

# ANALYTICAL STATISTICAL PROCEDURES FOR FRAUD WASTE & ABUSE ... IN EXCEL! (INTELLIGENT DATA ANALYSIS FOR AUDIT EFFICIENCY)

## COURSE DESCRIPTION

Audit practice, and research, has validated that Advanced Analytical Procedures are 2,000% *more efficient & effective* than Tests of Controls and 8,000% more than Tests of Details! Yet, as the PCAOB correctly complains, most auditors still trudge along doing Substantive Testing!

Advanced analytics allows you to reduce cycle time. Also, you decrease your response time...and lessen your travel time (as you “bring the data to you”). Further, as you audit by exception, you will deploy your resources in a more efficient manner. Finally, Advanced Analytics provides for more robust (and better received) audit findings. Analytics work best with operational data, and thus are highly applicable for:

- Fraud Audits
- Operational/Efficiency Audits
- Program/Policy/Agency/Performance Audits
- Compliance/Statutory Audits
- Financial Audits
- Process Improvement: Directing you towards WORST PRACTICE and BEST PRACTICE (go there, and save your company **BIG \$MONEY**)

Advanced analytics forms the foundation of Continuous Control Monitoring, the necessary building block (e.g., the “secret sauce”) for AUTOMATION and CONTINUOUS REAL-TIME MEASUREMENT/NOTIFICATION of 1) Entity-Wide Risk Assessment and Management, 2) Corporate Governance), 3) Real-Time Business Intelligence (Balanced Scorecards, Budgeting, Forecasting, Benchmarking, Business Optimization), 4) Fraud/Waste/Abuse and 5) Process Control.

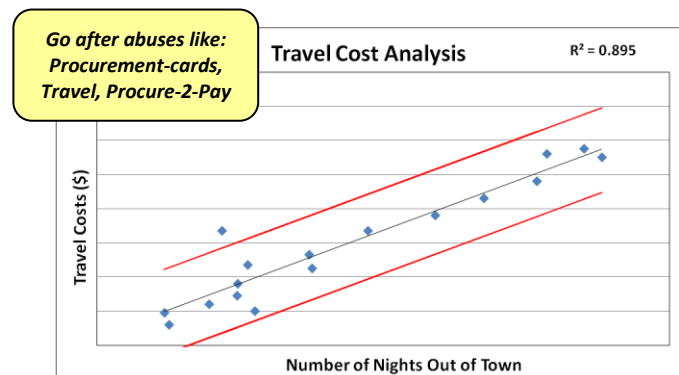
Advanced Analytical techniques are supported by Yellow Book, AICPA, ISA and IIA Standards, the Bank Secrecy Act and the Model Audit Rule (insurance), six-sigma, SOX and Basel II.

Auditors realize that testing for fraud is very difficult (no audit trail and possible collusion). Regression analysis is the # 1 objective fraud finding technique ... court room tested and accepted! The best news of all is we can assign a statistical confidence to our analysis. When was the last time your audit report started with the sentence “I am 95% confident that...”? This is powerful stuff. Think like an engineer: process, process, process: if it isn't broken ... perhaps don't audit it.

This course will teach auditors how to perform a wide range of analytics. You'll get proven tools to help you hit the ground running ... ramped up ... traction!

## WHO SHOULD ATTEND

ALL auditors: process, compliance, fraud/waste/abuse, I.T., SOX, efficiency, program, performance ... and Business Unit Managers ... anyone who has to ask the following question, “Isn't There a Better Way?”



## DETAILED COURSE OUTLINE

1. Introduction and the Evolving Audit Process
  - a. The Audit Risk Model
  - b. The Shocking Cost of Types of Audit Evidence
2. Analytics and Regression
  - a. Sources of Analytics Data
  - b. Basic and Intermediate Analytics
    - i. Ratio Analysis, Trend Analysis and Metrics
    - ii. Reasonableness and Flux Analysis Tests
    - iii. Mini-Max Tests
  - c. Promulgated Standards Set You Free
    - i. AICPA, IIA, ISA
    - ii. Yellow Book and Government Score-carding
    - iii. COSO and COSO for Monitoring
  - d. Relevant Research
    - i. Hylas and Ashton: Analytics as Fraud Finders
    - ii. Stringer: Keep Regression Models Simple
  - e. Basic Regression Analysis
    - i. Terms: R and  $R^2$
    - ii.  $R^2$  versus Adjusted  $R^2$
    - iii. Causality versus Correlation
    - iv. Simple Linear
    - v. Minimum Number of Observations
  - f. Charting Regression - Seeing Is Believing
    - i. Plotting Data
    - ii. Inserting a "Trendline"
    - iii. Calculation of "Confidence Bounds" (not statistical)
    - iv. Calculation of Statistical "Confidence Bounds"
  - g. Advanced Regression Analysis
    - i. Curve-linear (Polynomial, Exponential, Logarithmic)
    - ii. Subpopulations
    - iii. Lagging Data
    - iv. Multivariate Regression
3. Advanced Uses of Regression
  - a. Why Advanced Analytics?
  - b. Specific Audit Usages of Regression
  - c. Finding Fraud Waste & Abuse
  - d. Reconstructing Missing Data
  - e. Analytics as a Test of Controls
  - f. Overlaying an Industry Standards
  - g. Finding BEST PRACTICE
  - h. Constructing Management Dashboards
4. Class Presentations

## COURSE OBJECTIVES

Upon completion of this course participants will be able to:

- Apply multiple types of analytics.
- Reduce audit costs by performing analytics (\$0.05 test) versus tests of controls (\$1 test) or substantive tests (\$4 test).
- Apply Promulgated Standards.
- Adhere to the IIA Red Book and the GAO Yellow Book.
- Run regression, hands-on, in Excel.
- Introduce efficiency AND effectiveness into the audit process.
- Learn why 99% of the Analytical Procedures used by auditors are DOOMED TO FAILURE.
- Assign a statistical confidence or reliability to our analysis.
- Identify the business rules for core processes, and quantify the Critical Success Factors (CSFs) and related Key Performance Indicators (KPIs).
- Demystify terms such as "curvilinear."
- Recognize the value of correlation analysis.
- Utilize the Analysis ToolPak.
- Understand multivariate regression.
- Construct management dashboards for Continuous Monitoring.

## COURSE MATERIALS/TAKEAWAYS

Each participant will receive the following:

- Workbook with screen captures and step-by-step instructions
- Computerized cases so they may practice and replicate the classroom experience (that is, APPLY this knowledge on the job).

## COURSE LENGTH

- 2 to 2½ days



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