

1. Employee Accounts

• Data "mined" from the report into a data table:

customer	account	date	control number	amount
53	A	*****02-18	000051 720	2173.09
54	A	*****03-04	000051 190	3410.81
55	A	*****02-28	000051 900	400.00
56	A	*****02-21	000051 120	1191.03
57	A	*****02-07	000051 600	861.39
58	A	*****02-07	000051 410	300.00
59	A	*****02-07	000051 120	992.00
60	A	*****02-10	000002 090	871.21
61	A	*****02-10	000002 690	300.00
62	A	*****02-10	000002 260	59.00
63	A	*****02-10	000002 820	100.00
64	A	*****02-11	000051 120	157.00
65	A	*****02-11	000002 840	92.00
66	A	*****02-11	000051 920	350.00
67	A	*****02-11	000051 750	100.00
68	A	*****02-11	000051 520	609.37
69	A	*****02-12	000051 430	883.23
70	A	*****02-13	000051 330	30.00
71	A	*****02-13	000051 750	115.00
72	A	*****02-14	000051 430	300.00

1. Employee Accounts

• Data now aggregated alphabetically by customer

• Total number (count) of deposits and total amounts by account

customer	count	amount
6	ADRI	1 58.27
7	AFTC	6 2666.14
8	AFTC	1 3000.00
9	AGEE	4 1014.84
10	ALAN	3 6029.74
11	ALAN	3 3850.00
12	ALAN	1 1400.00
13	ALAN	1 600.00
14	ALAN	5 3691.00
15	ALAN	2 11000.00
16	ALAN	3 268.17
17	ALBE	4 12903.00
18	ALEX	1 400.00
19	ALEX	1 1191.03
20	ALEX	1 50.00
21	ALEX	1 50.00
22	ALEX	1 3496.28
23	ALEX	5 855.39
42		19833.67

2. Branch Clearings

- Banks use the Branch Clearings account to transfer items between departments
- Account for any item in transit
- Account can be used for floating funds or illegal transfers
- Difficult to identify bogus transactions
- Monarch gives the Columbia Bank auditor more ways to analyse unusual activity

2. Branch Clearings

• Mine data from Branch Clearings Report:

• Wildcard symbol used to indicate where numeric values must exist

Branch	Date	Amount	Control Number	Amount
11 38	09-27	20,000.00	000051 30	
11 38	09-05	91.35	000001	90
11 47	09-04	1,000.00	000001	90
11 48	09-16	4,000.00	000051	50
11 49	09-23	830.00	000051	90
11 50	09-23	36.30	000051	80
12 37	09-16	496.83	000001	60
12 59	09-03	6,494.00	000050	40
12 63	09-24	8,057.00	000001	50
13 30	09-27	3,822.15	000001	50

3. General Ledger

- A filter is defined, so only manual entries ("0000" criteria) that have been applied to income accounts (listed below) will display

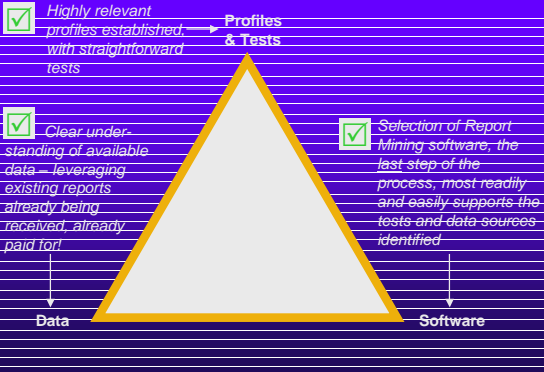
Account	Balance	Debit	Credit
1 214000 EXPENSE CHECKS	0000 1001 121902 1202	20070000	277895.91
2 214000 EXPENSE CHECKS	0000 1001 121902 1211	18720000	99966.14
3 214000 EXPENSE CHECKS	0000 1001 121902 1212	35760000	547956.37
4 214000 EXPENSE CHECKS	0000 1001 121902 1215	43770000	871712.02
5 214000 EXPENSE CHECKS	0000 1001 121902 1227	28287000	181302.38
6 214000 EXPENSE CHECKS	0000 1001 121902 1232	22220000	141610.74
7 214000 OVER			
8 214000 OVER			
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3. General Ledger

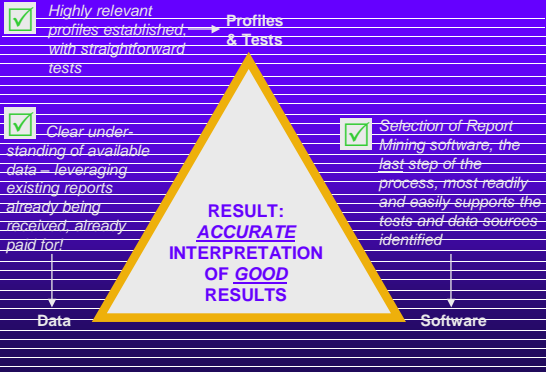
- Out of a total of 200,000 entries, a customised view of 84 manual entries to income accounts has been created for targeted research

Account	Balance	Debit	Credit
51 71100 OVER AND SHIRT	0000 1001 121902 1212	300000	1577.00
52 71100 OVER AND SHIRT	0000 1001 121902 1219	300000	560.00
53 71100 OVER AND SHIRT	0000 1001 121902 1226	300000	478.65
54 71100 OVER AND SHIRT	0000 1001 121902 1227	300000	478.65
55 71100 OVER AND SHIRT	0000 1001 121902 1232	300000	200.00
56 71100 OVER AND SHIRT	0000 1001 121902 1231	300000	1000.00
57 71100 OVER AND SHIRT	0000 1001 121902 1231	300000	6000.00
58 71100 OVER AND SHIRT	0000 1001 121902 1232	300000	4000.00
59 71100 OVER AND SHIRT	0000 1001 121902 1238	300000	318.90
60 71100 OVER AND SHIRT	0000 1001 121902 1203	300000	800.00
61 71100 OVER AND SHIRT	0000 1001 121902 1204	300000	278.01
62 71100 OVER AND SHIRT	0000 1001 121902 1207	300000	2000.00
63 71100 OVER AND SHIRT	0000 1001 121902 1204	300000	500.00
64 71100 OVER AND SHIRT	0000 1001 121902 1204	300000	300.00
65 71100 OVER AND SHIRT	0000 1001 121902 1218	300000	500.00
66 71100 OVER AND SHIRT	0000 1001 121902 1209	300000	568.45
67 71100 OVER AND SHIRT	0000 1001 121902 1218	300000	400.00
68 71100 OVER AND SHIRT	0000 1001 121902 1206	300000	280.35
69 71100 OVER AND SHIRT	0000 1001 121902 1211	300000	200.00
70 71100 OVER AND SHIRT	0000 1001 121902 1216	300000	418.91
71 71100 OVER AND SHIRT	0000 1001 121902 1209	300000	600.00
72 71100 OVER AND SHIRT	0000 1001 121902 1209	300000	1481.12
73 71100 OVER AND SHIRT	0000 1001 121902 1209	300000	252.00
74 71100 OVER AND SHIRT	0000 2800 121902 1210	960000	250.00
75 71100 OVERDRAFT LOSSES	0000 1001 121902 1204	400000	210.00
76 71100 OVERDRAFT LOSSES	0000 1001 121902 1209	600000	524.25
77 71100 OVERDRAFT LOSSES	0000 1001 121902 1209	600000	1350.11
78 71100 OVERDRAFT LOSSES	0000 1001 121902 1209	600000	204.65
79 71100 OVERDRAFT LOSSES	0000 1001 121902 1209	600000	252.00
80 71100 OVERDRAFT LOSSES	0000 1001 121902 1209	600000	303.52
81 71100 OVERDRAFT LOSSES	0000 1001 121902 1204	600000	291.98
82 71100 OVERDRAFT LOSSES	0000 1001 121902 1207	600000	288.12
83 71100 OVERDRAFT LOSSES	0000 1001 121902 1213	600000	282.77
84 71100 OVERDRAFT LOSSES	0000 1001 121902 1219	600000	284.27

Columbia Bank's fraud detection efforts display good AfD-style principles:



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Putting it all together: Automated Fraud Detection Success

- ▣ Empowered Audit
- ▣ Legal compliance (which is easy!)
 - Multiple platforms
 - Monarch for importation
- ▣ Well designed tests using all available electronic data and especially report files (aka "spool" or "print" files)
- ▣ Validation before glorification (Remove false positives)
- ▣ Effective investigation
- ▣ **DETERMINATION TO SUCCEED**




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5th Annual
INTERNATIONAL FRAUD CONFERENCE
November 15-17, 2006



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