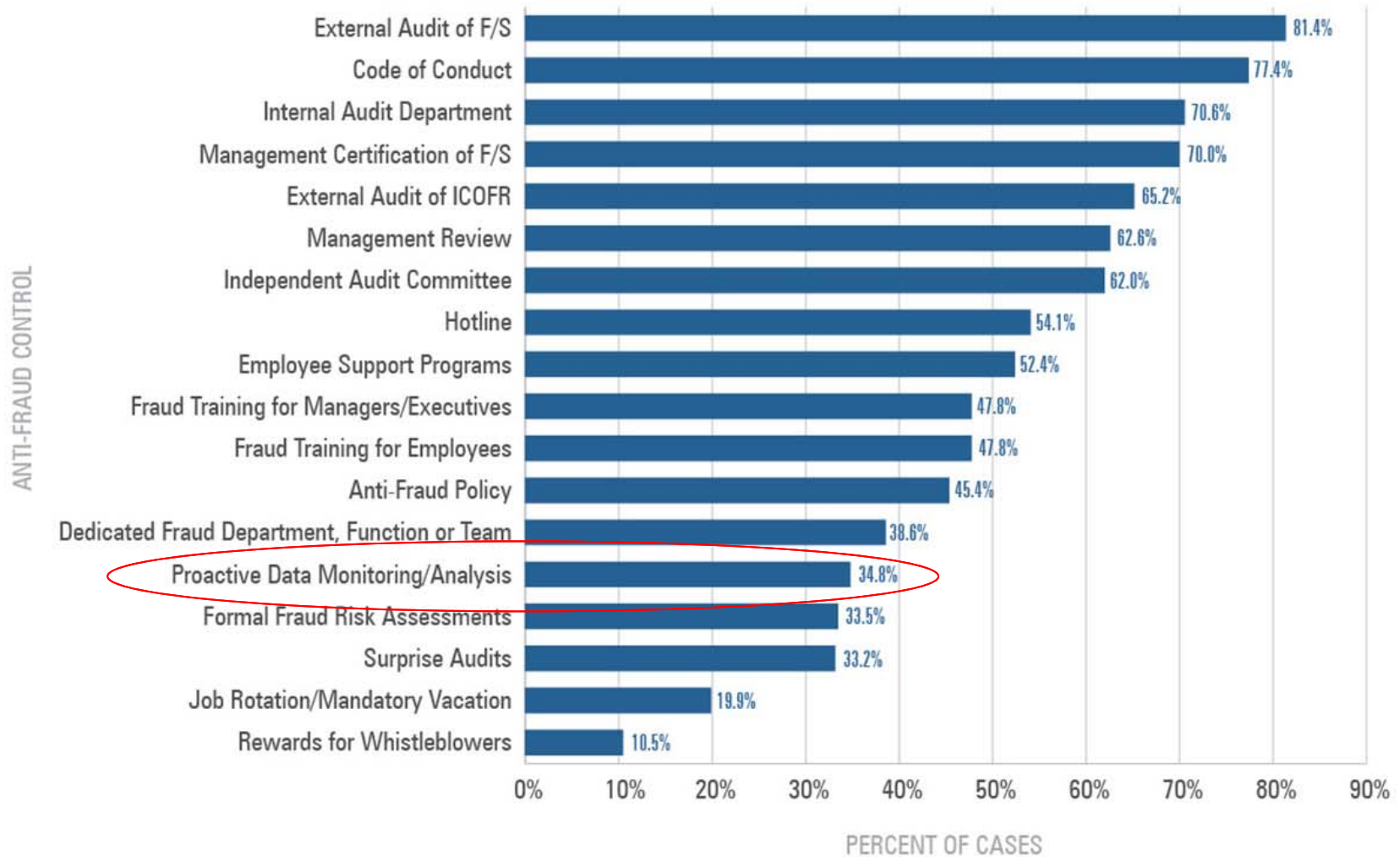


**Figure 38: Median Duration of Fraud Based on Presence of Anti-Fraud Controls**

Control	Percent of Cases	Control in Place	Control Not in Place	Percent Reduction
Surprise Audits	33.2%	12 months	24 months	50.0%
Proactive Data Monitoring/Analysis	34.8%	12 months	24 months	50.0%
Dedicated Fraud Department, Function or Team	38.6%	12 months	24 months	50.0%
Anti-Fraud Policy	45.4%	12 months	24 months	50.0%
Fraud Training for Employees	47.8%	12 months	24 months	50.0%
Hotline	54.1%	12 months	24 months	50.0%
Formal Fraud Risk Assessments	33.5%	12 months	23 months	47.8%
Management Review	62.6%	13 months	24 months	45.8%
Independent Audit Committee	62.0%	14 months	24 months	41.7%
Internal Audit Department	70.6%	14 months	24 months	41.7%
Job Rotation/Mandatory Vacation	19.9%	12 months	20 months	40.0%
Fraud Training for Managers/Executives	47.8%	13 months	21 months	38.1%
External Audit of ICOFR	65.2%	15 months	24 months	37.5%
Management Certification of F/S	70.0%	15 months	24 months	37.5%
Rewards for Whistleblowers	10.5%	12 months	18 months	33.3%
Code of Conduct	77.4%	16 months	24 months	33.3%
External Audit of F/S	81.4%	18 months	24 months	25.0%
Employee Support Programs	52.4%	14 months	18 months	22.2%

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**Figure 26: Frequency of Anti-Fraud Controls**



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# Summary of Categories



Job	Total Transactions	Transaction Count	Categorical Hits	Holiday Transactions	Transactions with Keywords	Transactions at Merchants of Interest	Potential Split Transactions	Transactions on PTO	Round Hundred Dollar Transactions	Weekend Transactions
Sales Representative	1,239,885.17	16,131	6	52	215	178	-	81	21	1,463
Vice President Sales	564,654.06	4,112	6	15	7	62	-	13	4	459
Technical Sales Rep	524,032.93	5,504	6	19	61	34	-	40	2	587
Business Unit Manager	495,998.25	5,001	6	16	10	79	-	12	2	454
Customer Service Rep	270,665.16	3,272	6	13	3	56	-	22	1	300
Executive Vice President	263,505.40	1,724	6	14	7	31	-	2	7	189
Regional Vice President	223,448.47	1,819	6	5	59	11	-	15	2	178
VP Operations	194,824.17	1,433	6	11	1	7	-	5	1	181
Print Production Manager	190,866.42	2,310	6	9	4	19	-	10	2	185
General Manager	156,892.40	1,915	6	5	21	4	-	23	2	215
Plant Manager	101,922.90	1,324	6	2	5	6	-	15	2	141
Production Manager	87,231.55	949	6	1	12	3	-	13	5	72
n/a	406,902.25	3,704	5	10	20	75	-	-	2	316
Sales Division Manager	297,656.65	2,470	5	10	3	31	-	3	-	217
Operations Manager	106,736.03	1,221	5	4	5	20	-	7	-	106
IT Manager	100,892.16	759	5	2	5	29	-	2	-	132
Finance Manager	79,946.48	507	5	1	-	7	-	1	4	39
Chief Financial Officer	77,086.00	317	5	1	15	1	-	1	-	27
CEO & President	72,371.44	433	5	6	5	1	-	1	-	60
Business Development Mgr	64,449.41	803	5	1	3	15	-	-	1	58
Quality Control Manager	50,332.81	634	5	1	-	7	-	5	1	42

# Weekend Purchases



Transaction Date	Transaction Amount	Merchant Name Original	Address	City Name	State Province	Expense Description
7/7/2013	79.08	SHERIDAN NURSERIES EST		MISSISSAUGA	ON	
10/5/2013	28.20	VALUE VILLAGE #2027		MISSISSAUGA	ON	
10/12/2013	56.44	HOMESENSE 013		ETOBICOKE	ON	
1/11/2014	124.42	CLOVERDALE HOME HARDWA		ETOBICOKE	ON	
1/11/2014	50.76	KITCHEN STUFF PLUS #7		ETOBICOKE	ON	
1/11/2014	14.63	HOME OUTFITTERS #5116		TORONTO	ON	
1/11/2014	22.59	TARGET CANADA T3715		TORONTO	ON	
1/11/2014	31.56	HOMESENSE 013		ETOBICOKE	ON	
2/2/2014	36.01	HOUSE WARMINGS INC		OAKVILLE	ON	
2/23/2014	235.04	LULULEMON 262		ETOBICOKE	ON	

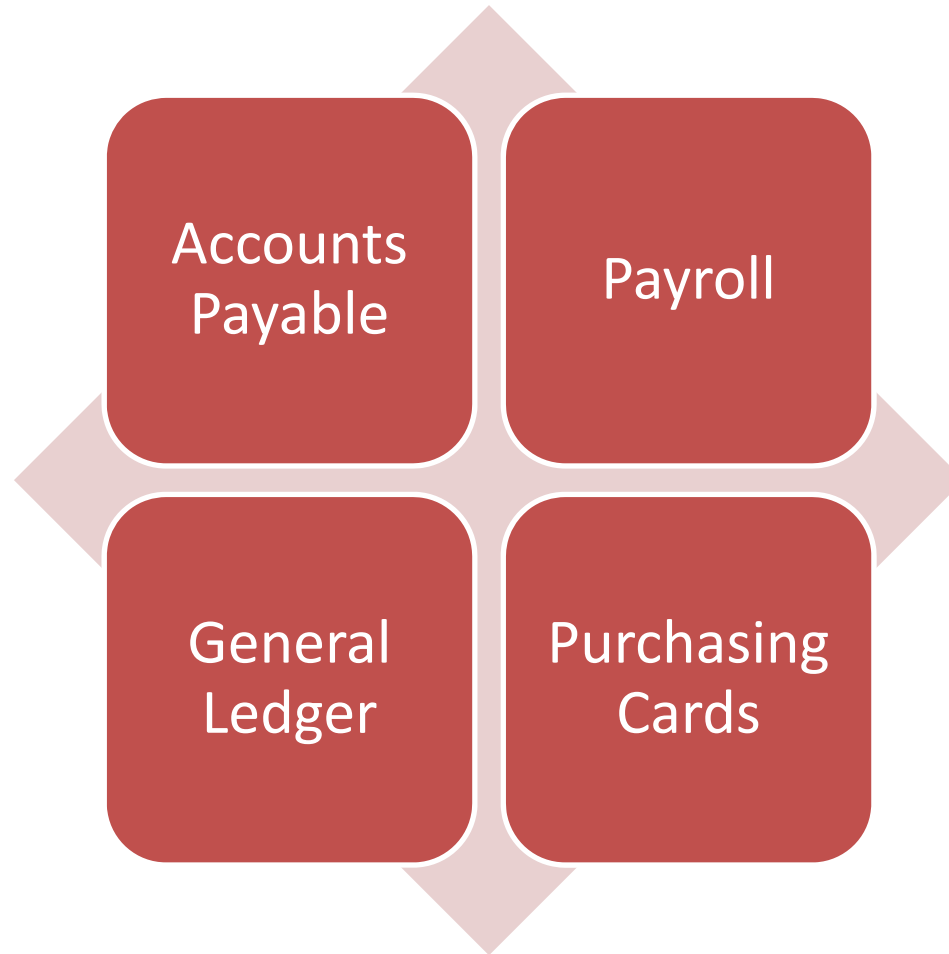


# Keyword Search



Transaction Date	Transaction Amount	Merchant Name Original	City Name	Expense Description
9/7/2013	48.22	ALBERTSONS #4132	DALLAS	personal expense to be reimbursed by Amy
8/11/2013	6.36	STARBUCKS #02240 WOODR	WOODRIDGE	Card used in error - will send check
12/5/2013	17.71	NOODLES CO 611	LAGRANGE	Check Included - personal mistake
11/2/2013	2,000.00	PTI MARKETING TECH	8588476613	This was billed by mistake and was credited on January 2014 statement
3/26/2014	65.04	FRONT STREET CAFE	NEW RICHMOND	Personal Expense Check Inclosed
6/29/2013	44.90	LILYDALE BP QPS	LILYDALE	gas for personal vehicle
7/3/2013	31.10	HOLIDAY STNSTORE 0336	BROOKLYN PARK	gas for personal vehicle
7/9/2013	48.05	LILYDALE BP QPS	LILYDALE	gas for personal vehicle
7/13/2013	46.36	LILYDALE BP QPS	LILYDALE	gas for personal vehicle
7/17/2013	35.92	HOLIDAY STNSTORE 0336	BROOKLYN PARK	gas for personal vehicle
7/19/2013	41.19	HOLIDAY STNSTORE 0336	BROOKLYN PARK	gas for personal vehicle
7/21/2013	35.58	LILYDALE BP QPS	LILYDALE	gas for personal vehicle

# Examples of Uses in Examinations





# VENDOR ATTRIBUTE ANALYSIS – EMPLOYEE /VENDOR MATCHING



Vendor Information							Employee Information	
Vendor TIN	Vendor nu	Name	City	Total Amount Paid from January 04 to July 2005	Street	Region	NAME	ADDRESS1
227620426	454385	J		no activity	605 HIGHLAND AVE SW			605 Highland Ave Sw
241720797	437069	L		\$ 3,786.00	3139 BECKS CHURCH RD			3139 Becks Church Rd.
243464534	509775	R		<b>\$167,708.00</b>	<b>315 RIDGECREST DRIVE</b>			<b>315 Ridgcrest Dr.</b>
250085378	434913	K		no activity	436 EAST TIERRA DR			436 E. Tierra
255398736	497638	E		\$ 1,748.00	1247 DEE KENNEDY RD			1247 Deen Kennedy Rd
259869739	525761	S		\$ 70.00	1510 LITTLE RIVER DRIVE			1510 Littleriver Dr
260159762	443860	A		<b>\$ 13,042.00</b>	<b>151 MONTGOMERY RD</b>			<b>151 Montgomery Road</b>
265960806	445631	M		\$ 2,472.00	1204 FIR STREET			1204 Street
292649087	496812	A		\$ 225.00				P.O. Box 141
294847554	473441	D		no activity	5225 CROSSINGS BLVD #216			680 Lake Terrace Drive
319729230	424820	S		\$ 920.00	176 LIBERTY STREET			612 California Avenue

**Vendor addresses match employee addresses**





## Mailbox Service Comparison

Name	Address	City	State	ZIP	FLAG
Syntec Corporation	1221 East Kearney	Springfield	MO	65601	<b>MATCH</b>



**UPS Store**  
**1221 East Kearney**  
**Springfield, MO 65801**

## ADDRESS MINING – PROXIMITY



### Latitude/Longitude Comparison

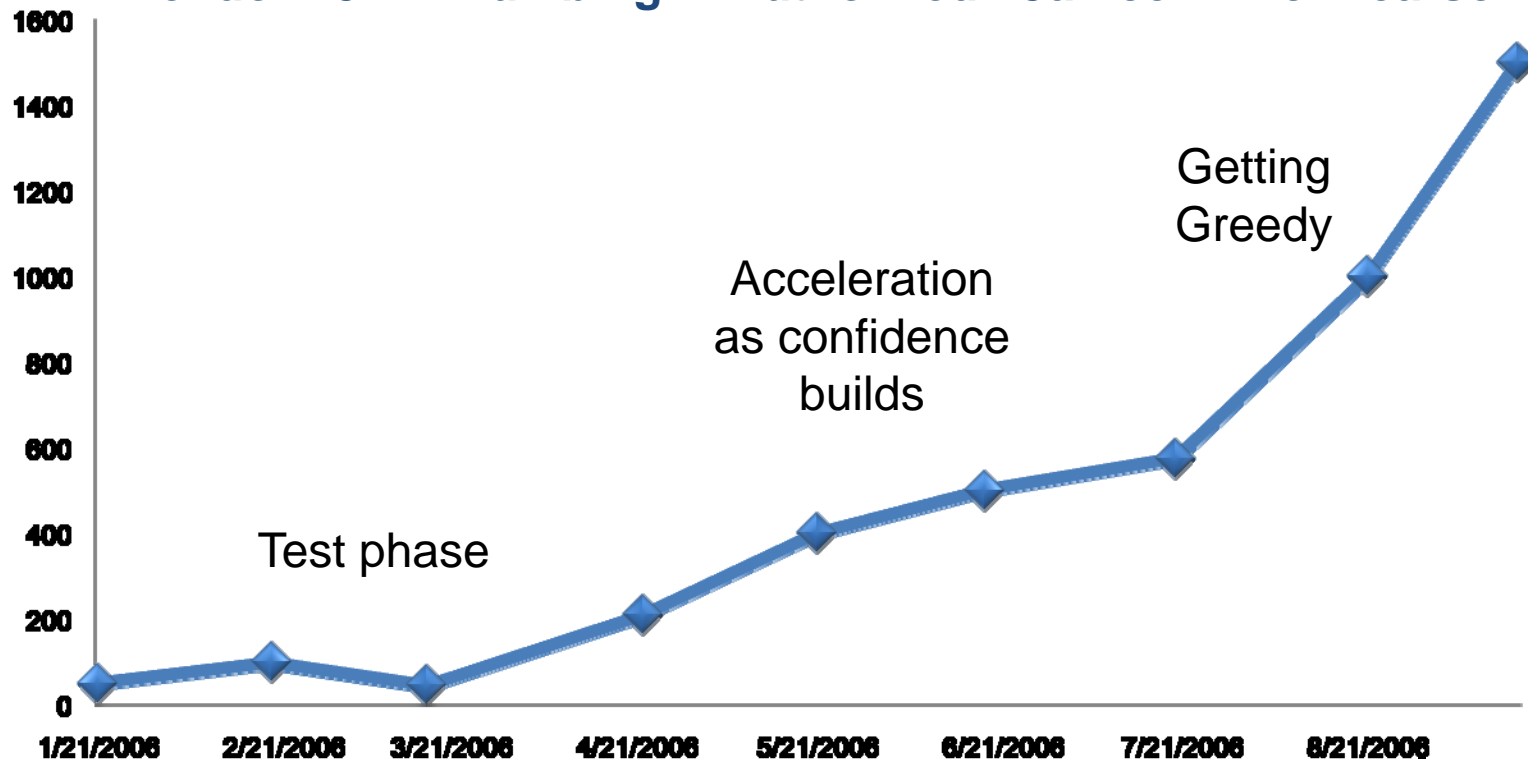
Name	Address	City	State	ZIP	LAT	LONG
AP Clerk	312 East Warwick	Springfield	MO	65807	37.320552	-93.583655
Syntec Corporation	1221 East Kearney	Springfield	MO	65807	37.320289	-93.583836

965 feet

# VENDOR TRENDING ANALYSIS



Vendor: JLM Plumbing      Authorized: Janice L. McPhearson

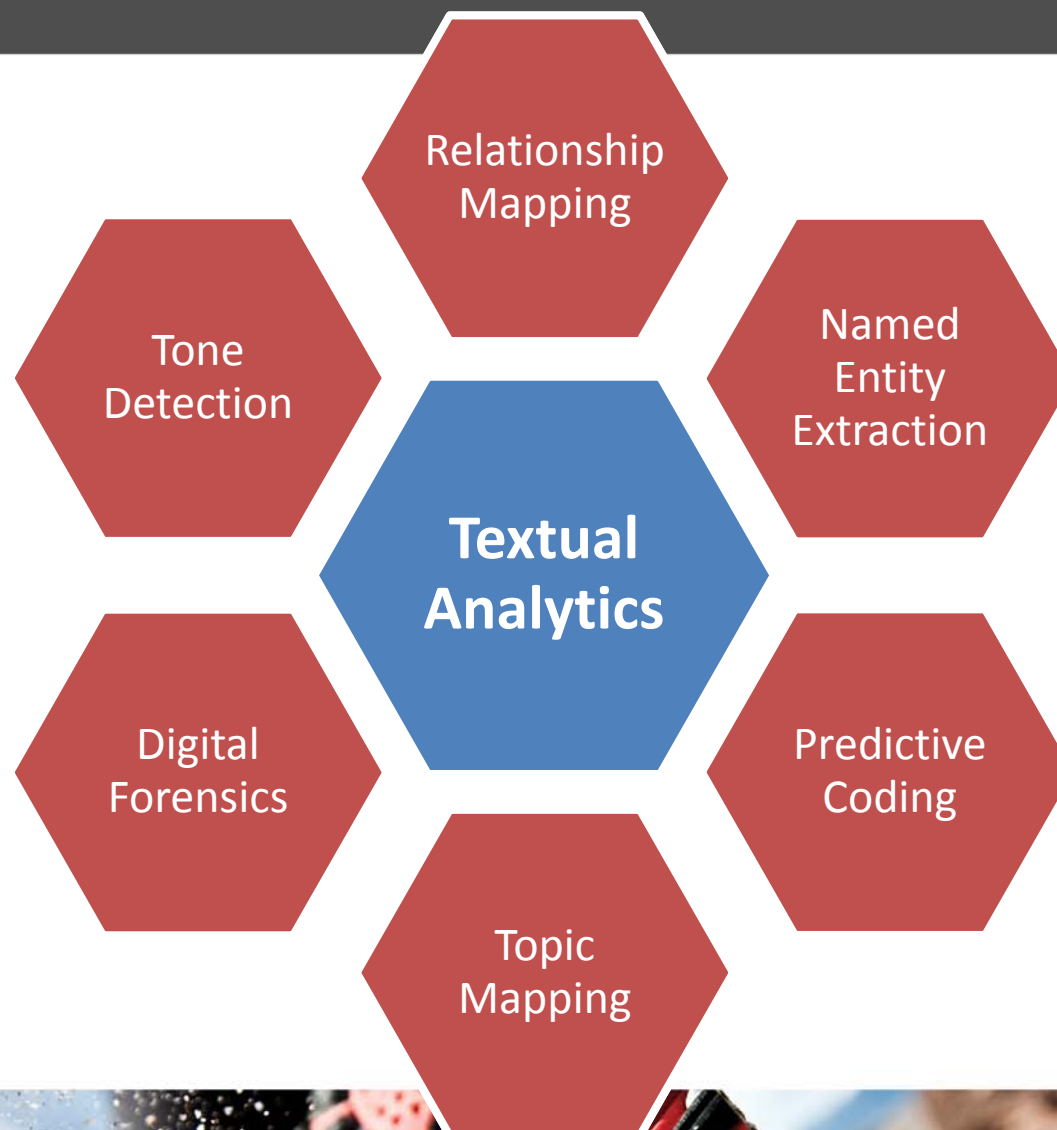




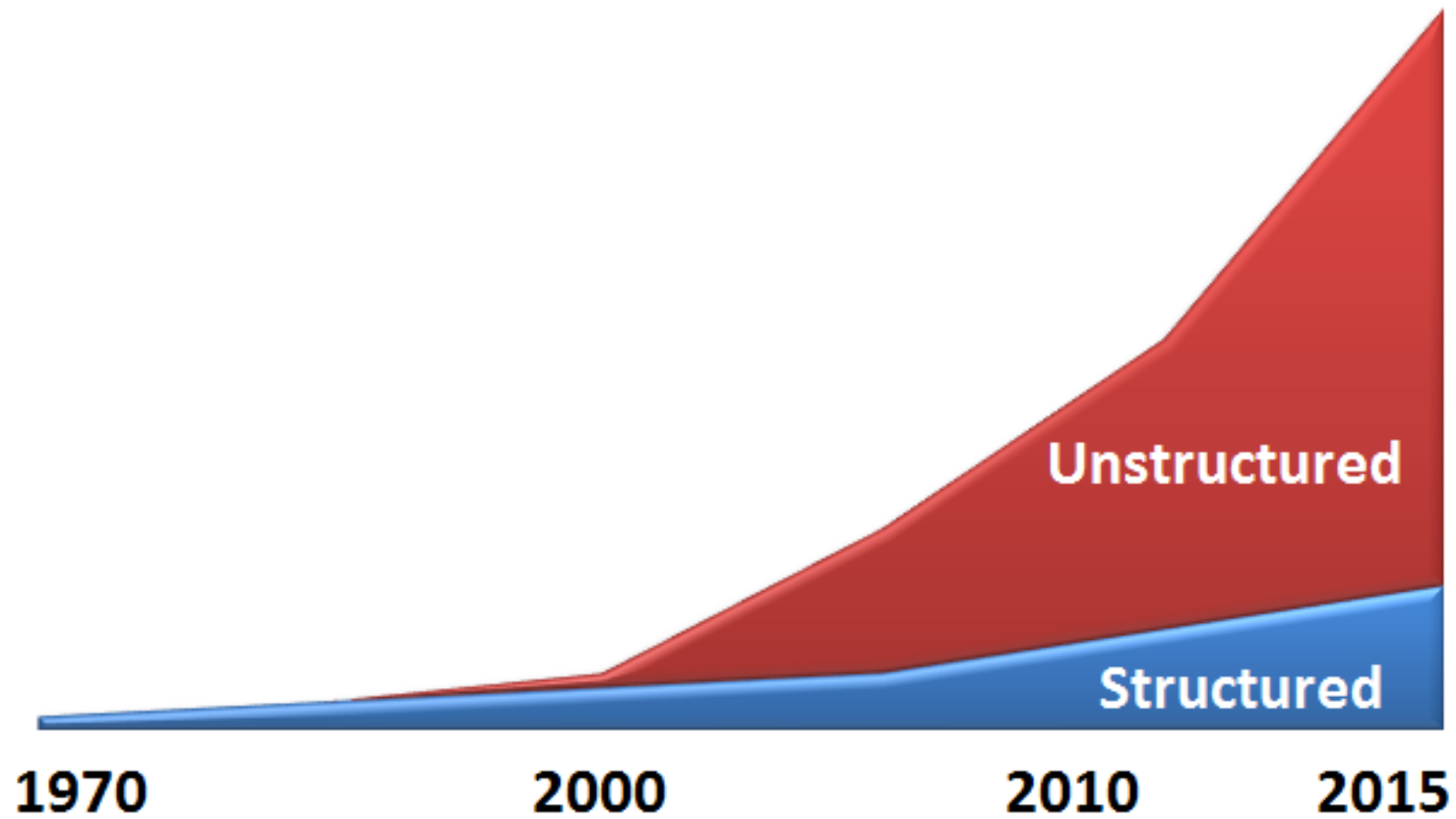
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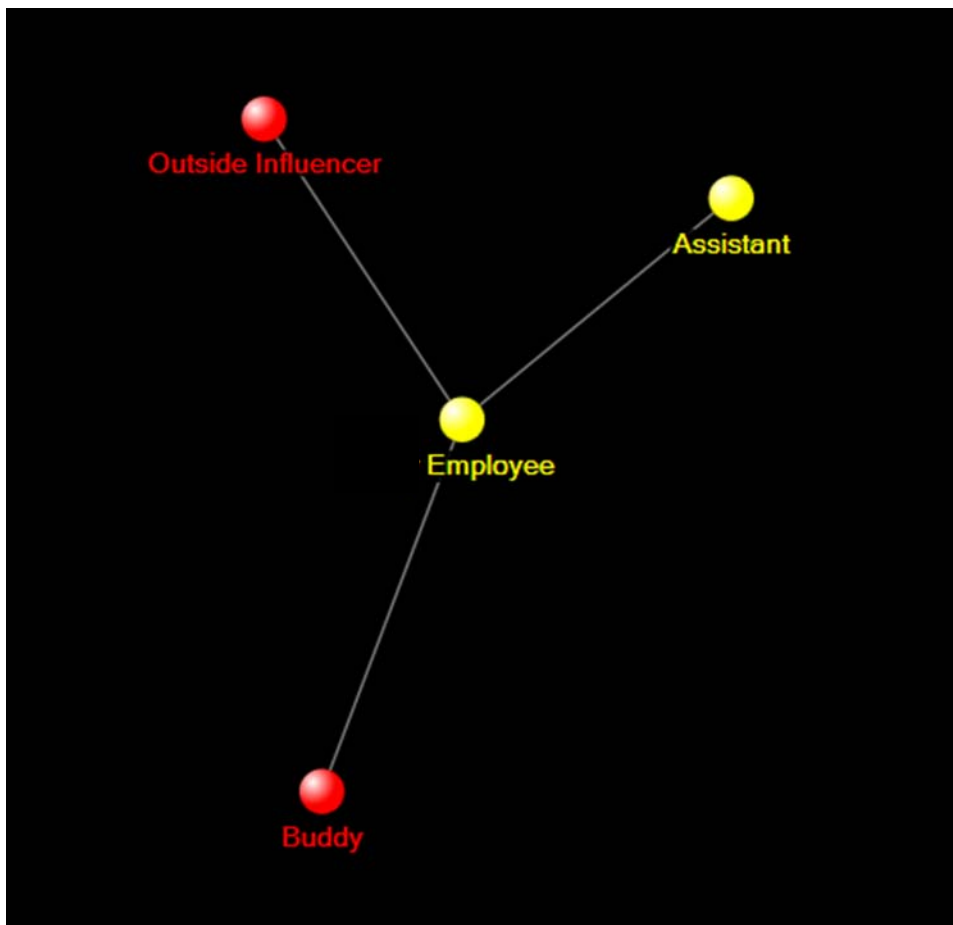
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# Data Types



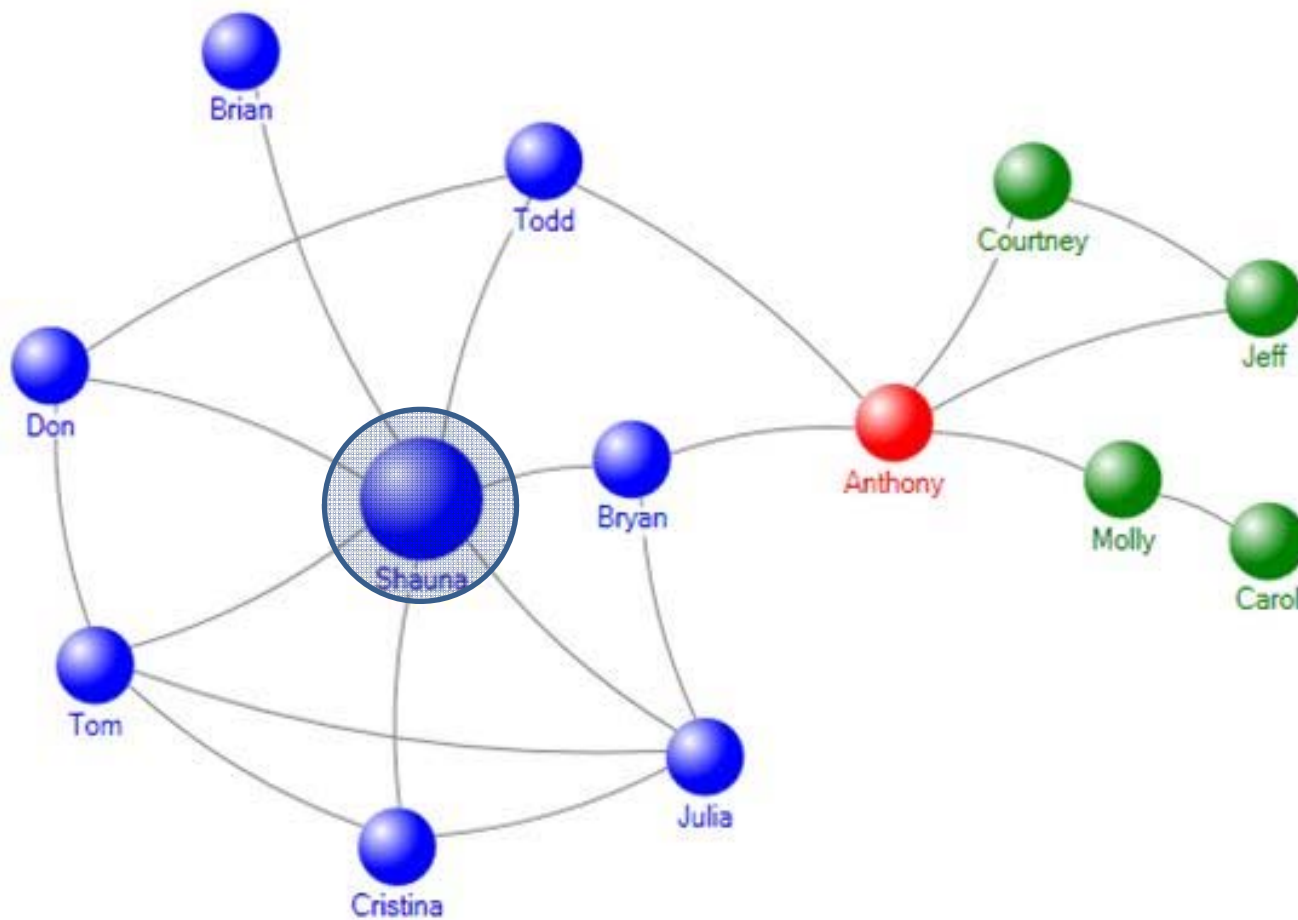


**Figure 45: Frequency of Schemes Based on Industry**

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%	46.4%	30.6%	31.8%	32.7%	36.0%	28.2%	48.0%	44.0%	28.6%	51.5%	41.8%	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%

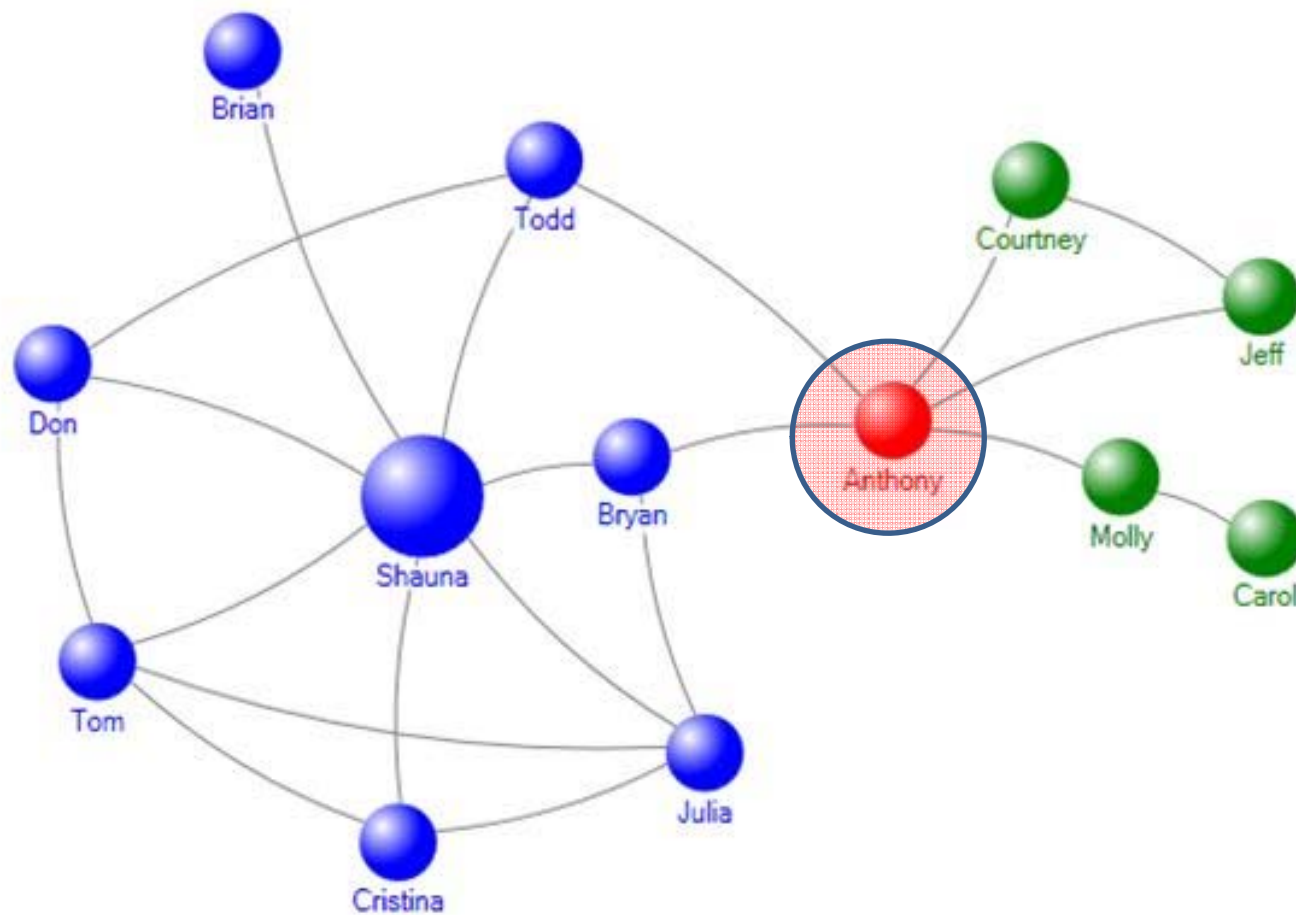


# Degree

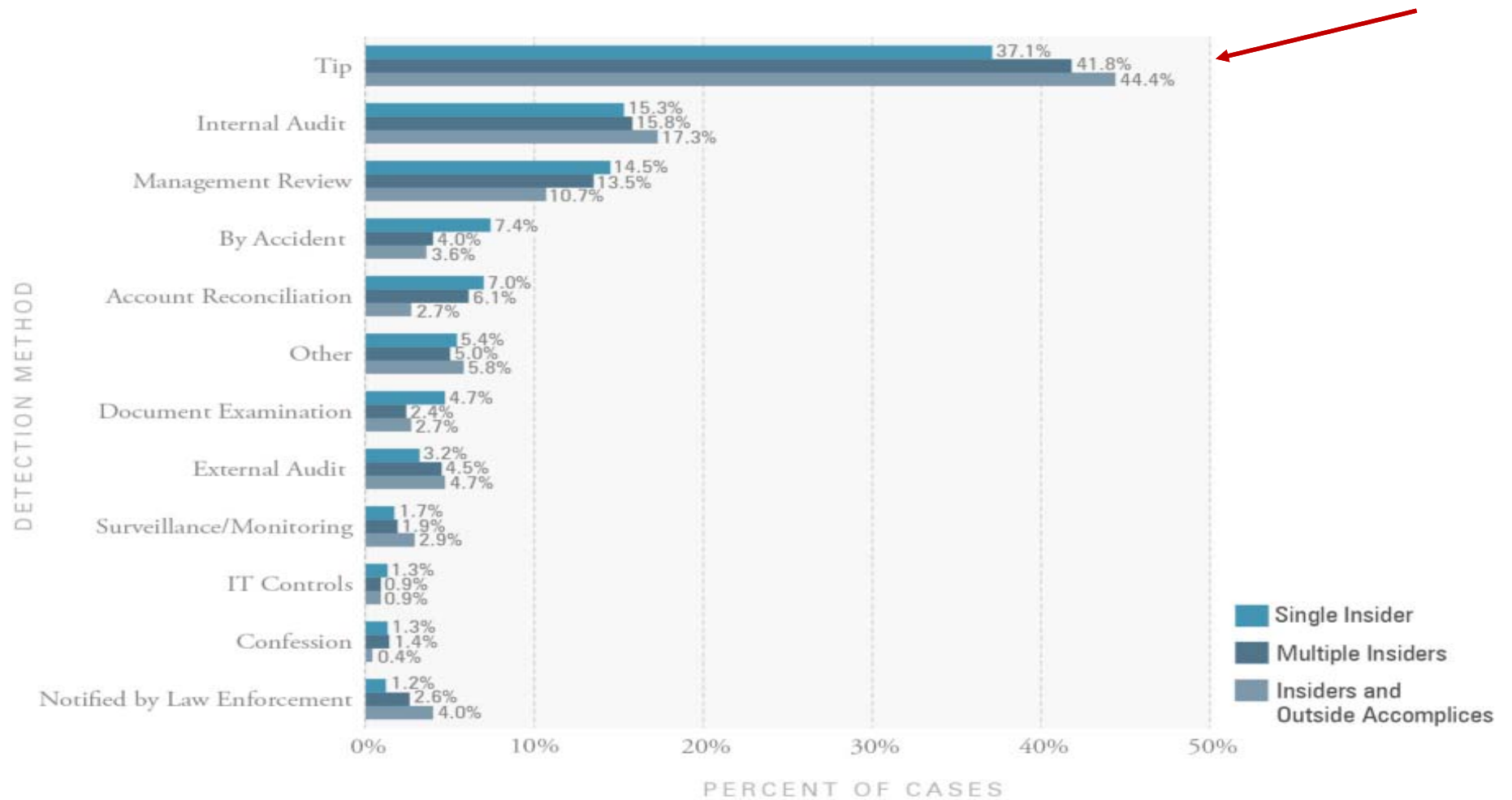




# Betweenness Centrality



**Figure 91: Detection Method by Perpetrators' Relationship to Victim**



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THANK YOU

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