

# AuditNet® Survey Report on Data Analysis Software and Auditors



Are auditors implementing data analysis software technology in detecting and preventing fraud and how is it being used? AuditNet has long held the opinion that data analytics are not as widely used as the profession would lead us to believe. In December 2009 the IIA published GTAG 13 Fraud Prevention and Detection in an Automated World.

According to the Guide;

It is imperative that auditors stay ahead of fraudsters in their knowledge of technology and available tools. With readily available software, using computers to isolate accounting fraud clues not only makes sense, it is an absolute necessity if auditors are to help fulfill their duty of independent oversight.

The IIA 2009 Software Survey reported that nearly 20% of auditors are not using data analysis software and one third do not use data extraction software in their audits. AuditNet conducted a software survey in 2009 and found that only 50% of the respondents reported using audit software and of those 70% use it for data analytics. These figures translate to just over one third who do use audit software for data analytics. One reason for the discrepancy could be that the IIA survey respondents are from large audit shops whereas more than half of the respondents to the AuditNet survey were from audit shops with less than 10 auditors.

Despite the above after discussing the use of audit software for data analytics we sense that there has been Analysis Software Auditor Paralysis or ASAP. This fear of audit software technology may be caused by many factors and it is our attempt to unravel some of the myths and get to the truth of this phenomenon. This survey attempted to find how audit departments are using data analysis and the way they are using the technology.

## **Survey Summary**

Auditors from a cross section of industries reported that they have purchased and are using data analysis software. While there is no evidence of Analysis Software Auditor Paralysis there are a number of steps that both vendors and internal auditors can take to facilitate integration of data analytics in the audit process. The first steps include acquiring

the software and training all staff in the use of data analysis software. In order to do this the Chief Audit Executive must be a proactive champion of integrating data analytics in the audit process. AuditNet® and FraudAware® held a Webinar in December 2010 entitled "How to Make Data Analysis Work for you," in which the panelist, a CAE from RLI Corp. presented a best practice model for integrating data analysis in the audit process. Auditors are aware of the myths and truths of data analytics however they are sometimes hampered by the culture of their organization, department or those in senior positions of setting the proper tone for using the software. All of the major professional organizations encourage the use of technology to meet the increased demands of auditors in public and private organizations. However, according to the IIA's IPPF (International Professional Practices Framework)

*Internal auditors MUST have sufficient knowledge of ... technology-based audit techniques to perform their assigned work. However, not all auditors are expected to have the expertise of an internal auditor whose primary responsibility is information technology auditing.*

The IIA therefore continues to endorse information technology audit specialists rather than the "integrated auditor model" in the Standards which may be the reason for confusion when it comes to requiring all auditors to have data analytic software skills. The following statement from the Foreword of the IIA's Global Technology Audit Guide 13 - Fraud Prevention and Detection in an Automated World should encourage a review of the performance standards for the audit profession:

*It is imperative that auditors stay ahead of the fraudsters in their knowledge of the technology and available tools. With readily available software, using computers to isolate accounting fraud clues not only makes sense, it is an absolute necessity if auditors are to help fulfill their duty of independent oversight.*

*Scott Grossfeld, CFE, CPA  
Chief Executive Officer  
Association of Certified Fraud Examiners*

Given that information technology systems and software are now standard in the majority of organizations it follows that all auditors should possess the knowledge, skills and abilities to audit in this environment. The use of data analysis software and the integration of its use in the audit process should not be optional but rather should be elevated to mandatory. The digital age is now integrated into our culture and auditors need to utilize all the tools and techniques available to meet the challenges of this new era!

Jim Kaplan, CIA, CFE  
AuditNet® Founder

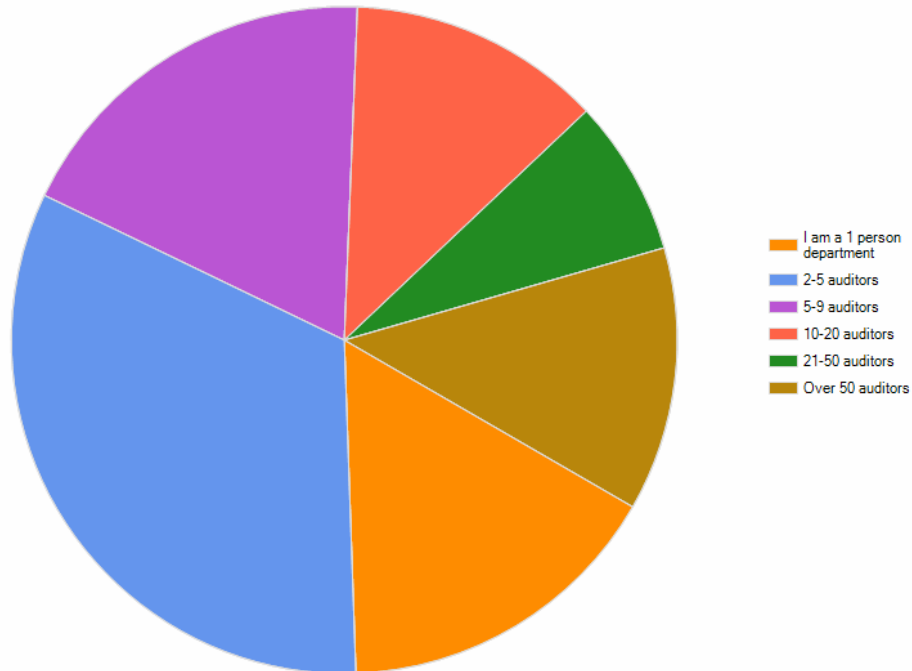
## Detailed Results

The summary and detailed results are also available online by clicking [here!](#)

We had response from over 200 auditors from a cross section of industry sectors. Over 50% worked in audit department with 5 auditors or less. Over 70% reported that they have purchased data analysis software. Of those who purchased the software over 90% use the software for analyzing data for audits. Cost is the main reason reported by those who have not purchased the software (75%) with the next highest barrier being staff training. Of those who have data analysis software 64% own ACL, 16% own IDEA and 47% own Access. When asked what software they use 63% use ACL, 16% use IDEA and 31% use Access. It is interesting that everyone who owns IDEA uses it which may relate to ease of use or a commitment on the part of their management to integrate its use in audits. Almost 2/3 of the respondents reported that it is not a requirement that data analytics be integrated into all audits with the main reason being that the data is not available in all cases. Over 57% said that the reason the use of data analytics is not required is because staff is not trained in its use. More than 85% indicated that being an IT auditor is not a requirement for using data analysis software. Almost 20% of those surveyed believed that data analysis software will prevent fraud and 45% thought that it will find fraud. This seems to emphasize the software rather than the skills of the auditor in finding fraud although the perception may be that if you have the tools and are able to apply them that a proactive approach may both prevent and detect fraud.

More than 200 auditors responded to the survey from various industry sectors. The group with the largest number of responses was from government. Regarding the size of the audit departments almost one half of the respondents worked in an office with 5 auditors or less.

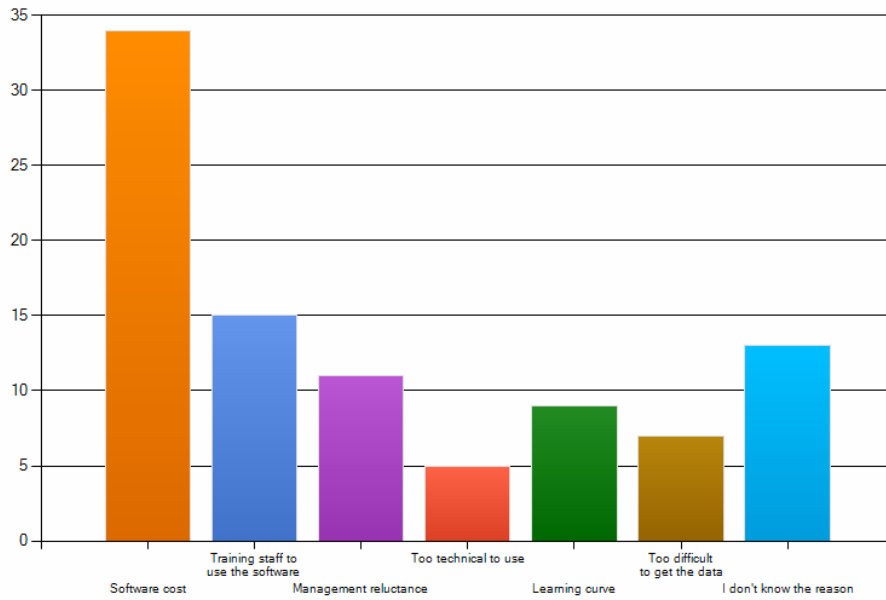
### What is the size of your audit department?



Close to 70% of the survey participants indicated that they had purchased data analysis software. This correlates closely to other surveys including annual surveys conducted by the Institute of Internal Auditors. This represents a positive that auditors own the software. When asked whether they are using the software for data analysis almost 90% indicated that they are. In other words the true indicator of the integration of data analysis in the audit process must be judged not only by who purchased the software but rather by who is actually using it for audits.

The main reason that auditors reported for not purchasing the software related to the cost. The following chart shows all the reasons given by survey participants including the issue of training and management reluctance. Some auditors indicated that a change in personnel (CAE) impacts whether a department will or will not implement a data analysis audit requirement.

**If you have not purchased data analysis software for audit projects what are the reasons?**



We next asked which products auditors purchased or owned for data analysis. We allowed them to select more than one product as many audit offices purchase multiple applications or they are included as part of a software suite. More than 57% own ACL followed by Access (46%) and IDEA (24%). As Access is included in Microsoft Office we surmised that is the reason for the high percentage reporting that they own the product. The two primary packages owned are ACL and IDEA. Of those who responded 'Other' more than 25% own Excel which again relates to the Microsoft Office suite.

If you use software to analyze data please indicate which product(s) you OWN.		
Answer Options	Response Percent	Response Count
ACL	57.6%	98
Caseware IDEA	24.1%	41
ActiveData	3.5%	6
ActiveAudit	0.6%	1
TopCAATs	0.6%	1
Microsoft Access	46.5%	79
Monarch Standard	1.2%	2
Monarch Professional	3.5%	6
Other (please specify)	16.5%	28
<i>answered question</i>		<b>170</b>

The follow up question asked auditors which product they use (as opposed to which product they own). We found that not all owners of ACL or IDEA used the software. While the percentage is small it could be an indication of a change in management or personnel which impacted using the package by the current staff. Microsoft Access had the biggest difference which reinforces the fact that although it is included in the Microsoft Office Suite it is not as widely used by auditors for data analysis. Some of the less purchased packages such as Monarch, ActiveData and TopCAATs when purchased were used specifically for data analysis.

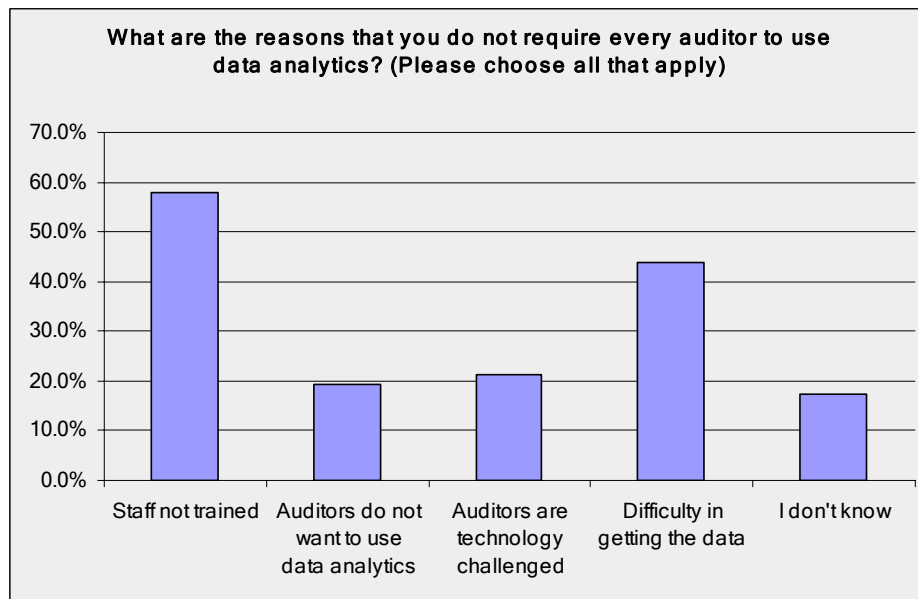
Almost 59% of the auditors said that data analysis steps or procedures were not required for every audit. The main reason they were not required was that data was not available (56.5%). The next highest reason was that the use of data analysis procedures was not integrated into the audit process followed by the fact that data was not in an easily retrievable format. It is therefore important that audit departments consider integrating the use of data analysis into the audit process whenever it is appropriate.

The follow up question asked whether it was a requirement that every auditor use data analysis for their audits which over 60% responded in the negative. If it is not required then there is less likelihood that data analytics will be used even if the department has acquired the software.

Surprisingly the next question asked whether only IT auditors were allowed to use data analysis software which 80% said that was not the case. We suspected that many audit departments still maintained a distinct separation between financial/operational/business

auditors and information technology or information system auditors and only allowed the latter to use the software. This is a positive trend in that all auditors should be trained and allowed to use data analysis software tools.

When asked for the specific reason(s) why audit departments did not require auditors to use data analysis software approximately 58% said because staff was not trained followed by difficulty in getting the data. We also looked at the "other" category which highlighted additional reasons for this trend. 13 auditors said data analysis was not needed in all cases. A few said that designated staff perform the data analysis. Others responded that licensing restrictions by the vendor prevented them from putting the tool in the hands of all staff.



The next survey area asked participants to either agree or disagree with a series of statements focused on myths of data analysis software. The results provide some interesting insight into perceptions on reliance on IT, ability of the software to find anomalies including fraud, fraud prevention and more. Software vendors and AuditNet® are leading the profession on confronting these myths to foster greater use of data analytics by auditors. Following are the results:

Answer Options	Agree	Disagree	Response Count
Data analysis software eliminates reliance on IT	64	135	199
All audit staff can use it	143	57	200
Data analysis software will find all the anomalies in data populations	62	136	198
Data analysis software will find fraud	93	105	198
It is too difficult to get the data	52	141	193
Data analysis software will prevent fraud	39	154	193
Our audit department is too small for a data analysis solution	24	172	196
You must be an IT auditor to use data analysis software	6	190	196
Data analysis software is too expensive	64	132	196
We can get by without using data analysis software	64	131	195

The next question queried reasons auditors cite for not using data analytics software. In most cases auditors disagreed with the reasons that many auditors cite for not using data analytics. The responses covered a range from modest to major disagreement covering areas such as cost, training, mandating use, complexity of the software and more. One of the major statement disagreements focused on the size of the audit department as more than 80% felt that small audit department could utilize data analytics. Implementing data analytics in a small audit department can be an important factor on its use as the department adds staff.

Answer Options	Agree	Disagree	Neutral	Don't Know	Response Count
The software costs too much(budget constraints)	54	84	42	13	193
We do not have a budget for training on the software	64	86	29	14	193
The training times and locations are not convenient	39	91	40	22	192
Audit management does not mandate it's use	83	64	37	9	193
We don't understand how it can help	24	138	22	7	191
The software is too complex (steep learning curve)	36	117	33	6	192
Our staff does not want to use it	25	123	36	7	191
Our audit department is too small	19	154	11	8	192
It is not a required part of the audit planning process	69	80	35	8	192
It's too difficult to access the data	54	103	28	7	192
We have technology platform incompatibilities	36	99	31	26	192
There are organizational roadblocks to access	65	84	26	16	191
We can't find auditors with data software experience	32	95	50	15	192

The next question covered the benefits derived from using data analysis software. Almost 90% of the survey responses cited the ability to review entire populations which would not be possible using sampling or other analysis techniques. Other benefits included improved efficiency, ability to do more with less (important in tough financial times), developing new skills and more. Following are the responses:

If you use data analysis software what benefits do you derive from using the software?		
Answer Options	Response Percent	Response Count
Allows us to do more audits	39.7%	62
We have increased audit efficiency (allowed us to streamline the audit process)	66.0%	103
We are able to review entire populations	89.7%	140
We find fraudulent transactions	43.6%	68
Our auditors enjoy using the software	45.5%	71
Our audit scope is more consistent	30.8%	48
We are able to do more with less	66.7%	104
It has reduced the amount of scheduled fieldwork	34.0%	53
Our staff acquires new skills	62.8%	98

We also surveyed the relative importance of factors regarding decisions on integrating data analysis in your audit process. Following are the responses received. Data quality for review was extremely important. Most of the other factors were rated as important. CAE support is high on the list as well as data access. It is interesting to note that support of the audit committee was not considered important by almost 30% of the survey participants. Also adjusting the audit process (audit programs) was not considered important by 37% of those who participated in the survey.

Please select from the following factors regarding decisions on integrating data analysis in your audit process							
Answer Options	Extremely Important	Important	Not Very Important	Not at all Important	N/A	Rating Average	Response Count
Software cost	54	102	26	5	3	3.10	190
Technology capabilities of our staff	47	124	16	3	2	3.13	192
Training availability	42	125	20	2	2	3.10	191
Training costs	50	114	20	5	2	3.11	191
Staff retention (Retaining data analysis trained staff)	46	94	37	9	5	2.95	191
Making the audit process more efficient	95	82	10	1	2	3.44	190
Finding fraud	72	91	23	2	1	3.24	189
Audit Committee (Board support)	36	71	56	10	17	2.77	190
Senior Management support	64	73	41	9	4	3.03	191
CAE support	79	71	16	4	18	3.32	188
Requires adjusting our audit work programs	19	83	71	13	6	2.58	192
Getting access to the data	91	88	11	0	1	3.42	191
Data quality and reliability	111	66	11	0	2	3.53	190

When asked whether auditors feared using data analysis software which seemed to be a perceived notion, more than 91% said they did not "fear the software". This is a very positive sign as a fear of technology is sometimes a major deterrent from use and implementation.

The final questions focused on whether audit programs with data analytic steps included as well as vendors creating a "light" version of the software would foster greater use of the techniques. In the case of the availability of data analytic enabled audit programs almost 64% indicated it would. 62% of the participants said the if the major software vendors created a "light" version of their product at a lower cost with basic functions that could be easily used by every auditor for every audit they would be more likely to purchase their software?

Software vendors have made significant advances in developing tools for their customers to make it easier for auditors to apply data analysis techniques. AuditNet® is working with software vendors to develop data analytic enabled audit programs for the standard business cycles. These programs include the steps an auditor would perform in conducting an audit as well as the application of data analysis techniques where possible. Auditors will still to apply critical thinking skills for every audit they conduct however providing sample scenarios, scripts or other data analytic routines can provide auditors new ways to look at examining data and integrating them into their process.