



Audit and Assurance exam – data analytics software

HOW TO APPROACH DATA ANALYTIC QUESTIONS IN THE PROFESSIONAL LEVEL AUDIT AND ASSURANCE EXAM

We introduced data analytics software to ACA exams starting with the Audit and Assurance exam in March 2021.

Chartered accountants are increasingly using more advanced approaches to interrogate client data. Embedding these techniques within our exams ensures that we continue to reflect the current and future workplace and will also help to develop your judgement, professional scepticism and critical thinking skills.

10-12 marks are awarded in the Audit and Assurance exam based on the use of the data analytics software. The number of marks may increase in future years as data analytics becomes embedded in the exam.

Since introducing the data analytics software to the Audit and Assurance exam three exam sessions have taken place. Students who have attempted the questions related to the data analytics software have often recorded very good marks. However, a small proportion of students have not attempted this part of the question. Speaking to the Audit and Assurance examiners, they have said that this is not advisable as it significantly reduces the likelihood of passing the exam overall and so have provide the advice below to support students sitting the Audit and Assurance exam.

USING THE DATA ANALYTICS SOFTWARE - ADVICE FROM EXAMINERS

The following guidance provides some useful advice on how to attempt the questions with data analytics software based on the performance of students to date.

To answer a data analytics software requirement, transactions or account balances often need to be 'identified' within the software. The clearest way to do this is to state the transaction number or account name respectively. Requirements may go on to ask students to justify why they have identified specific transactions as being of interest.

Four modules within the data analytics software are explicitly examinable in the Audit and Assurance exam: 'Explore', 'Revenue Cascade', 'Metrics' and 'Detect'.

Explore

This module enables students to identify and investigate specific transactions as well as perform analytical procedures on account balances. Students may be required to use any of the four visualisations on specific general ledger codes or financial statement areas to identify unusual transactions.

For example, after ticking the relevant codes/areas, the 'Heat map' can be used to select individual transactions or all transactions of 'Elevated Risk' due to their monetary impact and limited occurrence (by clicking the  Elevated Risk icon):

Heat Map



Clicking the 'View Transactions' icon  reveals the detail. Similarly, the 'Stacked bar chart' is useful to filter transactions by user, time, or day of the week to identify unusual transactions.

Examples of unusual transactions include transactions that:

- are posted outside normal working hours (07:00 to 19:00 Monday to Friday);
- have round number figures, particularly manual journals;
- have retrospective effective dates (eg, an invoice posted with a retrospective effective date created on the same day as a post year-end sales credit note, in the June 2021 exam);
- have suspicious descriptions (eg, a payment to 'Porter Security' in the September 2021 exam, posted by accounts clerk, Gary Porter);
- have descriptions that do not match the nature, account, or amount (eg, the difference between the mileage claim journal description - 200 miles at 45 pence per mile - and the £900 figure in the September 2021 exam);
- appear to be incorrectly calculated based on information provided in the scenario
- reclassify unusual items from one account to another (eg, the security/uniform costs in the September 2021 exam); and
- are posted by staff who have left or who would not normally post such transactions (eg, material transactions posted by the production director in the March 2021 exam).

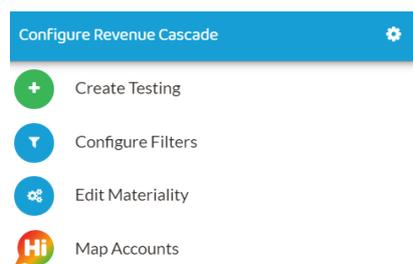
The 'Explore' module can also be used to undertake an analytical review of percentage changes in current year v prior year figures:

Income	2,706,639	3,075,999	369,360 (↑ 14 %)	✓	^
Income	2,636,050	2,946,293	310,243 (↑ 12 %)	✓	∨
Other Income	70,589	129,706	59,117 (↑ 84 %)	✓	∨
Expense	2,326,438	2,471,987	145,549 (↑ 6 %)	✓	^
Payroll Expenses	1,286,455	1,332,324	45,869 (↑ 4 %)	✓	∨
Cost of Sales	809,659	881,464	71,805 (↑ 9 %)	✓	∨
Distribution Costs	0	0	0 (0 %)	✓	∨
Administrative Expenses	230,324	248,324	18,000 (↑ 8 %)	✓	∨
Other Expenses	0	9,875	9,875 (↑ 0 %)	✓	∨
Depreciation Costs	0	0	0 (0 %)	✓	∨
Other P&L	0	0	0 (0 %)	✓	∨
Profit (Selected Accounts)	380,201	604,011	223,811 (↑ 37 %)		

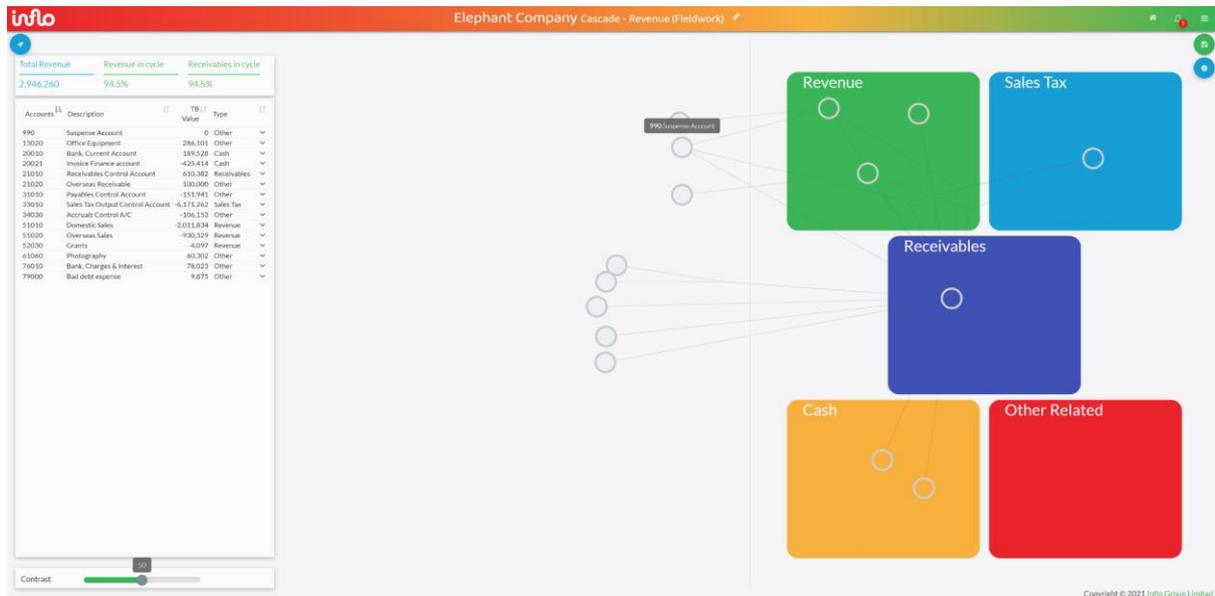
This could be particularly relevant to an audit planning (eg, to identify risks) or completion (eg, to consider sufficiency of evidence) scenario.

Revenue Cascade

This module can be used to identify unusual transactions that fall outside the normal revenue-receivables-cash cycle yet go through those accounts. Here, it is important to use the 'Map Accounts' tool from the cog menu first as this allocates entries which are related to the normal cycle to the standard categories (revenue, sales tax, receivables, cash, other related):



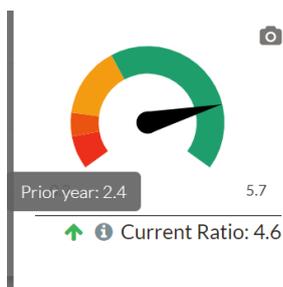
This leaves circles representing unallocated entries that need to be investigated further, for example, a transaction with an entry in a suspense account in the example below. You can also view more examples in the explanatory guidance notes [here](#).



Students should also note that 'Revenue Cascade' has been elevated to Level 2 (moderate knowledge) from 2022, illustrating that the level of knowledge of modules may change over time. you will find more information on the levels in the explanatory guidance notes found [here](#)

Metrics

The 'Metrics' module can be used to identify unusual changes in ratios and financial data v previous years/industry data for further investigation. The comparative data could be provided either within a question scenario or within the data analytics software (by hovering over the up/down arrows available for some metric visualisations):



Clicking the 'i' button  on each metric visualisation shows the metric formula, identifying which accounts require further investigation, for example, for receivables days (credit period):

Credit Period

Current Year	81.9 days
Formula	(Trade Receivables x Days in Period) / Income
Values (Original)	$\frac{690,482.4 \times 365}{3,075,998.7} = 81.9$
Lower Quartile	10.5 days
Median	35.1 days
Upper Quartile	73.3 days
Benchmarked Against	All Data

Students should note that where a question requirement restricts them to using the 'Explore' module only, calculation of relevant ratios to address a requirement (eg, calculating trade payables days to justify risks in the March 2021 exam) can still be undertaken using data available in the 'Explore' module rather than using 'Metrics' data.

Detect

'Detect' routines can be used to identify unusual transactions, such as unusually large transactions, transactions posted by users before they officially start/after they have left, transactions outside normal working hours or on non-working days, unusual words used in descriptions, etc.

For example, students could click on the green bar for the 'Large Value' routine:



This provides visualisations by user, period, weekday, hour, document type and general ledger account:



Clicking on these visualisations allows individual transactions to be identified.

Clues to issues will be provided within question scenarios to orientate candidates towards the data/routines that need to be considered.

In summary, students must be familiar with how to use the data analytics software before sitting the Audit and Assurance exam: it is advisable to work through the [Explanatory Guidance Notes](#) more than once. The practice questions also illustrate different exam styles using a real dataset. Practising questions to time within the software will help students earn marks quickly and gain valuable skills for the workplace. Having worked through these and following the other guidance above, the data analytics software elements of the Audit and Assurance exam should be achievable for all students.

Find more information, guidance and resources on the data analytic software in the Audit and Assurance exam at icaew.com/das