PacificCPE

COURSE
21755B

Forensic Accounting: Advanced Analyses, Findings, and Expert Testimony

Going deeper into the Data Sleuth toolkit, this module covers three additional analytical methods — interesting data findings, risk indicator analysis, and payroll analysis — then shifts to the critical final phase of any engagement. You'll learn how to document your findings clearly, structure reports that hold up to scrutiny, and present conclusions effectively, even in testimony settings. From written deliverables to the witness stand, this module helps you communicate your work with clarity and confidence.

CREDIT HOURS 2 | FIELD OF STUDY ACCOUNTING | EXAM QUESTIONS 10

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Assignment

- Study the full course materials included here.
- Complete the review questions after each chapter.
- Answer 10 final exam questions.
- Final exam is scored immediately, 70% or better passes.
- Certificate of completion is available in your account.
- Failed exams can be retaken free of charge.

Course Objectives

- Identify the characteristics of risk indicator analysis.
- Recall the characteristics of reports issued to law enforcement.

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Chapter 1: STANDARD DATA SLEUTH ANALYSES: INTERESTING DATA FINDINGS, RISK INDICATOR ANALYSIS, AND PAYROLL ANALYSIS

Chapter Objective

After completing this chapter, you should be able to:

- Identify the characteristics of risk indicator analysis.

Most client cases worked by Workman Forensics involve bank account and credit card account data and the Source and Use Summaries explained in Chapter 2 of course 21754B. This provides a starting point to addressing client concerns and investigation priorities. However, a Source and Use Summary is only a high-level examination indicating where money came from and how it was used. It does not identify anomalies within the detailed underlying data. That is why the Interesting Data Findings analysis was created. It combines the power of data analysis with the intentionality and problem-solving of an investigation to answer the client's questions. The Interesting Data Findings is now a standard detailed analysis that allows investigators and analysts to perform what are now considered to be standard data analysis tests on client data for identifying outliers and anomalies.

Sometimes, especially when other supporting evidence is lacking, the best analysis requires identification of characteristics or specific indicators within the data. An analyst may not be able to confirm that a subject benefited at the expense of a client, but she may be able to organize and prioritize the transactions indicating the highest risk of fraud by identifying the fraud-risk characteristics of the data, or risk indicators. Risk indicator analysis has proven extremely helpful with investigating allegations of purchasing fraud and fake vendors.

An application of the comparative analysis, explained in Chapter 2 of course 21754B, the data analysis tests from the Interesting Data Findings analysis, and the risk indicator analysis is in payroll investigations. All three analyses work well together when investigating allegations of ghost employees and payroll overpayments.

INTERESTING DATA FINDINGS

Another Data Sleuth analysis to incorporate after the Source and Use Summary is the Interesting Data Findings (IDF) analysis. The IDF is a more detailed, granular analysis of specific transactions using data analysis tests to identify anomalies and the most common indicators within a data set, which might indicate fraud or attempts to hide assets or purchases of assets. There are standard

data analysis tests that are performed on each data set; however, the analyst preparing the IDF also considers whether custom tests should be designed based on the client's concerns and investigation priorities.

Standard IDF Data Analysis Tests

The analyses described in this section are not necessarily useful in every case, nor is it all inclusive; however, the list is an excellent place to start. The IDF tests can be performed on any data set, including bank statement data, credit card statement data, payroll data, purchasing data, general ledgers, cash disbursement journals, and check registers – just to name a few. To create an IDF:

- Run data analysis tests on each data set in the case that are relevant to the client concerns and investigation priorities.
- Categorize the individual transaction results of the tests by type.
- Summarize the results in a simplified format for client feedback and or additional inquiry, research, or review.

Benford's Analysis

Benford's analysis is based on Benford's Law, which provides the expected distribution of a random population of numbers.[1] Using this law is helpful in spotting anomalies in data in investigations because deviations from the expected frequency distribution may indicate that the transaction was not a random occurrence but was influenced somehow. Benford's analysis works best on large data sets and can be run using spreadsheet software or data analysis software. As with any data analysis result, further research must be performed to decide if the anomaly is legitimate, erroneous, or fraudulent. Benford's analysis expected frequency deviations are explained through the following examples to illustrate Benford's analysis anomalies:

- **Legitimate**. Several partners in a medical practice were concerned that copays from their patients were being stolen by the office manager. One of the tests performed in the investigation was Benford's analysis. The analyses performed prior to Benford's analysis had determined that all cash payments recorded to the system had been deposited, which led to the analysis of bad debt write-off reports. The results of the analysis indicated a deviation from the expected frequency in the first digit for the number 1. All of the transactions for which the dollar amount began with a 1 were extracted and reviewed. It was quickly identified from the detailed transactions that the abnormal frequency of the payments with the first digit of 1 were due to normal insurance rates for the most common services. This category was still further researched by verifying the services were billed to the appropriate insurance agency and that the write-off was appropriate. Such verification was located, and for this client concern and investigation priority, no loss was identified. (See Figure 10.1.)

- **Unauthorized Expenditures, Fraudulent.** An employee was accused of using corporate funds for charitable contributions benefiting the executive personally and subsequently deducting the contributions on his personal tax return. A Benford's analysis was used on the bank account data. For all the first two digits within the data set that were abnormal to the expected frequency, additional research was performed and confirmed that all of the underlying transactions were charitable contributions not for the benefit of the company. (See Figure 10.2.)

FIGURE 10.1 BENFORD'S ANALYSIS GRAPH OF NUMBER OF WRITE-OFFS FROM PATIENT ACCOUNTS.

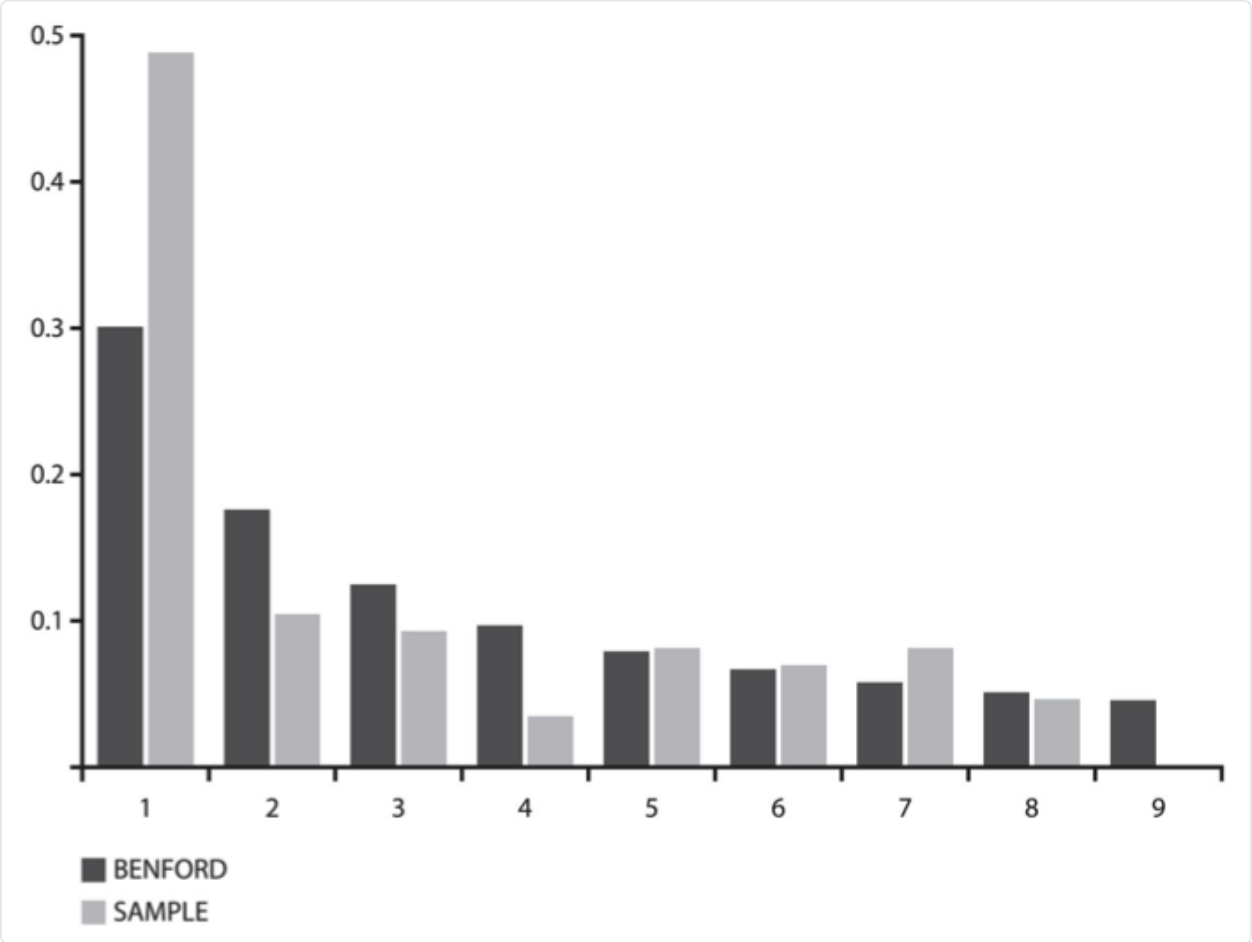
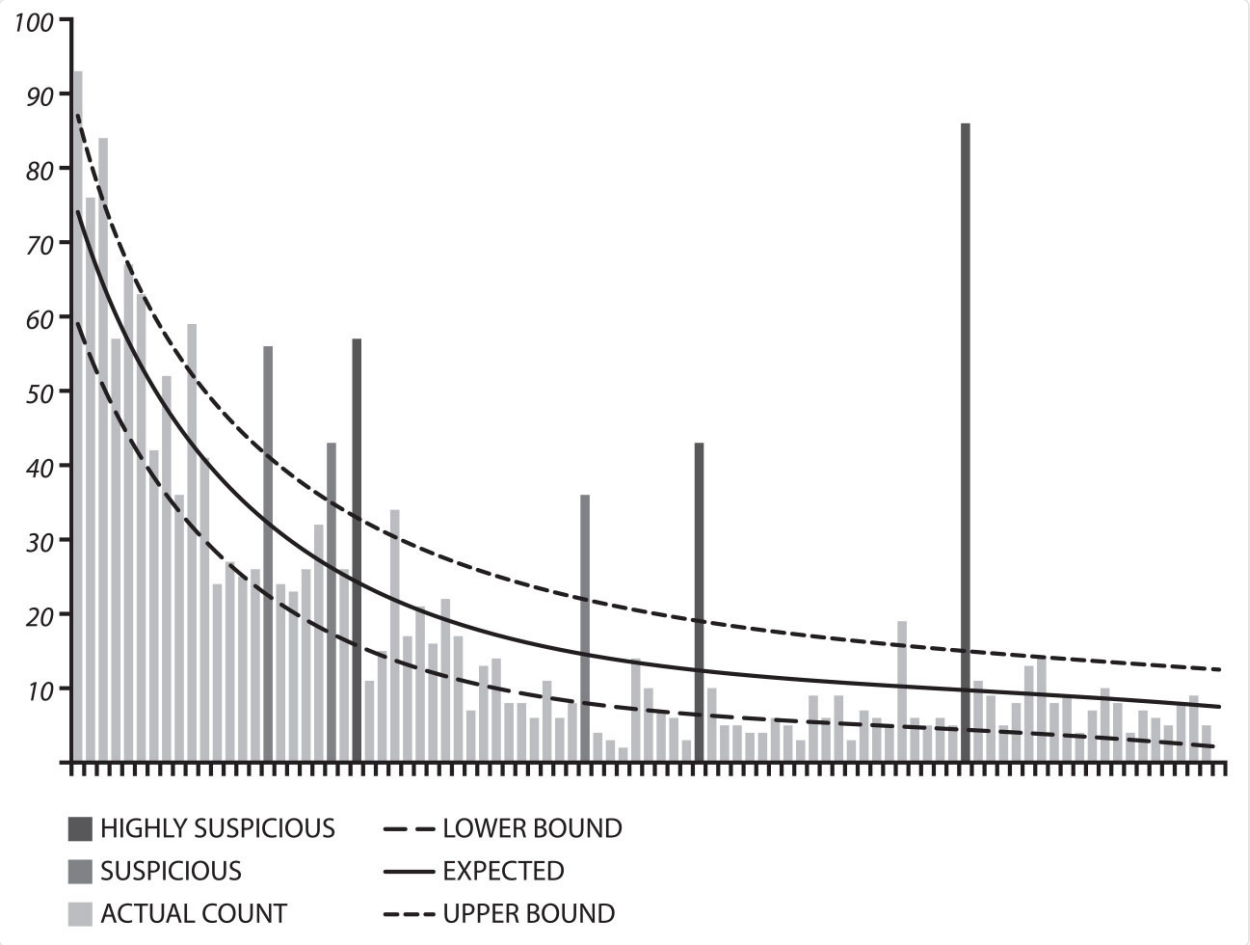


FIGURE 10.2 BENFORD'S ANALYSIS GRAPH OF SUSPICIOUS FIRST TWO DIGITS IDENTIFYING CHARITABLE CONTRIBUTIONS.



Even-Dollar Amounts

It is common that when individuals are stealing funds or moving money to hide in a divorce directly from a bank account or brokerage account, the payment amounts are multiples of 10 or 100 and are even in amount such as $3,500.00, $55,000.00, $205,000.00. Many data analysis programs assisting with Benford's analysis will provide a result for the last two digits for which even dollar payments can be exported. Additionally, filter functions within spreadsheet software can be used to filter for dollar amounts ending in ".00," "00.00," and so forth. When transactions of even dollar amounts are identified, additional research and inquiry can be performed to verify whether they were for the benefit of the subject or the client.

Large Individual Payments

Graphing expenditures in a data set may be helpful in identifying large individual payments or outliers in a data set. Graphing expenditures for this purpose could be used for all expenditures in certain general ledger accounts or for an entire expenditure report for the entire relevant period.

Month-Over-Month Pivot Table

For data in which regular monthly deposits or payments are made, a month-over-month pivot table may be helpful in identifying missing deposits that could include rental income or subscription income or debt payments. If the underlying data have payor information or if deposit items were scheduled, then a month-over-month pivot table can be created by payor identifying the total amount paid by payor by month and a total number of payments by month. For any months in which it appears a deposit was skipped, further research and inquiry should be performed to identify what happened, which could include that the payor simply did not pay; there was a catch-up payment in another month; or funds were diverted. An example of a month-over-month pivot table by customer is shown in Table 10.1. Conditional formatting in the spreadsheet was used to highlight the months for which no customer payment was received.

Pivot tables can also be used to evaluate month-over-month sales or expenditures by location or by sales employee or whatever other factor would help answer a client's concern or investigation priority. If check dates or transaction dates were scheduled as part of the data entry, pivot tables, similar to that of the month-over-month pivot table could be used to count the number of transactions occurring on certain days of the week.

TABLE 10.1 ILLUSTRATION OF MONTH-OVER-MONTH PIVOT TABLE

Month-Over-Month Pivot Table by Customer – Sum of Customer Payments

PAYOR NAME	2021-01	2021-02	2021-03	2021-04	2021-05	TOTAL
Adams	0.00	0.00	0.00	0.00	0.00	0.00
Andrews	3,951.04	3,904.04	3,904.04	4,880.05	3,904.04	20,543.21
Cole	13,973.88	4,060.00	4,495.00	5,053.00	0.00	27,581.88
Daughtery	4,004.04	4,004.04	4,165.04	4,959.05	4,065.04	21,197.21
Martin	3,904.04	3,904.04	3,904.04	4,880.05	3,904.04	20,496.21
Mason	0.00	0.00	0.00	0.00	1,450.00	1,450.00
Mitchell	0.00	0.00	0.00	0.00	0.00	0.00
Newton	7,960.00	4,060.00	4,495.00	4,210.57	4,495.00	25,220.57
Patterson	3,589.04	3,904.04	4,219.04	1,576.17	4,982.04	18,270.33
Williams	0.00	0.00	0.00	0.00	0.00	0.00
Workman	0.00	0.00	0.00	0.00	0.00	0.00

Month-Over-Month Pivot Table by Customer – Count of Customer Payments

PAYOR NAME	2021-01	2021-02	2021-03	2021-04	2021-05	TOTAL
Adams	0	0	0	0	0	0
Andrews	1	1	1	1	1	5
Cole	3	1	1	1	0	6
Daughtery	1	1	1	1	1	5
Martin	1	1	1	1	1	5
Mason	0	0	0	0	1	1
Mitchell	0	0	0	0	0	0
Newton	2	1	1	1	1	6
Patterson	1	1	1	1	1	5
Williams	0	0	0	0	0	0
Workman	0	0	0	0	0	0