

Data Analytics & Automation for Financial Professions



Why Data Analytics & Automation?

- Risk based audit approach helps in better audit quality as well as value additions to clients
- Improved efficiency in conducting audit (around 40% efficiency)
- Automations of manual working (vouching, depreciation recomputation, interest recomputation, investment valuation, IRR computation etc.) – one time investment in development, henceforth only data is to be replaced
- Helps in meeting Regulator's expectations along with client deadlines
- Increases business understanding, focus on risk, fraud detections



What is data Analytics tools for Auditor?

- Powerful, Versatile and Scalable Audit and fraud Analytics tools
- Plug and play software with easy-to-use Audit features can be designed by auditors and accountants
- Investigators, Security Professionals and Compliance Professionals
- Effortlessly import data from multiple applications/databases
- Seamlessly analyses the imported data to reveal control failures and red flags for timely management control reporting and action

Key Functionalities

- Filter and Extract – quick exceptions identifications reporting
- Categorize and Profile- dynamic MIS representation
- Merge, Match and reconcile – seamless reconciliation for improved compliance monitoring
- Sample – Objective sample representation verification
- Track Duplicates and observe Gaps – present on completeness of data or otherwise
- Trend Analysis – Generate forecasts for performance monitoring
- Chart/Graph – story telling through visual imagery

General Insurance: Premium Analytics (Power BI)

Case Study

- ABC & Co. is statutory auditor of XYZ General Insurance Limited
- Statutory auditors wants to understand the business and movement of the business during the current period
- Also, he wants to understand how premium rates are charged for difference LOBs and identify exceptional rates charged

Procedure followed

- Obtain Premium Register (policy issued)
- Uploaded data on Data Analytics Viz tool Power BI
- Created Power BI analytics visualization to analyze the business and draw exceptions in the data

Benefits

- Better understanding of the business
- Better audit quality by selecting only exceptional samples, rather than selecting random samples
- Automated the audit analysis, next time audit team need to replace the data to get analytics

Automation: Corporate Action (Dividend, Buy Back, Bonus etc.)

Case Study

- Let's assume auditor (ABC & Co.) auditing corporate actions (including dividend income) having 200+ schemes of mutual fund that all CA are correctly recorded by the Mutual Fund (XYZ Mutual Fund)
- This audit procedure on Data Analytics tool (Alteryx) for all mutual fund audits to ensure that all corporate actions are recoded properly
- Inputs required:
 - Mutual Fund Scheme dump
 - Opening Security Balance & Trade Dump
 - NSE/BSE corporate action dump (downloaded from respective website)
 - ISIN Symbol file (downloaded from NSE/BSE website)

Logic of Alteryx Automation Workflow and Benefit

Procedure followed

- Obtained Trade Dump & Opening security balance dump
- Obtained list of securities listed on NSE/BSE
- Computed daily closing balance of all securities (listed in NSE and BSE) for each scheme (please note 200+schemes of Mutual Fund)
- V-lookup from corporate action dump on every day closing balance to get narration of corporate action on respective dates & securities
- Then from narration of corporate action it will extract the dividend rate

Benefits of automation

- Without automation, generally auditor used to take 10 hours to compute, as computing daily closing balance of all securities for 200 scheme in one excel file was not possible
- One time investment in development of workflow (in terms of hours) – 2.5 hours
- Through automation, you can get output in one sheet and time has reduced from 10 hours to 15 minutes
- Every period-end, auditor just need to replace next file and run the work-flow

ICFR – Control Testing (Rule Based Analytics)

Case Study

- ABC & Co. is statutory auditor of XYZ General Insurance Limited.
- Statutory Auditor obtained premium register (contains 1 crore policy issuance data)
- Auditor would like test following controls through rule-based analytics:
 - Premium refunded is more than premium received
 - Backdating of policies
 - Duplicate policies in the dump

Procedure to be followed

- Obtain Premium Register (policy issued)
- Obtain Premium Refund register (policy cancelled)
- We will run this live on Alteryx for audience to understand basic functionality of Alteryx

Data Analytics: Fuzzy Matchup Check (Alteryx)

Case Study

- ABC & Co. LLP is the internal auditor of XYZ General Insurance Company Limited (a general insurance company)
- Insurance company generally source business either through its agents or through their employees (direct business)
- Internal Auditor of the company wants to identify if any employee is fraudulently/unlawfully sourcing policies in the name of his spouse/children (as an agent)

Procedure followed

- Internal Auditor obtained Agent and Employee dump with few key information – First Name, Last Name, Address, Bank Details
- Uploaded both files on Data Analytics tool (Alteryx)
- Merged the details of Agent and Employee in one file
- Run fuzzy logic with 80% accuracy to obtain match details and identify doubtful cases

Tools & Technology Available in the Market

Data Storage & Maintenance

- Dedicated Servers
- Cloud based data storage

ETL Tools

- Alteryx Designer
- Knime

Visualisation Tools

- Tableau
- TIBCO Spotfire Analyst
- Power BI

Programming Languages

- Python
- R+

Other Tools

- Spreadsheet
- Database like Microsoft SQL/Oracle



Speakers

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Thank you!

Any questions for us?

You can connect us on call/email if anyone interested in applying Data Analytics

