

# Appendix I: Additional Results from the Paper "Improving Classifier Utility by Altering the Misclassification Cost Ratio"

Michelle Ciraco, Michael Rogalewski and Gary Weiss

Department of Computer Science  
Fordham University  
Rose Hill Campus  
Bronx, New York 10458

{ciraco, rogalews, gweiss}@cis.fordham.edu

This appendix provides additional results for the paper "Improving Classifier Utility by Altering the Misclassification Cost Ratio". This appendix is written to be a companion to that paper and is not meant to be read stand-alone—the meanings of the terms used in the figures and tables are provided only in the body of the main paper. These results are all based on C5.0.

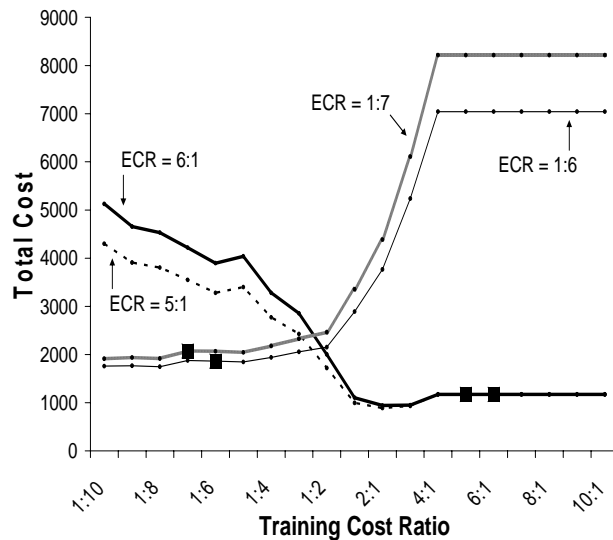


Figure A1: ECR Curves for the Letter-Vowel Data Set

Figure A1 shows four ECR curves for the Letter-Vowel data set. The TCR values that generate the lowest total cost are either 1:10 or 10:1. This occurs for every ECR.

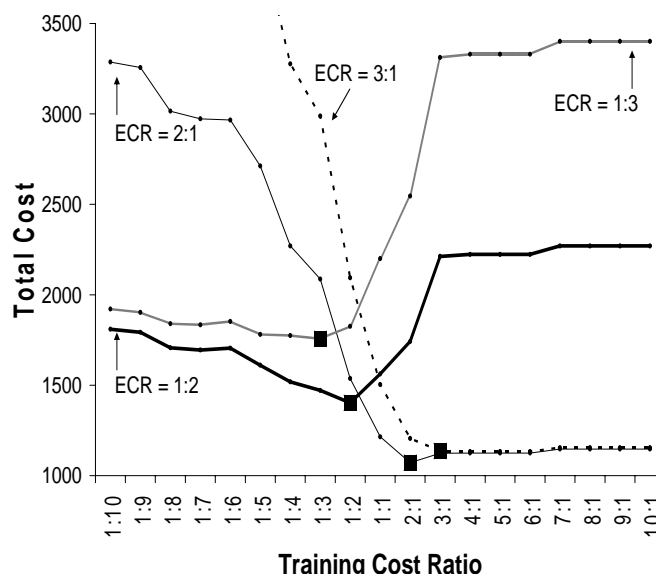


Figure A2: ECR Curves for the Adult Data Set

Figure A2 shows an example of four ECRs that generate lowest total costs if used as TCRs. Thus, for these the default strategy of setting the TCR to the ECR would perform well. Our TCR identification strategy came very close to predicting the best TCR to use, as can be seen from the hold out set effectiveness column in Table A2 in this appendix.

Table A1: Summary Statistics for the Cover-Type Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	141701	1:8	140760	1:6	140181	3	0.66%	1.07%
1:9	146611	1:8	137841	1:6	136132	3	5.98%	7.15%
1:8	134922	1:8	134922	1:6	132083	3	0.00%	2.10%
1:7	128722	1:8	132003	1:6	128034	3	-2.55%	0.53%
1:6	123985	1:8	129084	1:6	123985	3	-4.11%	0.00%
1:5	129794	1:8	126165	1:6	119936	7	2.80%	7.60%
1:4	155455	1:8	123246	1:2	112607	12	20.72%	27.56%
1:3	102481	1:8	120327	4:1	100349	18	-17.41%	2.08%
1:2	90241	1:8	117408	4:1	80758	19	-30.10%	10.51%
1:1	80804	9:1	102567	2:1	59704	15	-26.93%	26.11%
2:1	93677	9:1	197686	2:1	93677	14	-111.03%	0.00%
3:1	146308	9:1	292805	2:1	127650	14	-100.13%	12.75%
4:1	185895	9:1	387924	2:1	161623	14	-108.68%	13.06%
5:1	286160	9:1	483043	2:1	195596	14	-68.80%	31.65%
6:1	512408	9:1	578162	2:1	229569	14	-12.83%	55.20%
7:1	496889	9:1	673281	2:1	263542	14	-35.50%	46.96%
8:1	522957	9:1	768400	2:1	297515	14	-46.93%	43.11%
9:1	863519	9:1	863519	2:1	331488	14	0.00%	61.61%
10:1	701906	9:1	958638	2:1	365461	14	-36.58%	47.93%

Table A2: Summary Statistics for the Adult Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	2698	1:10	2698	1:9	2673	2	0.00%	0.93%
1:9	2563	1:10	2587	1:9	2563	2	-0.94%	0.00%
1:8	2505	1:9	2453	1:9	2453	1	2.08%	2.08%
1:7	2390	1:10	2365	1:9	2343	2	1.05%	1.97%
1:6	2297	1:10	2254	1:9	2233	3	1.87%	2.79%
1:5	2121	1:8	2106	1:8	2106	1	0.71%	0.71%
1:4	2031	1:5	1951	1:5	1951	1	3.94%	3.94%
1:3	1756	1:3	1756	1:3	1756	1	0.00%	0.00%
1:2	1403	1:3	1471	1:2	1403	2	-4.85%	0.00%
1:1	926	2:1	938	1:1	926	2	-1.30%	0.00%
2:1	1072	2:1	1072	2:1	1072	1	0.00%	0.00%
3:1	1136	3:1	1136	4:1, 5:1, 6:1	1134	2	0.00%	0.18%
4:1	1143	3:1	1148	4:1, 5:1, 6:1	1143	2	-0.44%	0.00%
5:1	1152	3:1	1160	4:1, 5:1, 6:1	1152	2	-0.69%	0.00%
6:1	1161	3:1	1172	4:1, 5:1, 6:1	1161	2	-0.95%	0.00%
7:1	1187	3:1	1184	4:1, 5:1, 6:1	1170	2	0.25%	1.43%
8:1	1195	3:1	1196	4:1, 5:1, 6:1	1179	3	-0.08%	1.34%
9:1	1203	3:1	1208	4:1, 5:1, 6:1	1188	3	-0.42%	1.25%
10:1	1211	10:1, 9:1, 8:1, 7:1	1211	4:1, 5:1, 6:1	1197	3	0.00%	1.16%

Table A3: Summary Statistics for the Coding Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	3664	1:10	3664	1:10	3664	1	0.00%	0.00%
1:9	3843	1:10	3501	1:10	3501	1	8.90%	8.90%
1:8	4052	1:10	3338	1:10	3338	1	17.62%	17.62%
1:7	3987	1:10	3175	1:10	3175	1	20.37%	20.37%
1:6	3782	1:10	3012	1:10	3012	1	20.36%	20.36%
1:5	4200	1:10	2849	1:10	2849	1	32.17%	32.17%
1:4	4153	1:10	2686	1:10	2686	1	35.32%	35.32%
1:3	3552	1:10	2523	1:10	2523	1	28.97%	28.97%
1:2	3229	1:6	2422	1:9	2359	5	24.99%	26.94%
1:1	2289	1:4	1972	1:3	1930	2	13.85%	15.68%
2:1	2926	1:1	2826	1:1	2826	1	3.42%	3.42%
3:1	3500	2:1	3136	2:1	3136	1	10.40%	10.40%
4:1	3500	2:1	3346	2:1	3346	1	4.40%	4.40%
5:1	3500	2:1 - 10:1	3500	2:1 - 10:1	3500	1	0.00%	0.00%
6:1	3500	2:1 - 10:1	3500	2:1 - 10:1	3500	1	0.00%	0.00%
7:1	3500	2:1 - 10:1	3500	2:1 - 10:1	3500	1	0.00%	0.00%
8:1	3500	2:1 - 10:1	3500	2:1 - 10:1	3500	1	0.00%	0.00%
9:1	3500	2:1 - 10:1	3500	2:1 - 10:1	3500	1	0.00%	0.00%
10:1	3500	2:1 - 10:1	3500	2:1 - 10:1	3500	1	0.00%	0.00%

Table A4: Summary Statistics for the Letter-Vowel Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	2379	1:10	2379	1:10	2379	1	0.00%	0.00%
1:9	2278	1:10	2224	1:10	2224	1	2.37%	2.37%
1:8	2087	1:10	2069	1:10	2069	1	0.86%	0.86%
1:7	2077	1:10	1914	1:10	1914	1	7.85%	7.85%
1:6	1863	1:10	1759	1:8	1747	2	5.58%	6.23%
1:5	1645	1:7	1675	1:8	1577	6	-1.82%	4.13%
1:4	1463	1:6	1447	1:8	1407	4	1.09%	3.83%
1:3	1244	1:2	1218	1:2	1218	1	2.09%	2.09%
1:2	906	1:2	906	1:2	906	1	0.00%	0.00%
1:1	571	1:2	594	1:1	571	2	-4.03%	0.00%
2:1	727	1:1	678	1:1	678	1	6.74%	6.74%
3:1	910	2:1	781	2:1	781	1	14.18%	14.18%
4:1	1174	2:1	835	2:1	835	1	28.88%	28.88%
5:1	1174	2:1	889	2:1	889	1	24.28%	24.28%
6:1	1174	2:1	943	2:1	943	1	19.68%	19.68%
7:1	1174	2:1	997	3:1	962	1	15.08%	18.06%
8:1	1174	2:1	1051	3:1	975	1	10.48%	16.95%
9:1	1174	2:1	1105	3:1	988	1	5.88%	15.84%
10:1	1174	2:1	1159	3:1	1001	1	1.28%	14.74%

Table A5: Summary Statistics for the Blackjack Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	2884	1:7, 1:6	2967	1:10 - 1:8	2884	2	-2.88%	0.00%
1:9	2884	1:7, 1:6	2932	1:10 - 1:8	2884	2	-1.66%	0.00%
1:8	2884	1:7 - 1:6	2897	1:10 - 1:8	2884	2	-0.45%	0.00%
1:7	2862	1:7, 1:6	2862	1:7, 1:6	2862	1	0.00%	0.00%
1:6	2827	1:7, 1:6	2827	1:7, 1:6	2827	1	0.00%	0.00%
1:5	2809	1:7, 1:6	2792	1:7, 1:6	2792	1	0.61%	0.61%
1:4	2773	1:4	2773	1:5	2734	3	0.00%	1.41%
1:3	2611	1:3	2611	1:3	2611	1	0.00%	0.00%
1:2	2183	1:2	2183	1:2	2183	1	0.00%	0.00%
1:1	1286	1:1	1286	1:1	1286	1	0.00%	0.00%
2:1	1370	2:1	1370	2:1	1370	1	0.00%	0.00%
3:1	1408	3:1 - 10:1	1408	2:1	1407	2	0.00%	0.07%
4:1	1408	3:1 - 10:1	1408	3:1 - 10:1	1408	1	0.00%	0.00%
5:1	1408	3:1 - 10:1	1408	3:1 - 10:1	1408	1	0.00%	0.00%
6:1	1408	3:1 - 10:1	1408	3:1 - 10:1	1408	1	0.00%	0.00%
7:1	1408	3:1 - 10:1	1408	3:1 - 10:1	1408	1	0.00%	0.00%
8:1	1408	3:1 - 10:1	1408	3:1 - 10:1	1408	1	0.00%	0.00%
9:1	1408	3:1 - 10:1	1408	3:1 - 10:1	1408	1	0.00%	0.00%
10:1	1408	3:1 - 10:1	1408	3:1 - 10:1	1408	1	0.00%	0.00%

Table A6: Summary Statistics for the Boa1 Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	16570	1:10 - 1:2	16570	1:1	7331	4	0.00%	55.76%
1:9	14913	1:10 - 1:2	14913	1:1	6666	4	0.00%	55.30%
1:8	13256	1:10 - 1:2	13256	1:1	6001	4	0.00%	54.73%
1:7	11599	1:10 - 1:2	11599	1:1	5336	4	0.00%	54.00%
1:6	9942	1:10 - 1:2	9942	1:1	4671	4	0.00%	53.02%
1:5	8285	1:10 - 1:2	8285	1:1	4006	4	0.00%	51.65%
1:4	6628	1:10 - 1:2	6628	1:1	3341	4	0.00%	49.59%
1:3	4971	1:10 - 1:2	4971	1:1	2676	2	0.00%	46.17%
1:2	3314	1:10 - 1:2	3314	1:1	2011	3	0.00%	39.32%
1:1	1346	1:1	1346	1:1	1346	1	0.00%	0.00%
2:1	1632	2:1	1632	2:1	1632	1	0.00%	0.00%
3:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%
4:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%
5:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%
6:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%
7:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%
8:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%
9:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%
10:1	1643	3:1 - 10:1	1643	3:1 - 10:1	1643	1	0.00%	0.00%

Table A7: Summary Statistics for the Mushroom Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	287	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
1:9	281	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
1:8	281	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
1:7	281	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
1:6	281	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
1:5	1405	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
1:4	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
1:3	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
1:2	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
1:1	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
2:1	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
3:1	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
4:1	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
5:1	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
6:1	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
7:1	0	1:4 - 7:1	0	1:4 - 7:1	0	1	0.00%	0.00%
8:1	5	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
9:1	5	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%
10:1	5	1:4 - 7:1	0	1:4 - 7:1	0	1	100.00%	100.00%

Table A8: Summary Statistics for the Weather Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	1008	1:10	1008	1:9, 1:6	1002	3	0.00%	0.60%
1:9	966	1:10	981	1:9	966	5	-1.55%	0.00%
1:8	939	1:10	954	1:9	930	5	-1.60%	0.96%
1:7	913	1:10	927	1:9	894	5	-1.53%	2.08%
1:6	862	1:10	900	1:9	858	5	-4.41%	0.46%
1:5	873	1:9	822	1:9	822	1	5.84%	5.84%
1:4	835	1:8	787	1:9	786	2	5.75%	5.87%
1:3	756	1:8	749	1:2	736	3	0.93%	2.65%
1:2	606	1:2	606	1:2	606	1	0.00%	0.00%
1:1	475	1:1	475	2:1	463	2	0.00%	2.53%
2:1	570	2:1	570	3:1	559	1	0.00%	1.93%
3:1	605	4:1	638	3:1	605	2	-5.45%	0.00%
4:1	653	5:1 - 7:1	661	3:1	651	3	-1.23%	0.31%
5:1	688	8:1 - 10:1	684	4:1 - 7:1	668	2	0.58%	2.91%
6:1	675	8:1 - 10:1	684	4:1 - 7:1	675	3	-1.33%	0.00%
7:1	682	8:1 - 10:1	684	4:1 - 7:1	682	2	-0.29%	0.00%
8:1	684	8:1 - 10:1	684	8:1 - 10:1	684	1	0.00%	0.00%
9:1	684	8:1 - 10:1	684	8:1 - 10:1	684	1	0.00%	0.00%
10:1	684	8:1 - 10:1	684	8:1 - 10:1	684	1	0.00%	0.00%

Table A9: Summary Statistics for the Network1 Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	919	1:9	880	1:9	880	1	4.24%	4.24%
1:9	840	1:9	840	1:9	840	1	0.00%	0.00%
1:8	870	1:9	800	1:9	800	1	8.05%	8.05%
1:7	820	1:9	760	1:9	760	1	7.32%	7.32%
1:6	731	1:9	720	1:9	720	1	1.50%	1.50%
1:5	703	1:9	680	1:7	636	4	3.27%	9.53%
1:4	599	1:8	602	1:7	544	5	-0.50%	9.18%
1:3	516	1:7	452	1:7, 1:6	452	1	12.40%	12.40%
1:2	426	1:2	351	1:2	351	1	17.61%	17.61%
1:1	230	4:1	222	4:1	222	1	3.48%	3.48%
2:1	291	7:1 - 10:1	233	4:1	223	2	19.93%	23.37%
3:1	265	7:1 - 10:1	233	4:1	224	2	12.08%	15.47%
4:1	225	7:1 - 10:1	233	4:1	225	2	-3.56%	0.00%
5:1	252	7:1 - 10:1	233	4:1	226	2	7.54%	10.32%
6:1	256	7:1 - 10:1	233	4:1	227	2	8.98%	11.33%
7:1	233	7:1 - 10:1	233	4:1	228	2	0.00%	2.15%
8:1	233	7:1 - 10:1	233	4:1	229	2	0.00%	1.72%
9:1	233	7:1 - 10:1	233	4:1	230	2	0.00%	1.29%
10:1	233	7:1 - 10:1	233	4:1	231	2	0.00%	0.86%

Table A10: Summary Statistics for the Splice-Junction Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	147	1:6	191	1:10 - 1:7	147	4	-29.93%	0.00%
1:9	140	1:6	177	1:10 - 1:7	140	4	-26.43%	0.00%
1:8	133	1:6	163	1:10 - 1:7	133	4	-22.56%	0.00%
1:7	126	1:6	149	1:10 - 1:7	126	4	-18.25%	0.00%
1:6	135	1:6	135	1:10 - 1:7	119	4	0.00%	11.85%
1:5	119	1:6	121	1:10 - 1:7	112	4	-1.68%	5.88%
1:4	103	1:6	107	1:4	103	3	-3.88%	0.00%
1:3	98	1:4	89	2:1	88	2	9.18%	10.20%
1:2	78	1:4	75	2:1	64	2	3.85%	17.95%
1:1	58	2:1	40	2:1	40	1	31.03%	31.03%
2:1	56	2:1	56	2:1	56	1	0.00%	0.00%
3:1	92	2:1	72	2:1	72	1	21.74%	21.74%
4:1	104	2:1	88	2:1	88	1	15.38%	15.38%
5:1	118	3:1	122	2:1	104	4	-3.39%	11.86%
6:1	130	3:1	137	2:1	120	4	-5.38%	7.69%
7:1	146	3:1	152	2:1	136	4	-4.11%	6.85%
8:1	240	3:1	167	2:1	152	5	30.42%	36.67%
9:1	240	3:1	182	7:1	164	5	24.17%	31.67%
10:1	240	3:1	197	7:1	173	5	17.92%	27.92%

Table A11: Summary Statistics for the Move Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	751	1:10 - 1:3	751	1:1	592	6	0.00%	21.17%
1:9	751	1:10 - 1:3	751	1:1	568	6	0.00%	24.37%
1:8	751	1:10 - 1:3	751	1:1	544	8	0.00%	27.56%
1:7	751	1:10 - 1:3	751	1:1	520	8	0.00%	30.76%
1:6	751	1:10 - 1:3	751	4:1	471	11	0.00%	37.28%
1:5	751	1:10 - 1:3	751	4:1	407	12	0.00%	45.81%
1:4	751	1:10 - 1:3	751	4:1	343	12	0.00%	54.33%
1:3	751	1:10 - 1:3	751	4:1	279	12	0.00%	62.85%
1:2	751	1:10 - 1:2	751	4:1	215	11	0.00%	71.37%
1:1	376	2:1	250	4:1	151	9	33.51%	59.84%
2:1	450	3:1	287	9:1	194	4	36.22%	56.89%
3:1	399	4:1	325	9:1	232	7	18.55%	41.85%
4:1	412	4:1	412	9:1	270	7	0.00%	34.47%
5:1	475	4:1	499	9:1	308	7	-5.05%	35.16%
6:1	552	4:1	586	9:1	346	7	-6.16%	37.32%
7:1	565	8:1	429	9:1	384	3	24.07%	32.04%
8:1	475	8:1	475	9:1	422	3	0.00%	11.16%
9:1	460	8:1	521	9:1	460	3	-13.26%	0.00%
10:1	500	8:1	567	9:1	498	3	-13.40%	0.40%

Table A12: Summary Statistics for the OCR1 Data Set

ECR	Default Strategy (TCR=ECR)	TCR Identification (Best hold out TCR)		Omniscient (Best test set TCR)		Hold Out Set Effectiveness	% Relative Savings (vs. Default Strategy)	
	Cost	TCR	Cost	TCR	Cost		TCR Identification	Omniscient
1:10	103	1:5	56	1:4	40	3	45.63%	61.17%
1:9	103	1:5	56	1:4	40	3	45.63%	61.17%
1:8	69	1:5	56	1:4	40	3	18.84%	42.03%
1:7	69	1:5	56	1:4	40	3	18.84%	42.03%
1:6	51	1:5	56	1:4	40	3	-9.80%	21.57%
1:5	56	1:5	56	1:4	40	3	0.00%	28.57%
1:4	40	1:5	56	1:4	40	3	-40.00%	0.00%
1:3	51	1:5	56	1:4	40	3	-9.80%	21.57%
1:2	66	1:5	56	1:4	40	3	15.15%	39.39%
1:1	57	1:4, 1:5	40	1:4	40	1	29.82%	29.82%
2:1	176	1:4	80	1:4	80	1	54.55%	54.55%
3:1	198	1:4	120	1:4	120	1	39.39%	39.39%
4:1	224	1:4	160	1:4	160	1	28.57%	28.57%
5:1	290	1:4	200	1:4	200	1	31.03%	31.03%
6:1	348	1:4	240	1:4	240	1	31.03%	31.03%
7:1	413	1:4	280	1:4	280	1	32.20%	32.20%
8:1	472	1:4	320	1:4	320	1	32.20%	32.20%
9:1	531	1:4	360	1:4	360	1	32.20%	32.20%
10:1	780	1:4	400	1:4	400	1	48.72%	48.72%