MIS 5208 – Lecture 08 – Investigating Concealment

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Learning Objectives

1. Describe concealment investigation methods and how they relate to fraud.

2. Understand the value of documents and electronic records in a fraud investigation.

3. List the different methods of obtaining documentary evidence.

4. Understand how to perform discovery sampling to obtain documentary evidence.

5. Explain how to obtain hard-to-get documentary evidence.

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- **Investigators must understand the following aspects of documentary evidence:**
    - Chain of custody of documents
    - Marking of evidence
    - Organization of the evidence
    - Coordination of documentary evidence
    - Rules concerning original versus copies of documents

Aspects of Documentary Evidence

Chain of Custody of Documents

A record must be kept of when a document is received and what has happened to it since its receipt

Why is it important to maintain a chain of custody for documentary evidence?

Aspects of Documentary Evidence

- Marking the Evidence
- A transparent envelope should be used to store the evidence, with the date received and the initials of the examiner written on the outside
- A copy of the document should be made, and the original document should be stored in the envelope in a secure place

Aspects of Documentary Evidence

- Organization of the Evidence
- Evidence database should have the following:
- Creation dates of documents
- Sources of documents
- Dates when the documents were obtained
- Brief descriptions of document contents
- Subjects of documents
- Identifying or Bates number

Aspects of Documentary Evidence

- Original Documents versus Photocopies
- Originals are preferable to photocopies
- In certain jurisdictions, only four situations permit photocopies
  - Original document has been lost or destroyed
  - Original document is in the possession of an adverse party
  - Original document or record in the custody of a public office
  - Original documents are too voluminous

Aspects of Documentary Evidence

- Obtaining Documentary Evidence: Audits
- Auditors conduct seven types of tests
  - Tests of mechanical accuracy (recalculations)
  - Analytical tests (tests of reasonableness)
  - Documentation
  - Confirmations
  - Observations
  - Physical examinations
  - Inquiries

Aspects of Documentary Evidence
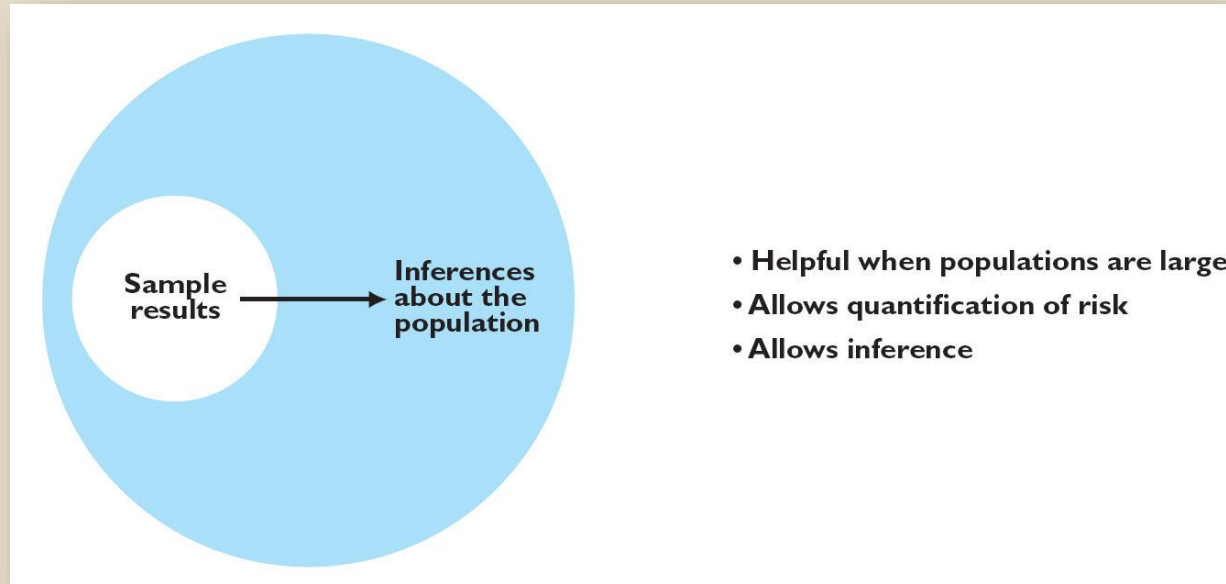
- Discovery sampling is the easiest of all statistical sampling variations to understand.
- Testing a random sample
- Using
  - Random Number Generator
  - Random Number Table

Discovery Sampling

- GOAL: Discover at least one error in a given sample size if the population error rate is a certain percentage.

  - Error: In our case this would be the presence of fraud (e.g. a check written to a fictitious doctor).

  - Population: All members of a group about which you want to draw a conclusion.

  - Sample Size: A subset of all available information – The part of the population selected for analysis.

  - Population Error Rate: The rate by which a potentially fraudulent occurrence in the Sample.

  - Confidence Level: Reliability or Degree of Belief in the Obtained Results

  - Sampling Risk: It is possible the sample will not be representative of the population

  Sampling information to assure that the proportion of the information with a particular attribute (i.e., error) is not in excess of a given percentage of the population.

Source: Levine, D. M., ; Stephan, David F. . (2012). *Even You Can Learn Statistics*. Upper Saddle River, New Jersey, USA: Pearson Education, Inc.

Discovery Sampling

- Step 1: Use a random number generator to select the checks to select for review

- Step 2: Use a Discovery Sampling Table to determine how confident you are that there is or is not fraud in the sample.

- Remember: The only way to know that there is no fraud in a sample

Source: Levine, D. M., ; Stephan, David F. . (2012). *Even You Can Learn Statistics*. Upper Saddle River, New Jersey, USA: Pearson Education, Inc.

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Random Number Table - Excel

ITEM	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1000	7854	3462	8465	3937	2426	5744	1499	7465	6187	6386
1001	7551	1110	8760	3645	2515	2530	8962	5721	1426	2977
1002	1178	4106	4947	8085	7138	5908	9653	4904	1221	2634
1003	8356	6239	3000	7967	6841	1806	5643	5615	3153	1102
1004	2436	2202	2149	4704	4942	4407	4299	3364	9415	2762
1005	8599	3724	7116	9261	9786	1437	6011	5772	2661	4913
1006	4583	2033	9350	3022	4074	2143	7072	7638	1418	6141
1007	4194	5814	6162	5785	9754	6408	6190	8834	4847	1434
1008	7532	5014	3983	3983	4145	7041	2796	3534	8301	9869
1009	3240	2962	1237	1489	6464	2954	6901	4721	3970	6213
1010	1817	4939	6722	7370	2137	1493	7438	9503	7042	7637
1011	2354	6682	8874	1484	5656	6387	5339	9842	7183	1294
1012	9236	5746	2490	4479	1177	2381	4146	3335	8330	9059
1013	2777	1133	1580	4506	5259	7831	4602	1792	5873	1695
1014	9237	1481	7413	6264	2351	8750	4498	1958	4031	9436
1015	3610	5585	1134	2016	1052	3377	9899	8046	1693	6543
1016	9899	5918	2672	9957	3564	9865	1895	6452	9384	1476
1017	7762	4203	8923	9217	2029	9463	1142	9022	4095	1258
1018	5282	7200	6831	4503	1875	3735	2767	1273	8313	6956
1019	5890	6931	2498	5917	6226	9014	5315	3256	7404	8522
1020	5276	4086	9003	7366	1877	1509	1236	8589	8363	7012
1021	9493	4926	3005	3144	5687	9463	3624	5988	6052	5928
1022	7712	8642	8315	6018	2878	5702	4411	1594	6352	3811
1023	3536	6571	2926	1966	5305	9511	5327	9344	7986	5138
1024	7695	6783	2286	6798	5059	6043	5159	1716	8107	7111
1025	1892	9505	8341	8148	6242	8320	9346	1765	8898	9273
1026	1112	2458	8017	9458	8441	2529	6790	8673	6533	8657
1027	1824	2468	6769	1751	8738	9255	1432	5670	2321	3297
1028	3237	4403	6996	3190	6973	1579	4897	3404	6512	1165
1029	3264	9458	1942	9539	8824	6792	8718	9942	3274	4234
1030	3440	3564	8982	1003	3827	2706	5884	1287	3065	9475

=RANDBETWEEN(1000, 10000)

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Discovery Sampling Table

Sample Size	Rate of Occurrence in the Population (%)								
	0.01%	0.03%	0.10%	0.20%	0.30%	0.50%	1%	2%	
50	0%	2%	5%	9%	14%	22%	39%	64%	
60	1%	3%	6%	11%	16%	26%	45%	70%	
70	1%	3%	7%	13%	19%	30%	51%	76%	
80	1%	4%	8%	15%	21%	33%	55%	80%	
90	1%	4%	9%	16%	24%	36%	60%	84%	
100	1%	5%	10%	18%	26%	39%	63%	87%	
120	1%	6%	11%	21%	30%	45%	70%	91%	
140	1%	7%	13%	24%	34%	50%	76%	94%	
160	2%	8%	15%	27%	38%	55%	80%	96%	
200	2%	10%	18%	33%	45%	63%	87%	98%	
240	2%	11%	21%	38%	51%	70%	91%	99%	
300	3%	14%	26%	45%	59%	78%	95%	99%	Confidence Level
340	3%	16%	29%	49%	64%	82%	97%	99%	
400	4%	18%	33%	55%	70%	87%	98%	99%	
460	5%	21%	37%	60%	75%	90%	99%	99%	
500	5%	22%	39%	63%	78%	92%	99%	99%	
800	8%	33%	55%	80%	91%	98%	99%	99%	
1000	10%	39%	63%	86%	95%	99%	99%	99%	
1500	14%	53%	78%	95%	99%	99%	99%	99%	
2500	22%	71%	92%	99%	99%	99%	99%	99%	

95% confident – no fraud when sampling 300 checks

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Discovery Sampling

Sampling data

You want to discover the rate of deviation from a prescribed control, or the total amount of monetary misstatement, in an account or class of transactions. However, you may not have the time or the budget to examine every record in the data set.

You can use *ACL* to draw a statistically valid subset of the data, called **a sample**, and analyze this much smaller set of data instead.

Drawing a sample
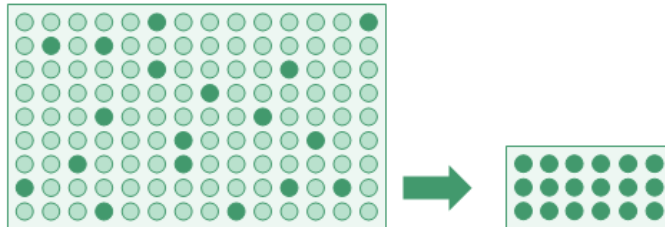
You can then **project** the results you get from analyzing the smaller set of data to the entire population of data. The projection creates an estimate of the overall deviation rate, or the overall amount of misstatement.

Projecting results
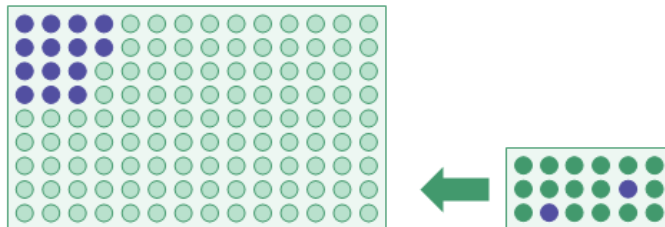
The sample selection and the projection use statistical formulas, which ensure a reasonable and measurable degree of confidence that the estimate is close to what you would have got if you had actually examined every record.

Discovery Sampling

Sampling types

ACL has three types of sampling:

- record sampling (attributes sampling)
- monetary unit sampling
- classical variables sampling

Generate a random selection of records

You can use *ACL* to generate a random selection of records.

The method outlined below selects records at random, **however the resulting output cannot be considered representative of the entire population of records.**

If you intend to do analysis on the selected records and project the results back to the entire population, the selection needs to be statistically valid, or representative. For more information, see Sampling data.

On this page
Steps

Steps

1. Open the table from which you want to randomly select records.
2. From the main menu, select **Sampling > Record/Monetary Unit Sampling > Sample**.
3. Under **Sample Type**, select **Record**.
4. Under **Sample Parameters**, select **Random**.
5. Specify the following values:
   - **Size** – the number of records that you want to randomly select
   - **Seed** – (optional) a seed value to initialize the *ACL* random number generator
     The seed value can be any number. You can recreate the same random selection of records by respecifying the same seed value.
     Enter a seed value of '0', or leave the seed blank, if you want *ACL* to randomly select a seed value.
   - **Population** – the total number of records in the table
   - **To** – the name of the output table
6. Click **OK**.

Documentation and Evaluation

- Investigation should document the method used to determine sample size
- Document:
  - Population Error Rate
  - Confidence Level
- Evaluation:
  - Are the errors intentional or mistakes

Aspects of Documentary Evidence
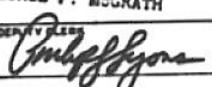
> **Remember this …**
>
> *Discovery sampling is a simple, statistically based method of analyzing a subset of transactions from a larger pool. It allows the investigator to decide on an acceptable risk level for sampling. As with all sampling, discovery sampling should only be used when full-population analysis using a computer is not possible.*

- Obtaining Documentary Evidence: Hard-to-Get Documentary Evidence
- Three ways to obtain documentary evidence:
  - Subpoena
  - Search warrant
  - Voluntary consent

Subpoena

Consent Form

Authorization For the Release Of Bank "XYZ" Records

To: Bank "XYZ"
Main Branch, Bahnhofstrasse
Zurich, Switzerland

I, ▓▓▓▓▓▓▓▓▓" of 123 East 23rd St., N.Y.C hereby authorize and consent to the release of banking information and documents to "Jane Doe Client" through her counsel ▓▓▓▓▓▓ Talacker 50, Zurich, Switzerland.

This authorization/consent applies to the release of all information and documents regarding "ABC Corp. Account # xxx-xxxxxx" and its sub accounts in various currencies for various purposes.

Furthermore, I waive my claim that banking secrecy laws apply, (if any are applicable), to preclude the release of the foregoing information/documents.

Sworn to before me this
___ day of July, 2

_____
Notary

Authorization for Bank to Release Information Form

Dear Sir or Madam:

You are hereby authorized and directed to release to _____ at _____ all banking information requested by him relating to my Account No. _____, on this one time basis only.

We would consider it a great courtesy if you would respond promptly to their inquiries.

This shall be your good and sufficient authority for doing so.

With best regards,

_____
Authorized Signer on Account

cc Inquirer listed above

Disputed Documents

TABLE 8.3 QUESTIONS ABOUT DISPUTED DOCUMENTS

Handwriting:

1. Is the signature genuine?
2. Is the continued writing genuine?
3. Was the writing disguised?
4. Who did any unknown writing?
5. Can any hand printing that exists be identified?
6. Can any handwritten numerals be identified?
7. Which was written first, the signature or the writing above it?
8. Can the forger be identified?
9. Is the handwriting or signature consistent with the date of the document?

Printing:

1. What make and model of printer was used? During what years was the particular make and model used?
2. Can the individual printer that was used be identified?
3. Was the printing done before or after any handwriting and/or signatures?
4. Was the printing done on the date of the document or later?
5. Who did the actual printing?
6. Was the printing on the document all done at one time, or was some of it added at a later time? How much was added later?
7. Were copies made using the original document?
8. Are the copies genuine?
9. Can the printer or the document be identified from a carbon tape?

Alterations and additions:

1. Was the document altered in any way or added to at a later time? Were pages added, parts torn or cut off, pages purposely wrinkled or stained, etc.?
2. What original date or matter was altered or added to?
3. When was the alteration or addition made?
4. Who made the alteration or addition?
5. Has the photograph on an ID card or other ID document been removed and replaced with another?

Age:

1. Is the age of the document in accordance with its date?
2. How old are the paper, the printing, the ink, the seal, etc.?
3. Is there evidence of the manner or location in which the document was kept?

Copies:

1. Are the photocopies or photostatic reproductions copies of other documents?
2. What type of copy machine was used? What brand?
3. Can the individual copier be identified?
4. In what year was the particular make and model used? Produced?
5. Was any portion of the copy not on the original document? Was it pasted up?
6. Is there any indication that pages are missing on the copies that were part of the original?
7. Can the copy be traced to and identified as the particular original document that was its source?

Other:

1. Can machine-printed matter be identified?
2. Can the check writer, the adding machine, the addressograph machine, or other machine be identified?
3. Was the envelope resealed?
4. Can the stapler, glue, pin, clip, or other fastener be identified?
5. Is the printed document genuine or counterfeit? If counterfeit, can the original document used as a reproduction source be determined?
6. What processes were used to print the counterfeit document?
7. Could the printing source or counterfeiter be identified if located?

Characteristics of handwriting:

1. The basic movement of the handwriting—clockwise, counterclockwise, and straight-line—indicating direction, curvature, shapes, and slopes of the writing motions.
2. Slant—forward, backward, or in between.
3. The manner in which letters with loops are curved, and the size, shape, and proportion of the loops.
4. Peculiarities in the approach strokes and the upward strokes in the first letter of a word and in capital letters.

(continued)

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Thank you