



Data Quality and Standards

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Data Quality – Heightened Focus

- ASOP 23 Proposed Revision
- New NAIC Data Testing Requirement
 - Affects actuaries that sign opinions
 - Affects actuaries in management
- Sarbanes-Oxley
 - Public Companies in 2004
 - Mutual, private companies soon thereafter?



ASOP 23 and Data Quality

- Exposure Draft-October 2003
- Changes to Reflect More Recent Formatting of Standards and Improvement of Clarity
- Accuracy/Comprehensiveness of Data
 - ASOP 23 expanded to emphasize that the actuary is NOT required to audit the data
 - Responsibility of those who supply the data
 - Actuary should review data for reasonableness and consistency
- Prior Period Data



NAIC Data Testing – What Do Regulatory Actuaries Want to Happen?

- Actuary specifies scope (e.g., actuary selects triangle cells to be tested) OR desired opinion (i.e., data source can be relied upon).
- Amount of testing determined by reliance on controls and residual risk level.
- Pulling 3 claims year after year not enough to say data was tested but you should not have to test hundreds of claims every year.



Increased focus on Data Quality

- When should the appointed actuary begin talking to the auditor?
- Answer: **NOW**
- What's in it for me?
- Answer: For Actuary – greater sense of how reliable your data is
For Auditor – a better audit.



Sarbanes-Oxley 404 and Data Quality

- Further raises the bar over data used by actuary to evaluate reserves
- Data is key element in estimating liabilities
- Comprehensive controls need to be in place, working, documented, etc.



NAIC and Data Testing

Audit Guidance

Answers to Frequently
Asked Questions (Non-
authoritative)



Audit Guidance

- AICPA – Selected Statements of Auditing Standards
 - SAS 39, Audit Sampling
 - SAS 47, Audit Risk and Materiality in Conducting an Audit
 - SAS 57, Auditing Accounting Estimates
 - SAS 73, Using the Work of a Specialist
 - SAS 96, Audit Documentation
 - SAS 99, Consideration of Fraud in a Financial Statement Audit



Audit Guidance

➤ SOP 92-4, Auditing Insurance Entities' Loss Reserves

- Paragraph .07: As stated in paragraph 4.2 of SOP 92.4, because claim data and characteristics such as dates and type of loss can significantly influence claim reserve estimation, the auditor should test the completeness, reliability, and classification of the claim loss and loss expense data during the audit of the statutory financial statements.
- AICPA Audit & Accounting Guide, Audits of Property & Liability Insurance Companies, Chapter 4 – Sections on Auditing Loss Reserves:
 - Auditing the Claims Data Base
 - Evaluating the Reasonableness of the Estimate
 - Analytical Procedures
 - Loss Reserve Ranges
 - Evaluating the Reasonableness of Loss Adjustment Expense Reserves
 - Ceded Reinsurance Receivable



Audit Guidance

- SOP 92-8, Auditing Property/Casualty Insurance Entities' Statutory Financial Statements – Applying Certain Requirements of the NAIC Annual Statement Instructions.
- Extending paragraph 4.2 of SOP 92.4 to Schedule P-Part 1 Summary, the auditor should determine that:
 - Data in Schedule P-Part 1 Summary reconciles to company's statistical records
 - Changes between the prior-year and current-year Schedule P-Part 1 Summary are properly reconciled to the current-year audited statutory financial statements
 - The source of the data for the auditing procedures applied to the claim loss and loss adjustment expense data during the current calendar year reconciles to the statistical records that support the data presented on Schedule P-Part 1 Summary



Audit Guidance

- If “Agreed-upon Procedures Report” (i.e., scope specified)
 - SSAE No. 10
 - Au Section 622, Engagements to Apply Agreed-Upon Procedures to Specified Elements, Accounts or Items of a Financial Statement
 - SAS No. 75, Engagements to Apply Agreed-Upon Procedures to Specified Items of a Financial Statement
 - SAS No. 87, Restricting the Use of an Auditor’s Report



Audit Guidance

- If “Attestation Report” (i.e., opinion specified)
 - AT Section 400, Reporting on an Entity’s Internal Control Over Financial Reporting
 - SSAE No. 10, Chapter 5, Reporting on an Entity’s Internal Control Over Financial Reporting
 - AT Section 600, Agreed-Upon Procedures Engagements
 - SSAE No. 10, Chapter 2



Procedural Questions

- Question 1: What work regarding data testing is currently performed by the auditor?
- Answer:
 - For audit opinion, the auditor tests what she/he deems material in the context of the financial statements taken as a whole.
 - In connection with the statutory audit, the appointed actuary can only rely on the auditor to have tested Schedule P, Part 1, Summary.



Procedural Questions

➤ Question 2: What is the new NAIC Data Testing Requirement?

■ Answer:

- From the NAIC's Annual Statement instructions, 2004; *"The insurer shall also require the independent certified public accountant subject the data used by the appointed actuary to testing procedures. The auditor is required to determine what historical data and methods have been used by management in developing the loss reserve estimate and whether the auditor will rely on the same data or other statistical data in evaluating the reasonableness of the loss reserve estimate. After identifying the relevant data, the auditor should obtain an understanding of the controls related to the completeness, accuracy, and classification of loss data and perform testing as the understanding of the controls related to the completeness, accuracy, and classification of loss data and perform testing as the auditor deems appropriate. Through inquiry of the Appointed Actuary, the auditor should obtain an understanding of the data identified by the Appointed Actuary as significant. It is recognized that there will be instances when data identified by the Appointed Actuary as significant to his or her reserve projections would not otherwise have been tested as part of the audit, and separate testing would be required. Unless, otherwise agreed among the Appointed Actuary, management and the auditor, the scope of the work performed by the auditor in testing the claims data in the course of the audit would be sufficient to determine whether the data tested is fairly stated in all material respects in relation to the statutory financial statement taken as a whole. The auditing procedures should be applied to the claim loss and defense and cost containment expense data used by the Appointed Actuary and would be applied to activity that occurred in the current calendar year (e.g. tests of payments on claims paid during the current calendar year.)"*



Procedural Questions

- Question 3: What is the form of communication from the auditor to the appointed actuary regarding data testing?

- Answer:
 - With respect to the GAAS audit, there currently is no formal report issued by the auditor regarding data integrity. The appointed actuary can assume the data in Schedule P-Part 1 Summary is reliable since testing is required as part of a GAAS statutory audit.
 - Communication regarding results of other tests performed follows existing audit literature:
 - Agreed-upon procedures report (Scope defined by actuary)
 - Attestation report (desired Opinion)



Procedural Questions

- Question 4: With respect to the new NAIC Data Testing Requirement, what is the role of management?
- Answer:
 - Management selects appointed actuary, provides appropriate company data to appointed actuary. Management has sole contractual relationship with auditor including agreement on fees.
 - Management (and audit committee) agrees on the work to be performed by the auditor and the timing of execution.



Procedural Questions

- Question 5: What in practical terms is the difference, if any, between "material" as used by the auditor and "significant" as used by the appointed actuary?
- Answer:
 - “Material” is a matter of auditor judgment and framed in the context of the financial statements taken as a whole.
 - “Significant” is a matter of actuarial judgment and framed in the context of the financial statements’ loss reserves and related components.
 - “Material” \neq “significant”.



Procedural Questions

- Question 6: Will the new NAIC Data Testing Requirement have an impact on the work done by an auditor for every statutory audit?
- Answer:
 - Yes. At a minimum, there will need to be discussion.
 - Beyond this, it is difficult to generalize.



Procedural Questions

➤ Question 7: Will testing required by the appointed actuary for the new NAIC Data Testing Requirement already be performed by the auditor under his/her work under Sarbanes-Oxley 404?

■ Answer:

- Not comprehensively, the extent of the coverage will vary significantly.
- Sarbanes-Oxley 404 focuses on controls testing. The focus is at a level that considers “materiality,” not “significant.” Testing may relate to more than controls, i.e. substantive in nature.
- Currently, many insurance companies are not required to comply with Sarbanes-Oxley 404.



Procedural Questions

➤ Question 8: Who determines how the testing gets done? Who determines the sample size and attributes to be tested? Who determines how often the testing needs to be done?

■ Answer:

- The auditor determines how testing gets done.
- With regard to sample size and attributes to be tested, appointed actuary identifies Scope (e.g., selects triangle cells to be tested) OR desired Opinion (i.e., data source can be relied upon).
- The appointed actuary identified as of what date testing of significant items needs to be done.



Procedural Questions

- Question 9: What is the role of the audit firm's actuary with regard to the new NAIC Data Testing Requirement?
- Answer:
 - There is no prescribed role for the audit firm's actuary.
 - However, the audit firm actuary can assist the auditor in working with management and the appointed actuary throughout the process.



Procedural Questions

- Question 10: Does this change the separate requirements for the auditor and actuary to perform reconciliations to Schedule P (as this was previously the tie between appointed actuaries and auditors)?
 - Answer:
 - No.



Procedural Questions

- Question 11: Is there a difference in procedure if the appointed actuary and audit firm are the same?
- Answer:
 - No.



Procedural Questions

- Question 12: Should the appointed actuary disclose to the auditor what he/she currently does to verify data integrity?
- Answer:
 - There is no specific requirement for the appointed actuary to disclose such information. However, the appointed actuary should disclose to the auditor data-related matters he/she ultimately deems unreasonable or inconsistent.



Procedural Questions

- Question 13: Most actuaries use multiple methods which frequently use various sources of data. Does the auditor have to test data used for all models, or just those which are ultimately used or heavily weighted in the final range or point estimate?
- Answer:
 - Refer to Question 1 for auditor scope.
 - The appointed actuary assesses the need for other testing of data based on his/her judgment.



Procedural Questions

- Question 14: Many times the auditor will reduce sample sizes if reliance is placed on relevant controls. Does the appointed actuary have to agree upon the controls being relied on? Will the state DOI find this appropriate?

- Answer:
 - Auditors are solely responsible for determining the extent of controls testing with respect to Schedule P-Part 1 Summary.
 - The appointed actuary does not have to address the extent of control testing in this regard.
 - Other testing, substantive or control, deemed necessary by the appointed actuary would be agreed with management and the auditor.
 - Normally, the DOI has no contemporaneous role. Subsequently, the DOI may or may not view the auditor's reliance on controls as appropriate; it would ultimately depend on the facts and circumstances.



Procedural Questions

- Question 15: Does the auditor have to do any additional work on the appointed actuaries work to verify that they are utilizing the data tested appropriately?
- Answer:
 - Not required. Audit scope is based on auditor judgment.



Timing Questions

- Question 16: When should management, the appointed actuary and auditor begin talking? What should be the agenda for discussion?
- Answer:
 - The appointed actuary should begin talking now with management and the auditor.
 - The appointed actuary should:
 - Inform the auditor of the data he/she believes is “significant”,
 - Identify additional data testing needed,
 - Help with coordination among the parties,
 - Obtain approval by management.



Timing Questions

- Question 17: What if the appointed actuary changes his/her view of what is "significant" based upon work the appointed actuary performs subsequent to attaining agreement with the auditor and management? What if the company's circumstances change significantly?
- Answer:
 - In each case, as soon as practicable, the appointed actuary should discuss with management and the auditor the possible need to revise scope of the work.



Timing Questions

- Question 18: Frequently, the auditor performs field testing after February 28 (i.e., the date the appointed actuary opines on the reserves); if the auditor surfaces a data issue, what does the appointed actuary do?
- Answer:
 - The circumstances associated with the new NAIC Data Testing Requirement are no different than those covered by the current professional guidance to appointed actuaries and auditors.



Timing Questions

- Question 19: What if the auditor's data testing yields unfavorable results before the appointed actuary issues his/her opinion? After the opinion is issued?
- Answer:
 - The timing of the auditors testing of data yielding an unfavorable result is irrelevant. The actuary is still bound by ASOP 36.



Other Questions

- Question 20: Is the new NAIC Data Testing Requirement going to increase an insurance company's audit fees?
- Answer:
 - Assuming additional work is performed, this will increase audit or audit-related fees.



Other Questions

- Question 21: What consideration, if any, should be given to testing data used by the appointed actuary that is not generated from the company (i.e., industry or similar statistics)?
- Answer:
 - Regulatory View?
 - Appointed Actuary View?
 - Auditor View?



Other Questions

- Question 22: What if the appointed actuary uses proprietary or privileged data that is “significant” to his/her analysis?
- Answer:
 - The answer is the same as Question 21, except that there is a caution in respect to privileged data that needs to be recognized.



Other Questions

- Question 23: What if a company is new (i.e., there is no company-specific history), and the actuary uses data from external sources?
- Answer:
 - The answer is the same as Question 21.



Other Questions

- Question 24: What if the appointed actuary and auditor disagree on the amount of testing that is needed; for example, the appointed actuary might believe a larger sample size needs to be tested?
- Answer:
 - The auditor determines what Schedule P-Part 1 Summary testing will be done.
 - With regard to sample size and attributes of other tests to be performed, appointed actuary identifies Scope (e.g., selects triangle cells to be tested) OR desired Opinion (i.e., data source can be relied upon).
 - Ultimately, there would be agreement.



Other Questions

- Question 25: What does the appointed actuary do if he/she is unable to obtain sufficient comfort regarding data integrity?
- Answer:
 - The appointed actuary considers the facts and circumstances surrounding data integrity matters and can refer to existing professional guidance.



Actuarial Data & Sarbanes-Oxley Section 404




Topics

- Sarbanes-Oxley section 404
- Financial Statement Assertions
- A 7-Step Approach
- Risks & Controls
- Examples



Sarbanes-Oxley 404 - Final SEC/PCAOB Rules: Management Reporting on Internal Control

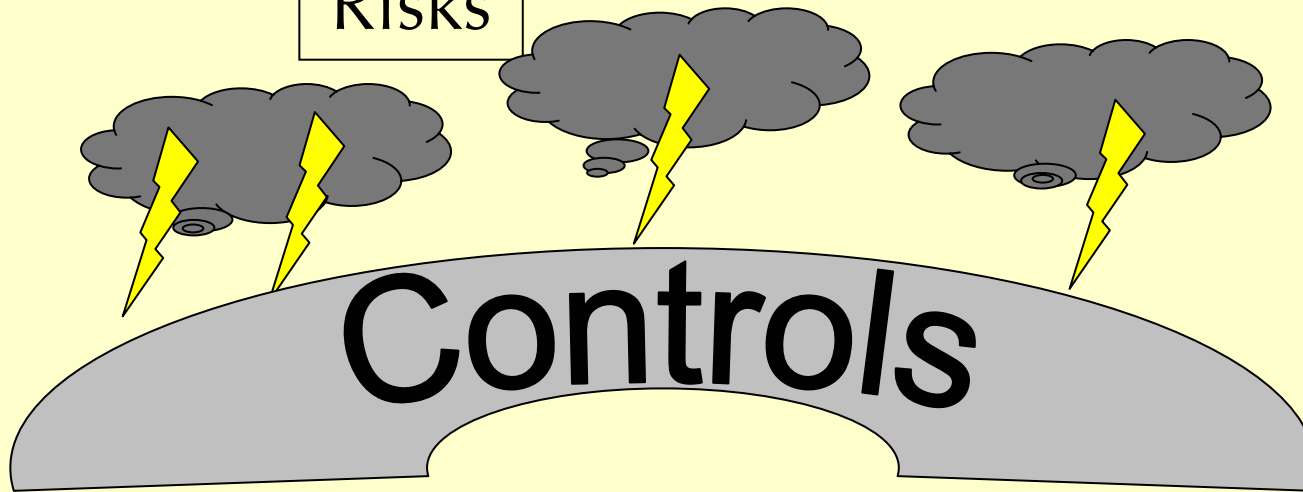
- Management must report annually on effectiveness of company's internal control over financial reporting.
- Company's auditor must:
 - attest to and report on management's assessment, and
 - opine on the effectiveness of internal controls.
- Both management's and the auditor's reports must be included in the company's annual report filed with the SEC.



From Transactions to Statements

Financial Statements

Risks



Transactions

Valuations

Recording

Assertions

Financial Reporting Objectives



Some Financial Statement Assertions

Transactions, events, assets, liabilities, and equity interests . . .

. . . that should have been recorded have been recorded. **Completeness**

. . . have been recorded accurately. **Accuracy**

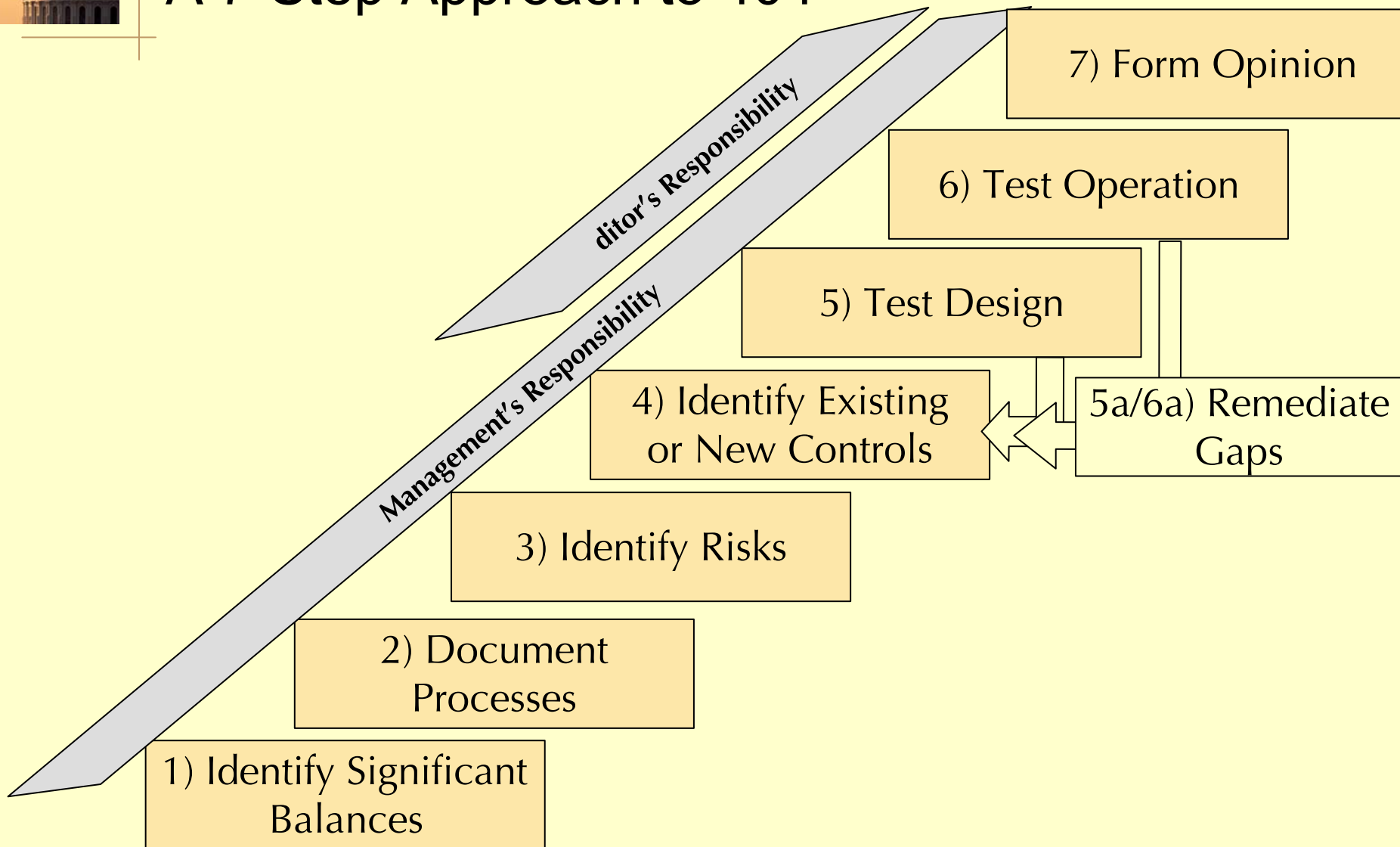
. . . have been recorded in the correct accounting period. **Cutoff**

. . . that have been recorded have occurred and pertain to the entity. **Occurrence**

. . . have been recorded in the proper accounts. **Classification**

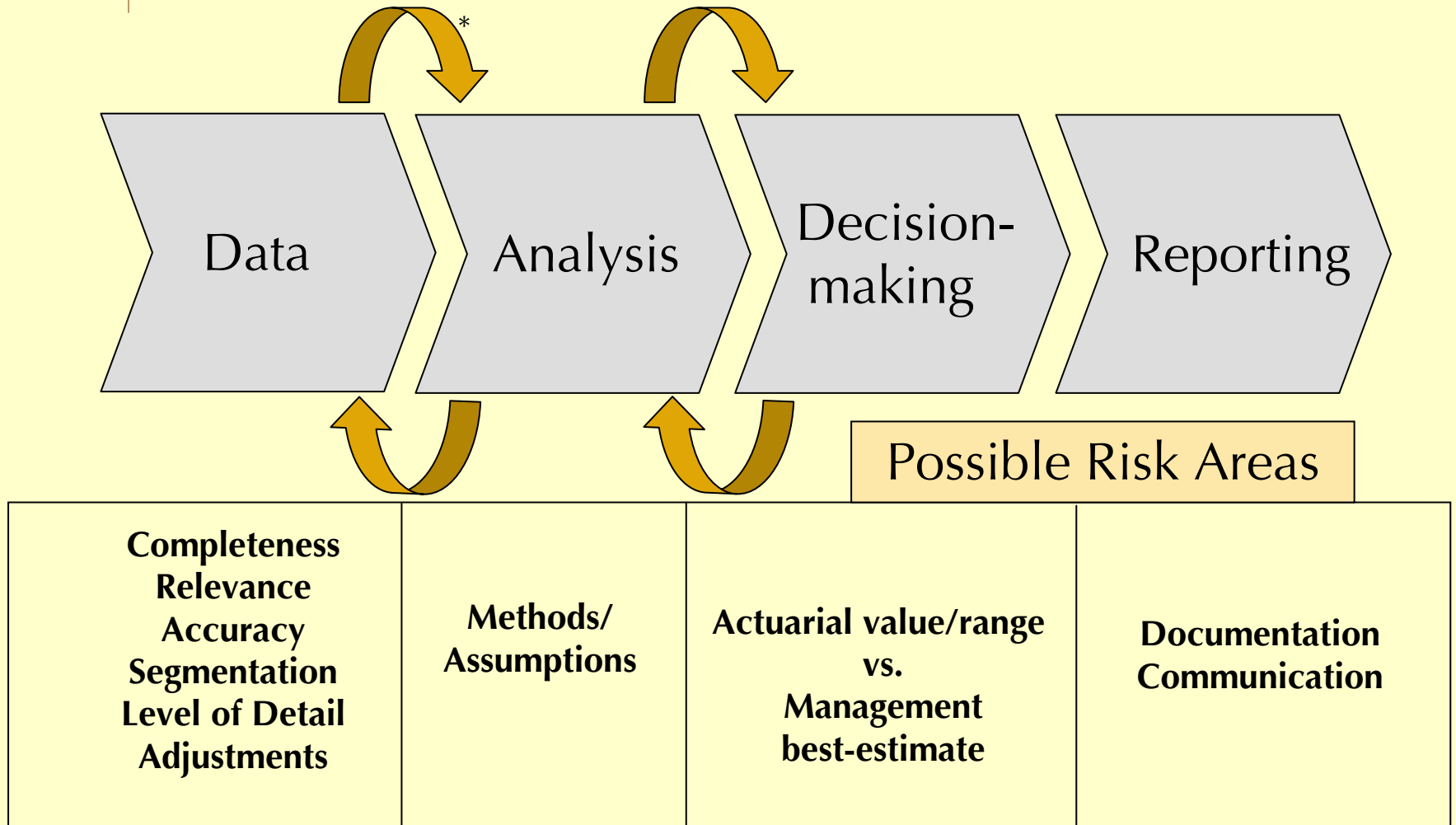


A 7-Step Approach to 404



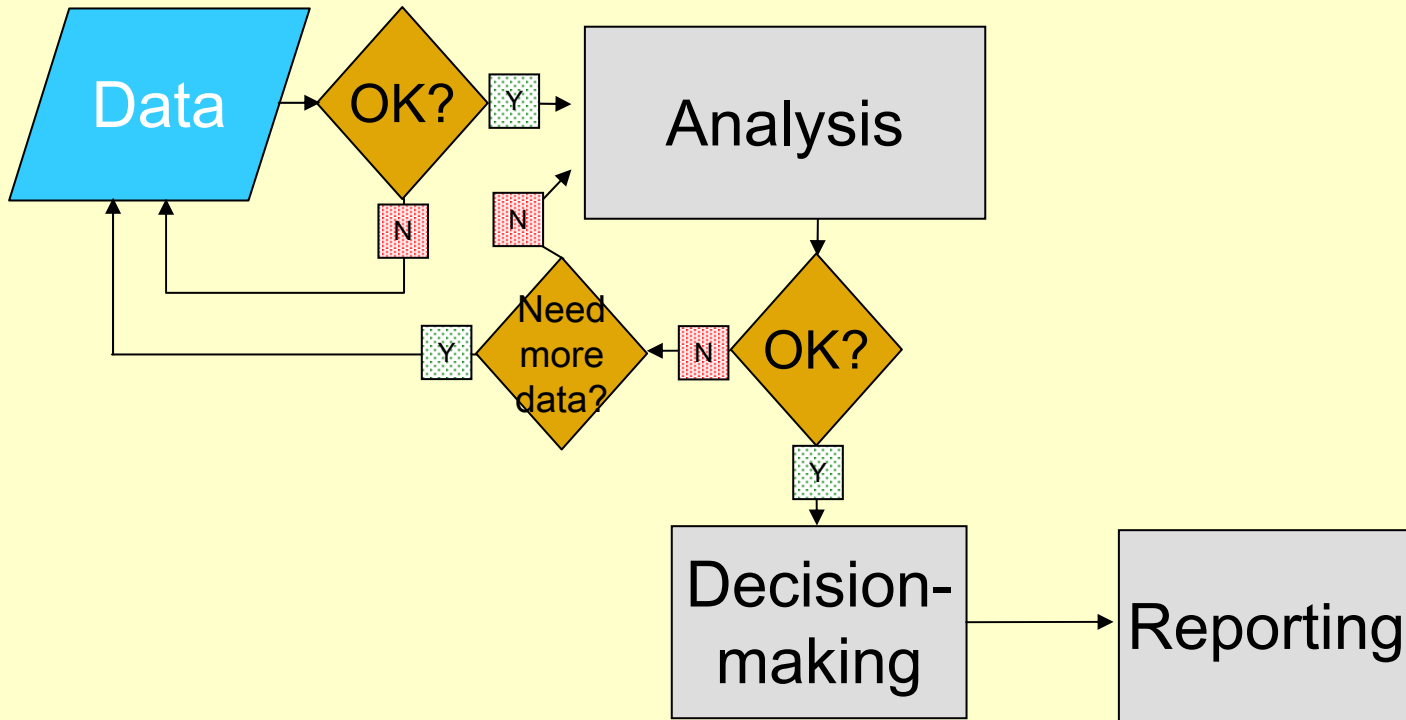


High-Level View of a Basic Reserving Process



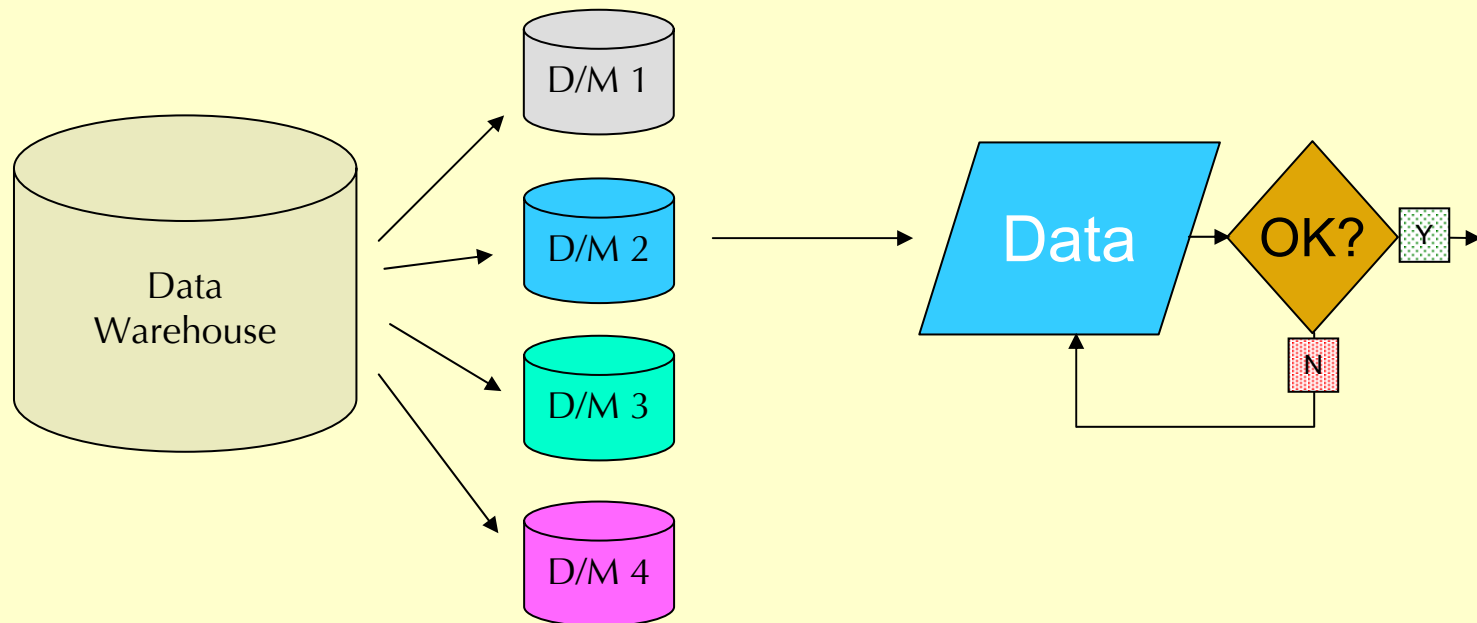
*** The process is generally not linear; iterations tend to occur.
For example, new data are gathered based on initial findings from analysis.**

FlowChart of Basic Reserving Process





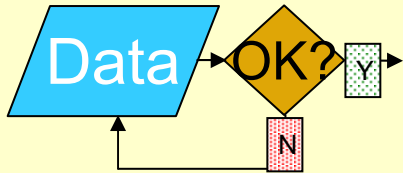
Lest We Forget the Source(s) of the Data



- Large data warehouse(s) may create multiple data-marts.
- Actuaries need to coordinate their work with I/T regarding general computer controls (or other controls) over source data systems.
- Actuarial data may depend on accuracy of certain data fields that may not be so important to others.



Objectives & Risks at Data Phase



Control Objective:

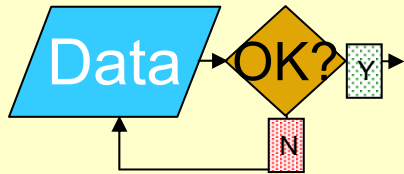
Data in actuarial study are complete and accurate.

Illustrative Risks:

- Data entry personnel tend to use valid but inaccurate codes in order to process large number of new transactions.
- Data query excludes certain classes.
- Data excludes certain large claims or events.
- Late adjustments are made after actuarial query is run.
- Unauthorized changes to query are made.
- Data do not reflect proper cut-off for current period.
- New codes are established but actuarial query does not capture them.
- Change in normal processing back-log is undetected.
- New product codes were implemented but query was not modified.



Objectives & Risks at Data Phase*



Control Objective:

The data are suitable (“reasonable and consistent”) for use in the selected actuarial analysis methods.

Illustrative Risks:

- Changes in case reserving practices are undetected.
- Changes in claim settlement practices are undetected.
- Changes in claim (claimant) count set-up, closure, or re-opening are undetected.
- A change in the profile of business being underwritten is undetected.

* This objective and the associated risks could also be aligned with the Analysis Phase.



What is a Control?

- A control is a process or step designed to mitigate a risk of not achieving an objective.
- Questions to consider:
 - What is the objective?
 - What risks could interfere with achieving the objective?
 - What processes/steps can be taken to reduce these risks?



Types of Controls

- A control can be preventive or detective.
- Examples of control types that may be relevant to actuarial data:
 - ✓ Segregation of duties
 - ✓ Reconciliations
 - ✓ Authorization
 - ✓ Edit reports
 - ✓ Diagnostic testing
 - ✓ Access restrictions
 - ✓ Policies
 - ✓ Control logs
 - ✓ Peer/supervisory reviews



Identifying and Designing Controls

Some things to keep in mind

- ✓ **Who/What** performs the control activity?
- ✓ **What** control activity is being performed?
- ✓ **When** is the control activity performed?
- ✓ **Why** is the control activity performed – to prevent/detect what?
- ✓ **Where** is the control activity performed, if relevant?
- ✓ Timing
- ✓ Effectiveness
- ✓ Segregation of Duties
- ✓ Efficiency



Identifying and Designing Controls

Some things to keep in mind (2)

❖ Reports

- It is not enough that a report is produced.
- It must have the right information, someone needs to review the report, and the criteria should be defined for that review.

❖ Errors

- It is not enough that errors are identified.
- There must be a process to track, log and monitor that status of exceptions items to ensure they are corrected/resolved.
- Accountability must be assigned.

❖ Evidence

- It is not enough to say that the control was performed.
- There must be evidence of the control's operation.



Example 1

Risk: Incomplete or inaccurate actuarial data.

Potential Controls:

- Reconciliations of claim and premium data utilized in the actuarial calculations to underlying statistical records/subsidiary ledgers are performed and reviewed in a timely manner by appropriate personnel.
- Claims and premium data from the actuarial analysis are compared (e.g., at product and coverage level) to the figures from the general ledger, to identify potential manual late adjustments or other out-of-balance conditions.



Example 2

Risk: Undetected changes in operating practices that cause the data to be unsuitable for the selected actuarial methods.

Potential Controls:

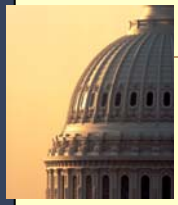
- Actuaries perform diagnostic testing of the data (e.g., payments, case reserves, claim counts, premiums, exposure units, etc.) to evaluate if any changes or unusual data may be present.
- Actuaries meet with claim department on regular basis to discuss changes in claims practices and discuss potential effects on the actuarial data.
- Actuaries receive and review regular claims management operating reports.



Putting It All Together

It might look like a matrix with the following elements:

- Process Step
- Objective
- Risk
- Control Activity
- Preventive / Detective indicator
- Frequency of Control
- Who performs the Control?
- Evidence of Control operation
- Who monitors the execution and operating effectiveness of the Control?



Q & A