

“
**It's only when the tide goes out that you
realise who's been swimming naked**
”

Warren Buffet



Your Trusted Partner for Audit Analytics

ACFE Conference ACL - Finding Fraud



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Paul Lloyd-Smith – ACL
Steve Worthington – DataConsulting

How Can ACL Assist With Fraud Detection?

Features in ACL that can assist with Fraud Detection

STATISTICS Command

- Gives averages, value or date spans
- Lots of values stored as variables that could be used in filters and scripts

Payment Amount

	Number	Total	Average
Range	-	2,672.05	-
Positive	16,573	6,884,996.23	415.43
Negative	0	0.00	0.00
Zeros	0	-	-
Totals	16,573	6,884,996.23	415.43
Abs Value	-	6,884,996.23	-

Name	Type	Value
LOW1	N	12.60
HIGH1	N	2,636.16
RANGE1	N	2,672.05
ABS1	N	6,884,996.23
AVERAGE1	N	415.43
MIN1	N	12.60
MAX1	N	2,684.65
TOTAL1	N	6,884,996.23
COUNT1	N	16,573

Highest	Lowest
2,684.65	12.60
2,684.65	12.60
2,636.16	12.60
2,636.16	12.60
2,636.16	12.60

Features in ACL that can assist with Fraud Detection

DUPLICATES Command

- Easy to use, key is in selection of data and computed fields
- Common application is in analysis of duplicate payments
- Suppliers may be deliberately double invoicing to exploit control weaknesses
- Could also be collusion between AP and Suppliers

Invoice Number	Payment Amount	Payment Date	Payment Number	Vendor Number
136649	£1,105.79	01/08/2002	PT-15262	102444
136649	£1,105.79	02/15/2002	PT-26397	102444
136654	£1,053.15	01/13/2002	PT-16706	102444
136654	£1,053.15	01/22/2002	PT-19178	102444
136654	£1,053.15	02/12/2002	PT-25449	102444
137545	£1,053.15	02/06/2002	PT-23469	102444
137545	£1,053.15	02/20/2003	PT-30303	102444
137828	£1,053.15	01/22/2002	PT-19268	102444
137828	£1,053.15	02/21/2003	PT-30304	102444

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Features in ACL that can assist with Fraud Detection

CLASSIFY / SUMMARIZE Commands

- Great for spanning large datasets and seeing the data in a concise way
- Take vendor creation/modification
- Is the role of K_DUDAK really to create/modify vendors?
- Why blanks?
- Use in combination with AVERAGE1 variable generated by STATISTICS
- Set tolerance boundaries e.g. 20% below AVERAGE1
- Sometimes good to view graphically also

CREATED_BY	Count	Percent of Count
R_PATEL	60	30.77
G_WILSON	50	25.64
S_JONES	39	20.00
J_SMITH	36	18.46
	5	2.56
K_DUDAK	5	2.56

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LAST_MODIFIED	Count	Percent of Count
J_SMITH	63	32.31
S_JONES	46	23.59
G_WILSON	40	20.51
R_PATEL	39	20.00
	5	2.56
K_DUDAK	2	1.03

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Features in ACL that can assist with Fraud Detection

STRATIFY Command

- Good way to quickly see outliers in a large population of numbers
- Could be used when viewing expenses

Expense Amount	Count	Percent of Count	Percent of Field	Expense Amount
0.60 - 152.53	6,734	94.34%	42.16%	103,357.61
152.54 - 304.47	211	2.96%	20.08%	49,220.00
304.48 - 456.41	122	1.71%	17.9%	43,885.75
456.42 - 608.35	34	0.48%	7.13%	17,483.00
608.36 - 760.29	16	0.22%	4.43%	10,854.50
760.30 - 912.23	14	0.2%	4.84%	11,874.00
912.24 - 1,064.17	2	0.03%	0.81%	1,980.00
1,064.18 - 1,216.11	2	0.03%	0.93%	2,268.00
1,216.12 - 1,368.05	1	0.01%	0.53%	1,296.00
1,368.06 - 1,520.00	2	0.03%	1.19%	2,920.00
Totals	7,138	100%	100%	245,138.86

Features in ACL that can assist with Fraud Detection

FIND Function

- Easy to locate key strings of data in large data sets
- Is not case sensitive and also looks within strings
- Famous Gym/Taxi scam

Filter:

	Report Number	Employee Number	Merchant Name	Expense Date	Expense Amount	Expense Type
3	017249	000988	Metro Taxi	03/27/2004	10.00	TAXICA
22	017249	000988	Metro Taxi	03/31/2004	10.00	TAXICA
34	017250	001781	Takeout Taxi	03/27/2004	15.00	TAXICA
65	017250	001781	Grove Taxi	04/02/2004	20.00	TAXICA
89	017251	001117	Atlanta Metro Taxi	03/30/2004	9.00	TAXICA
98	017252	002115	Metro Taxi	03/27/2004	10.00	TAXICA
130	017253	001107	Atlanta Metro Taxi	03/27/2004	9.00	TAXICA
158	017253	001107	Crown Taxi Cab	04/01/2004	6.00	TAXICA
170	017254	000243	Metro Taxi	03/30/2004	10.00	TAXICA
201	017254	000243	Atlanta Metro Taxi	05/04/2004	9.00	TAXICA
216	017255	001173	Metro Taxi	03/29/2004	11.00	TAXICA
217	017255	001173	Emerald Taxi Ltd	03/29/2004	4.20	TAXICA
218	017255	001173	Takeout Taxi	03/29/2004	13.50	TAXICA
219	017255	001173	Grove Taxi	03/29/2004	17.00	TAXICA
235	017255	001173	Atlanta Metro Taxi	04/01/2004	9.00	TAXICA
243	017256	001601	Atlanta Metro Taxi	03/30/2004	9.00	TAXICA
250	017256	001601	Crown Taxi Cab	03/31/2004	4.80	TAXICA
251	017256	001601	Takeout Taxi	03/31/2004	13.50	TAXICA

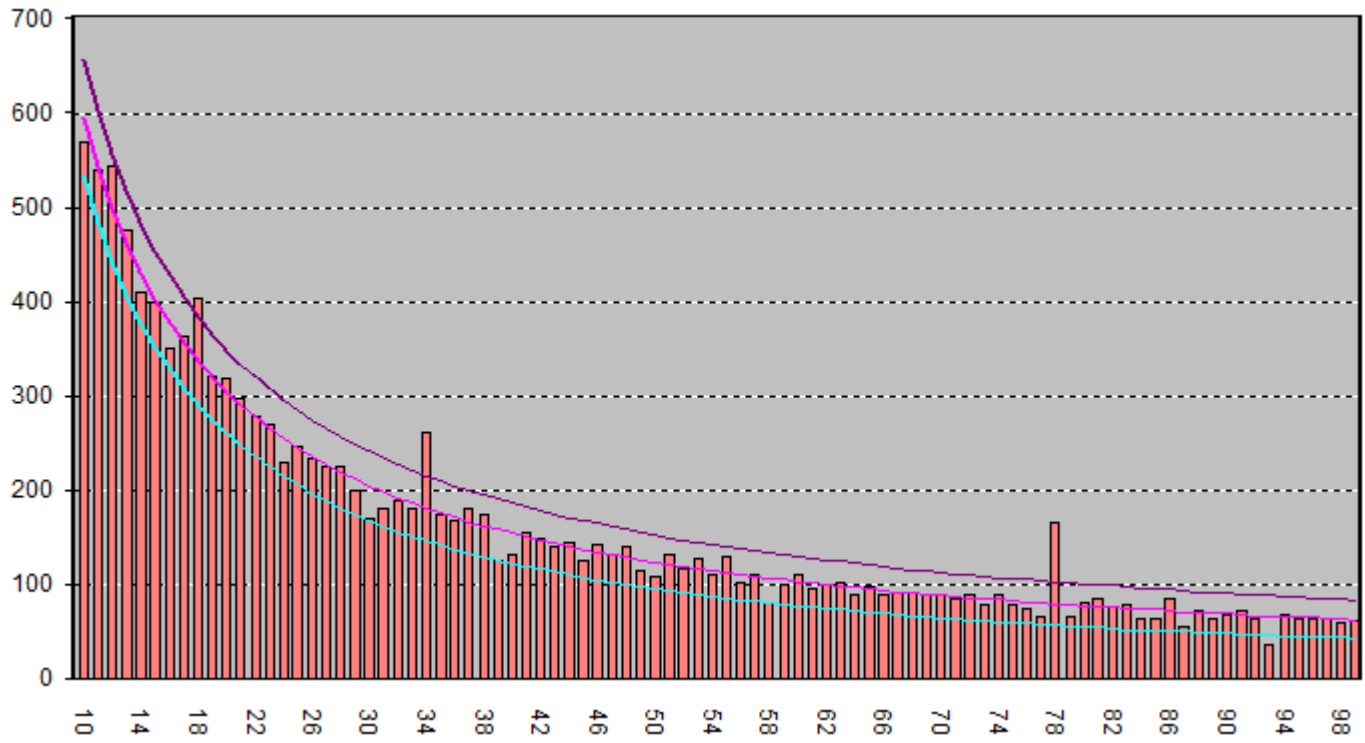
Features in ACL that can assist with Fraud Detection

BENFORD Command

- Probability theorem that makes predictions about distribution of digits in numerical data
- Can detect hidden trends occurring in the data
- Looks at first few digits of numbers and attempts to predict expected distribution
- Used frequently to detect spending just below authorisation levels
- Always worth running to see what it comes up with anything

Features in ACL that can assist with Fraud Detection

BENFORD Command







Features in ACL that can assist with Fraud Detection

FILTERS

- Allows you to home in on transactions that meet certain conditions
- Quick filter allows expressions to be built quickly with no syntax errors
- Use variables and functions to make your filters powerful
- Any guesses as to what this filter is doing?

Filter:

    DOW(transaction_date)=1 AND (transaction_amount > 55000)





	Transaction Number	Transaction Date	Employee Number	Transaction Amount
797	32421	02/16/2003	00447	£56,501.49
4169	35839	05/11/2003	00449	£55,188.16
5025	36703	06/01/2003	00450	£56,424.89
5031	36709	06/01/2003	00449	£58,776.29
8854	40591	08/03/2003	00447	£59,117.13
10477	42235	08/31/2003	00451	£57,384.58
11499	43273	10/12/2003	00450	£58,606.91

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Features in ACL that can assist with Fraud Detection

COMPUTED FIELDS / WORKSPACES

- Add your own fields to existing data fields
- Confirm accuracy of calculations
- Store filters as logical computed fields i.e. T or F
- For widely used computed fields think about using Workspaces

Filter:     | F_Sun_Trans_GT55000 <> F

	Transaction Number	Transaction Date	Employee Number	Transaction Amount	F_Sun_Trans_GT55000
797	32421	02/16/2003	00447	£56,501.49	T
4169	35839	05/11/2003	00449	£55,188.16	T
5025	36703	06/01/2003	00450	£56,424.89	T
5031	36709	06/01/2003	00449	£58,776.29	T
8854	40591	08/03/2003	00447	£59,117.13	T
10477	42235	08/31/2003	00451	£57,384.58	T
11499	43273	10/12/2003	00450	£58,606.91	T

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Features in ACL that can assist with Fraud Detection

SCRIPTS


- Why reinvent the wheel every time?
- Share/swap your scripts with your friends!
- Easier than you think to create – recorder, log entries, create script from table history
- What's this script doing?

```
OPEN Transactions_2003
SET FILTER DOW( transaction_date)=1 AND (transaction_amount > 55000)
EXTRACT RECORD TO "Sun_Trans_GT_55000" OPEN
```

Where Has ACL Been Invaluable In Detecting Fraud?

Uncovering a massive \$70m of fraud

ACL CASE STUDY



Forensic Strategic Solutions
Uncovering Massive Fraud Using ACL

FORENSIC STRATEGIC solutions.

“After Forensic Strategic Solutions completed the investigation, it opened a lot of eyes. It also demonstrated the effectiveness of ACL’s product, and the Los Angeles Unified School District purchased multiple licenses of ACL™ to use after we had completed the audit. The District recognized the need for a powerful data analysis tool to ensure proactive monitoring of areas such as exception reports and vendor encumbrances on an ongoing basis.”

CHALLENGES

- Fraudulent activities including fictitious vendors
- Lapses in financial controls resulting in duplicate payments
- Violations of competitive bidding policies, the sum of which totalled more than US \$70 million.

SOLUTION

- Data Analysis
- ACL™ Desktop

KEY BENEFITS

- Uncovered 48 budget transfers authorized by one employee for US \$45,999 each within a four-month period.
- Identified overbilling of US \$2.1 million through payment applications.

INDUSTRY

- Business Services

REGION


- North America

Customer Profile

Forensic Strategic Solutions fraud examiners are national experts in the detection and deterrence of a wide variety of fraudulent conduct – from discovering employees or executives who misappropriate company assets to assisting investors who are defrauded in the course of commercial transactions. Their team of highly specialized fraud examiners relies on the powerful data analysis capabilities of ACL technology to assist them on projects such as the LAUSD audit and investigation.

Applications

Forensic Strategic Solutions uses ACL technology to analyze transactional data when conducting forensic examinations, to detect fraud, and identify weaknesses in internal financial controls.



“

ACL opened a lot of eyes and made us recognise the need for a powerful data analysis tool to ensure proactive and ongoing monitoring of areas such as exception reports and vendor encumbrances.

”

Manager of Fraud Examination, Forensic Strategic Solutions

www.acl.com/success



Finding >\$2m lost revenue in days

“


A process that uses ACL technology is light years ahead of manual sampling. In the past, you'd have to hit the lottery to find something big.

With ACL, we can find the root issues, identify trends, and provide our clients with detailed results.”

”

VP Operations, CHAN Healthcare Auditors

ACL CASE STUDY



CHAN Healthcare Auditors
Business Assurance Through Targeted Data Analysis

“An audit process that uses *ACL* technology is light years ahead of manual sampling. In the past, you'd have to hit the lottery to find something big. With *ACL*, we can find the root issues, identify trends, and provide our clients with detailed results.”

Jill Linden, Vice President of Operations

CHALLENGES

- Minimize revenue leakage
- Ongoing regulatory compliance

SOLUTIONS

- Data Analysis
- ACL™ Desktop

KEY BENEFITS

- Identify millions of dollars in unpaid reimbursements and lost patient charges
- Map service and payment trends to provide excellent in-business process monitoring
- Analyze data derived from a wide variety of information systems and software applications

INDUSTRY

- Healthcare

REGION

- North America

For more than 10 years, CHAN Healthcare Auditors (CHAN) has relied on ACL data analysis solutions to help its clients assure compliance and maximize revenues. CHAN provides internal audit services to over 20 healthcare systems across the U.S. through a network of over 250 auditors working on-site in client locations. Each organization CHAN serves faces unique internal challenges, but nearly every facility must comply with government regulations and maintain strict controls over internal revenue cycles. CHAN uses ACL technology to help its clients strengthen the effectiveness of their business controls and minimize revenue leakage.

Customer Profile


CHAN is the only U.S. company focused exclusively on providing internal audit services to the healthcare industry. Formed in 1997 through a collaboration of the two largest tax-exempt healthcare systems, CHAN auditors maintain a permanent on-site presence in over 20 healthcare networks across the nation and operate in more than 225 hospitals and healthcare facilities with combined assets of US \$40 billion. Headquartered in St. Louis, Missouri, CHAN employs audit professionals in 36 states.

Applications

CHAN relies on ACL technology for effective, flexible, and powerful analytics to address a diverse range of healthcare audit processes.

Challenges

CHAN auditors work year-round, on-site, as the “Chief Audit Executives” in their individual healthcare facilities. CHAN auditors must address a variety of internal controls issues, but in particular, respond to the three key areas that challenge almost every healthcare organization: revenue capture, provision for bad debt reserves, and regulatory compliance.



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Detecting 85% frauds before customers affected




ACL has been a crucial resource for our organisation. We've enhanced audit efficiency and productivity, while detecting fraud and fund misappropriation with secure faster analysis.



President Audit Department, T.C. Ziraat Bankasi

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ACL CASE STUDY



T.C. ZIRAAT BANKASI A.Ş.
Fraud detection with ACL managed analytics

T.C. ZIRAAT BANKASI

“ACL has been a crucial resource for our organization. We've enhanced audit efficiency and productivity, while detecting fraud and fund misappropriation with secure faster analysis.”
Ali ARAS, President of Audit Department

SOLUTION
Continuous Auditing
ACL AuditExchange™ & Services

- Training
- Implementation & Consulting
- Support

KEY BENEFITS

- Using ACL, the central audit department detects 85% of fraud cases prior to impacting customers
- ACL also enables early detection of 42% of suspicious transactions
- Increased efficiency and effectiveness
- Cost saving opportunities with higher productivity
- Complete, secure, data coverage in a high-volume audit environment

INDUSTRY

- Banking & Finance

REGION

- EMEA


Company Profile
Founded in 1863, T.C. Ziraat Bankası A.Ş. is the largest bank in Turkey. The state-owned institution provides banking, financial, insurance and credit card services at over 1,300 branches, 50 special operations centers, and 25 bureaus in Turkey and in 17 countries around world. Ziraat Bank is headquartered in Ankara, with over 23,000 employees and annual net profits of US \$2.4 billion.

Objectives
In today's business environment, effective planning requires quick access to critical enterprise data. At the same time, the role of internal auditors continues to shift and evolve. Auditors must adapt to new responsibilities and use automated techniques to provide strategic intelligence. Tailored audit analytics offer one of the most effective solutions to help these teams enhance their efficiency and productivity.

Since 2005, the Ziraat Bank Central Audit Department (CAD) has used ACL solutions to uncover internal fraud and identify potential control risks. There are four auditors and four assistants in the CAD, plus 239 auditors in the larger Bank Supervisory Commission.

Audit managers and the CAD use the ACL solution to detect fraud without costly, time-consuming site visits. It equips them to analyze bank and branch balance sheets and measure risk exposure. The analytics also test large data files to determine credit placement, follow-up account balances, structural changes to deposit accounts, and other significant customer activities. Suspicious transactions identified by ACL analytics are then transferred to bank branch managers for additional investigation.

Implementation and Planning
The Ziraat Bank has worked closely with KOMTAS Information Management – a local ACL Channel Partner – to implement ACL technology and provide consulting, training and support services for the audit team and other employees.




Leveraging analytics in the fight against fraud



Seven Steps to Jump Start Your Anti-Fraud Program

Knowing what to look for is critical in building a fraud detection program. Excerpted from *Fraud Detection: Using Data Analysis Techniques to Detect Fraud*, read examples of the types of fraud and the tests used.

www.acl.com/fraud

Leveraging analytics in the fight against fraud



Learn Three Fraud Tests in Less Than 10 Minutes

Learn from the ACL specialist presenting this short webcast how to run three simple fraud tests: finding suspicious numbers, suspicious vendors and suspicious bids.

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Leveraging analytics in the fight against fraud



Free eBooks

Advice and real-life examples of organisations applying audit analytics to automate compliance and fraud testing. Resources include assessment questionnaires to give a snapshot of your compliance landscape and help determine next steps.

www.acl.com/Bribery

www.acl.com/FCPA

Leveraging analytics in the fight against fraud



Receive an Audit Analytic Capability Assessment

Global Survey:

What is your Audit Analytic Capability?

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Leveraging analytics in the fight against fraud



Leveraging analytics in the fight against fraud



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