

Appendix A : Outliers

First I measure the cook's distance of my models. Observations that have a cook's distance greater than 4 times the mean are considered as influential and are summarized in figures 1, 2 and 3.

X	Companies	Year	Ticker	Date	Ra	Beta	AlphaJensen
678	678	32	2015	APA	2015-12-01	-0.10067229	1.203229
-0.04402664	1.795195	-0.005170913	ROA	TobinsQ	ROE	EnergyProductivity	CarbonProductivity
678	-0.72	0.93	-1.62	0.00	0.04	882	0.06
1.40	0.60	0.08	0.09	WaterProductivity	WasteProductivity	SustainabilityPayLink	
678	0.00	0.00	1	882	0.05	0.04	1
SustainableThemedCommitment	AuditScore	FirmSize	Leverage	NetMargin			
678	0	1	10.28	3.54	-3.63	882	1
9.99	5.22	8.62	Industry	678	3	882	1
X	Companies	Year	Ticker	Date	Ra	Beta	
175	175	156	2013	FNMA	2013-12-01	0.127380439	3.5172763
176	176	156	2014	FNMA	2014-12-01	-0.169292057	3.5172763
177	177	156	2015	FNMA	2015-12-01	-0.242467824	3.5172763
193	193	161	2013	GILD	2013-12-01	0.003869318	0.4916288
232	232	174	2013	HIG	2013-12-01	0.016699218	1.7347533
370	370	22	2013	ALL	2013-12-01	0.004962791	0.8037314
AlphaJensen	ROA	TobinsQ	ROE	EnergyProductivity	CarbonProductivity	175	
0.028544976	0.03	1.03	-0.73	0.00	0.00	176	-0.167181691
0.00	1.03	-0.11	0.00	0.00	177	-0.166242929	0.00
1.03	-0.08	0.00	0.00	193	-0.009945452	0.14	5.25
0.28	0.88	0.83	232	-0.032047350	0.00	0.05	0.01
0.12	0.29	370	-0.017622060	0.09	0.19	0.11	0.19
0.21	WaterProductivity	WasteProductivity	SustainabilityPayLink	175	0.00	0.00	0
176	0.00	0.00	0	177	0.00	0.00	0
193	0.00	0.00	0	232	0.04	0.00	1
370	0.31	0.72	0	SustainableThemedCommitment	AuditScore	FirmSize	Leverage
NetMargin	175	0	0	12.51	339.01	-0.05	176
0	0	0	12.51	875.59	-0.05	177	0
0	12.51	793.47	-0.01	193	0	0	10.35
0.35	0.27	232	1	11.44	0.33	0.01	370
1	11.09	0.03	0.16	Industry	175	4	
176	4	177	4	193	5	232	4
370	4	X	Companies	Year	Ticker	Date	Ra
Beta	43	43	111	2013	DAL	2013-12-01	-0.053511418
0.5077983	175	175	156	2013	FNMA	2013-12-01	0.127380439
3.5172763	176	176	156	2014	FNMA	2014-12-01	-0.169292057
3.5172763	177	177	156	2015	FNMA	2015-12-01	-0.242467824
3.5172763	336	336	207	2015	KMB	2015-12-01	0.073454769
0.3380209	360	360	215	2015	LB	2015-12-01	0.004287896
1.4092611	AlphaJensen	ROA	TobinsQ	ROE	EnergyProductivity	CarbonProductivity	43
-0.06778055	0.22	NA	2.22	0.12	0.30	175	0.02854498
0.03	1.03	-0.73	0.00	0.00	176	-0.16718169	0.00
1.03	-0.11	0.00	0.00	177	-0.16624293	0.00	1.03
-0.08	0.00	0.00	336	0.08068982	0.11	3.57	3.65
0.03	0.02	360	0.03476886	0.11	4.00	-2.54	0.00
0.06	WaterProductivity	WasteProductivity	SustainabilityPayLink	43	0.89	0.77	1
175	0.00	0.00	0	176	0.00	0.00	0
177	0.00	0.00	0	336	0.02	0.01	1
360	0.00	0.00	1	SustainableThemedCommitment	AuditScore	FirmSize	Leverage
NetMargin	43	1	1	10.72	0.84	0.28	175
0	0	12.51	339.01	-0.05	176	0	0
12.51	875.59	-0.05	177	0	0	12.51	793.47
-0.01	336	1	1	10.17	8.57	0.19	360
0	1	9.90	-8.76	0.07	Industry	43	6
175	4	176	4	177	4	336	2
360	1	X	Companies	Year	Ticker	Date	Ra
Beta	90	90	128	2015	DVN	2015-12-01	-0.35634138
0.7596914	-0.33995607	148	148	147	2013	F	2013-12-01
-0.10159447	1.5436844	-0.14497201	175	175	156	2013	FNMA
2013-12-01	0.12738044	3.5172763	0.02854498	176	176	156	2014
FNMA	2014-12-01	-0.16929206	3.5172763	-0.16718169	177	177	156
2015	FNMA	2015-12-01	-0.24246782	3.5172763	-0.16624293	380	380
222	2014	LNG	2014-12-01	0.06469011	1.3808854	0.06551864	ROA
TobinsQ	ROE	EnergyProductivity	CarbonProductivity	90	-0.39	0.84	-1.01
0.00	0.08	148	0.04	0.40	0.34	0.57	0.35
175	0.03	1.03	-0.73	0.00	0.00	176	0.00
1.03	-0.11	0.00	0.00	177	0.00	1.03	-0.08
0.00	0.00	380	-0.05	1.94	3.55	0.00	0.00
WaterProductivity	WasteProductivity	SustainabilityPayLink	90	0.08	0.00	1	148
0.70	0.65	1	175	0.00	0.00	0	176
0.00	0.00	0	177	0.00	0.00	0	380
0.00	0	SustainableThemedCommitment	AuditScore	FirmSize	Leverage	NetMargin	90
1	1	10.47	1.72	0.08	148	1	0
11.31	4.35	0.05	175	0	0	12.51	339.01
-0.05	176	0	0	12.51	875.59	-0.05	177
0	0	12.51	793.47	-0.01	380	0	0
10.10	-59.73	-2.04	Industry	90	3	148	1
175	4	176	4	177	4	380	3
X	Companies	Year	Ticker	Date	Ra	Beta	
AlphaJensen	175	175	156	2013	FNMA	2013-12-01	0.12738044
3.5172763	0.02854498	176	176	156	2014	FNMA	2014-12-01
-0.16929206	3.5172763	-0.16718169	177	177	156	2015	FNMA
2015-12-01	-0.24246782	3.5172763	-0.16624293	379	379	222	2013
LNG	2013-12-01	0.08541034	1.3808854	0.04660746	381	381	222
2015	LNG	2015-12-01	-0.24412982	1.3808854	-0.21426461	477	477
255	2015	MRO	2015-12-01	-0.32986932	0.9159572	-0.31009305	ROA
TobinsQ	ROE	EnergyProductivity	CarbonProductivity	175	0.03	1.03	-0.73
0.00	0.00	176	0.00	1.03	-0.11	0.00	0.00
177	0.00	1.03	-0.08	0.00	0.00	379	-0.07
1.60	-1.47	0.00	0.00	381	-0.06	1.28	2.17
0.00	0.01	477	0.04	0.46	0.10	0.03	0.05
WaterProductivity	WasteProductivity	SustainabilityPayLink	175	0	0	0	176
0	0	177	0	0	0	379	0
0	0	381	0	0	0	477	0
1	SustainableThemedCommitment	AuditScore	FirmSize	Leverage	NetMargin	175	0
0	12.51	339.01	-0.05	176	0	0	12.51
875.59	-0.05	177	0	0	12.51	793.47	-0.01
379	0	0	9.99	36.60	-1.90	381	0
0	10.27	-18.40	-3.60	477	1	0	10.51
0.59	0.11	Industry	175	4	176	4	177
4	379	3	381	3	477	3	

Table 1: Model 1 - Energy

	<i>Dependent variable:</i>	
	ROA	
	(1)	(2)
SustainabilityPayLink	0.0003 (0.005)	0.001 (0.004)
SustainableThemedCommitment	0.008 (0.005)	0.011** (0.004)
AuditScore	-0.004 (0.005)	-0.002 (0.004)
CarbonProductivity	-0.024 (0.017)	-0.021 (0.013)
EnergyProductivity	0.013 (0.015)	0.007 (0.011)
WaterProductivity	0.031** (0.012)	0.025*** (0.009)
WasteProductivity	0.003 (0.012)	0.005 (0.009)
Leverage	-0.00001 (0.00004)	-0.00001 (0.00003)
NetMargin	0.057*** (0.004)	0.167*** (0.008)
FirmSize	-0.029*** (0.005)	-0.036*** (0.004)
Industry	-0.003** (0.001)	-0.003*** (0.001)
Beta	-0.006 (0.005)	-0.003 (0.005)
Constant	0.370*** (0.048)	0.427*** (0.043)
Observations	1,077	1,075
R ²	0.180	0.340
Adjusted R ²	0.170	0.333
F Statistic	19.408*** (df = 12; 1064)	45.615*** (df = 12; 1062)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 2: Model 1 - No Energy

	<i>Dependent variable:</i>	
	ROA	
	(1)	(2)
SustainabilityPayLink	0.00001 (0.005)	0.0004 (0.004)
SustainableThemedCommitment	0.009 (0.005)	0.012*** (0.004)
AuditScore	-0.004 (0.005)	-0.002 (0.004)
CarbonProductivity	-0.012 (0.011)	-0.015* (0.008)
WaterProductivity	0.033*** (0.012)	0.026*** (0.009)
WasteProductivity	0.002 (0.012)	0.004 (0.009)
Leverage	-0.00000 (0.00004)	-0.00001 (0.00003)
NetMargin	0.057*** (0.004)	0.167*** (0.008)
FirmSize	-0.029*** (0.005)	-0.036*** (0.004)
Industry	-0.003** (0.001)	-0.003*** (0.001)
Beta	-0.006 (0.005)	-0.003 (0.005)
Constant	0.371*** (0.047)	0.428*** (0.042)
Observations	1,077	1,075
R ²	0.179	0.340
Adjusted R ²	0.171	0.333
F Statistic	21.121*** (df = 11; 1065)	49.749*** (df = 11; 1063)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 3: Model 1 - Short Version

	<i>Dependent variable:</i>
	ROA
SustainabilityPayLink	−0.0003 (0.003)
SustainableThemedCommitment	0.012*** (0.004)
AuditScore	−0.001 (0.004)
Leverage	−0.00001 (0.00003)
NetMargin	0.169*** (0.008)
FirmSize	−0.036*** (0.004)
Industry	−0.003*** (0.001)
Beta	−0.003 (0.005)
Constant	0.427*** (0.043)
Observations	1,075
R ²	0.332
Adjusted R ²	0.327
F Statistic	66.110*** (df = 8; 1066)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table 4: Model 1 - Short Version

	<i>Dependent variable:</i>
	ROA
CarbonProductivity	−0.015* (0.008)
WaterProductivity	0.027*** (0.009)
WasteProductivity	0.004 (0.009)
Leverage	−0.00001 (0.00003)
NetMargin	0.167*** (0.008)
FirmSize	−0.034*** (0.004)
Industry	−0.003*** (0.001)
Beta	−0.003 (0.005)
Constant	0.413*** (0.042)
Observations	1,075
R ²	0.335
Adjusted R ²	0.330
F Statistic	67.112*** (df = 8; 1066)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table 5: Model 2 - Comparaison with and without outliers

	<i>Dependent variable:</i>	
	log(TobinsQ)	
	(1)	(2)
SustainabilityPayLink	0.038 (0.025)	0.041 (0.025)
SustainableThemedCommitment	0.064* (0.035)	0.069** (0.035)
AuditScore	0.070** (0.035)	0.080** (0.035)
CarbonProductivity	-0.037 (0.055)	-0.054 (0.057)
WaterProductivity	0.064 (0.060)	0.076 (0.062)
WasteProductivity	-0.164*** (0.059)	-0.165*** (0.063)
Leverage	0.0001 (0.0002)	-0.002 (0.002)
NetMargin	0.008 (0.022)	0.077* (0.042)
FirmSize	-0.959*** (0.051)	-0.997*** (0.051)
Industry	-0.029** (0.012)	-0.030** (0.012)
Beta	-0.189*** (0.062)	-0.251*** (0.062)
Constant	10.425*** (0.521)	10.868*** (0.525)
Observations	1,002	986
R ²	0.294	0.312
Adjusted R ²	0.287	0.304
F Statistic	37.548*** (df = 11; 990)	40.175*** (df = 11; 974)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 6: Model 3 - Comparaison with and without outliers

	<i>Dependent variable:</i>	
	ROE	
	(1)	(2)
SustainabilityPayLink	0.006 (0.030)	0.009 (0.016)
SustainableThemedCommitment	0.142*** (0.036)	0.068*** (0.021)
AuditScore	0.007 (0.036)	−0.001 (0.020)
CarbonProductivity	−0.104 (0.071)	−0.059 (0.038)
WaterProductivity	0.085 (0.080)	0.047 (0.043)
WasteProductivity	0.075 (0.079)	0.010 (0.042)
Leverage	0.003*** (0.0003)	−0.008*** (0.001)
NetMargin	0.115*** (0.029)	0.526*** (0.043)
FirmSize	−0.104*** (0.032)	−0.058*** (0.019)
Industry	−0.006 (0.007)	−0.002 (0.004)
Beta	−0.097*** (0.037)	−0.026 (0.023)
Constant	1.291*** (0.327)	0.734*** (0.197)
Observations	1,077	1,061
R ²	0.137	0.157
Adjusted R ²	0.128	0.148
F Statistic	15.375*** (df = 11; 1065)	17.761*** (df = 11; 1049)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 7: Model 4 - Comparaison with and without outliers

	<i>Dependent variable:</i>	
	AlphaJensen	
	(1)	(2)
SustainabilityPayLink	−0.0002 (0.004)	−0.001 (0.004)
SustainableThemedCommitment	0.002 (0.004)	0.003 (0.004)
AuditScore	0.003 (0.004)	0.003 (0.004)
CarbonProductivity	−0.006 (0.012)	−0.010 (0.011)
WaterProductivity	−0.004 (0.014)	−0.0005 (0.012)
WasteProductivity	0.002 (0.014)	−0.003 (0.012)
Leverage	−0.0001*** (0.00004)	−0.0002 (0.0003)
NetMargin	0.016*** (0.005)	0.023*** (0.008)
FirmSize	−0.002 (0.003)	−0.002 (0.003)
Industry	0.001* (0.001)	0.0004 (0.001)
Beta	−0.008** (0.003)	−0.006** (0.003)
Constant	0.025 (0.031)	0.027 (0.027)
Observations	1,077	1,059
R ²	0.032	0.017
Adjusted R ²	0.022	0.007
F Statistic	3.160*** (df = 11; 1065)	1.656* (df = 11; 1047)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 8: Model 5 - Comparaison with and without outliers

	<i>Dependent variable:</i>	
	Ra	
	(1)	(2)
SustainabilityPayLink	−0.007 (0.004)	−0.007* (0.004)
SustainableThemedCommitment	−0.0001 (0.004)	0.0002 (0.004)
AuditScore	−0.002 (0.004)	−0.002 (0.004)
CarbonProductivity	0.036*** (0.013)	0.035*** (0.012)
WaterProductivity	0.011 (0.015)	0.005 (0.014)
WasteProductivity	0.016 (0.015)	0.015 (0.013)
Leverage	−0.0001*** (0.00004)	−0.0004 (0.0003)
NetMargin	0.015*** (0.005)	0.023*** (0.009)
FirmSize	−0.001 (0.003)	−0.002 (0.003)
Industry	0.001 (0.001)	0.0003 (0.001)
Beta	−0.007* (0.003)	−0.004 (0.003)
Constant	0.013 (0.033)	0.021 (0.030)
Observations	1,077	1,062
R ²	0.053	0.042
Adjusted R ²	0.043	0.032
F Statistic	5.449*** (df = 11; 1065)	4.199*** (df = 11; 1050)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 9: Hausman Test PValue

Model	P-Value
Model 1 without outliers	0.0014
Model 2 without outliers	0.9996
Model 3 without outliers	0
Model 4 without outliers	0.8568
Model 5 without outliers	0.2283

Table 10: Fixed Effect Model - NoOutlier NoEnergy (1/2)

	<i>Dependent variable:</i>		
	ROA (1)	log(TobinsQ) (2)	ROE (3)
SustainabilityPayLink	−0.002 (0.004)	0.035 (0.026)	−0.007 (0.019)
SustainableThemedCommitment	0.019*** (0.006)	0.064 (0.039)	0.052* (0.029)
AuditScore	−0.001 (0.006)	0.049 (0.039)	−0.010 (0.029)
CarbonProductivity	−0.018** (0.009)	−0.064 (0.057)	−0.089** (0.040)
WaterProductivity	0.026*** (0.010)	0.066 (0.062)	0.050 (0.044)
WasteProductivity	0.005 (0.009)	−0.171*** (0.063)	−0.001 (0.043)
Leverage	−0.00003 (0.00003)	−0.002 (0.002)	−0.009*** (0.002)
NetMargin	0.181*** (0.009)	0.061 (0.043)	0.521*** (0.047)
FirmSize	−0.019** (0.009)	−0.863*** (0.095)	−0.045 (0.042)
Observations	1,075	986	1,061
R ²	0.380	0.145	0.181
Adjusted R ²	0.058	−0.314	−0.247
F Statistic	48.134*** (df = 9; 707)	12.062*** (df = 9; 641)	17.116*** (df = 9; 696)

Note:

*p<0.1; **p<0.05; ***p<0.01

Table 11: Fixed Effect Model - NoOutlier NoEnergy (2/2)

	<i>Dependent variable:</i>	
	AlphaJensen	Ra
	(1)	(2)
SustainabilityPayLink	−0.001 (0.007)	−0.013* (0.008)
SustainableThemedCommitment	0.008 (0.011)	0.002 (0.012)
AuditScore	−0.002 (0.011)	−0.016 (0.012)
CarbonProductivity	−0.007 (0.015)	0.045*** (0.017)
WaterProductivity	−0.002 (0.017)	0.008 (0.019)
WasteProductivity	−0.008 (0.016)	0.008 (0.018)
Leverage	−0.001* (0.001)	−0.001 (0.001)
NetMargin	0.017 (0.014)	0.024 (0.015)
FirmSize	0.014 (0.016)	−0.001 (0.018)
Observations	1,059	1,062
R ²	0.013	0.066
Adjusted R ²	−0.509	−0.427
F Statistic	1.013 (df = 9; 692)	5.413*** (df = 9; 695)

Note:

*p<0.1; **p<0.05; ***p<0.01

Figure 1: Observations considered as outliers in model 1 (i.e. Roa)

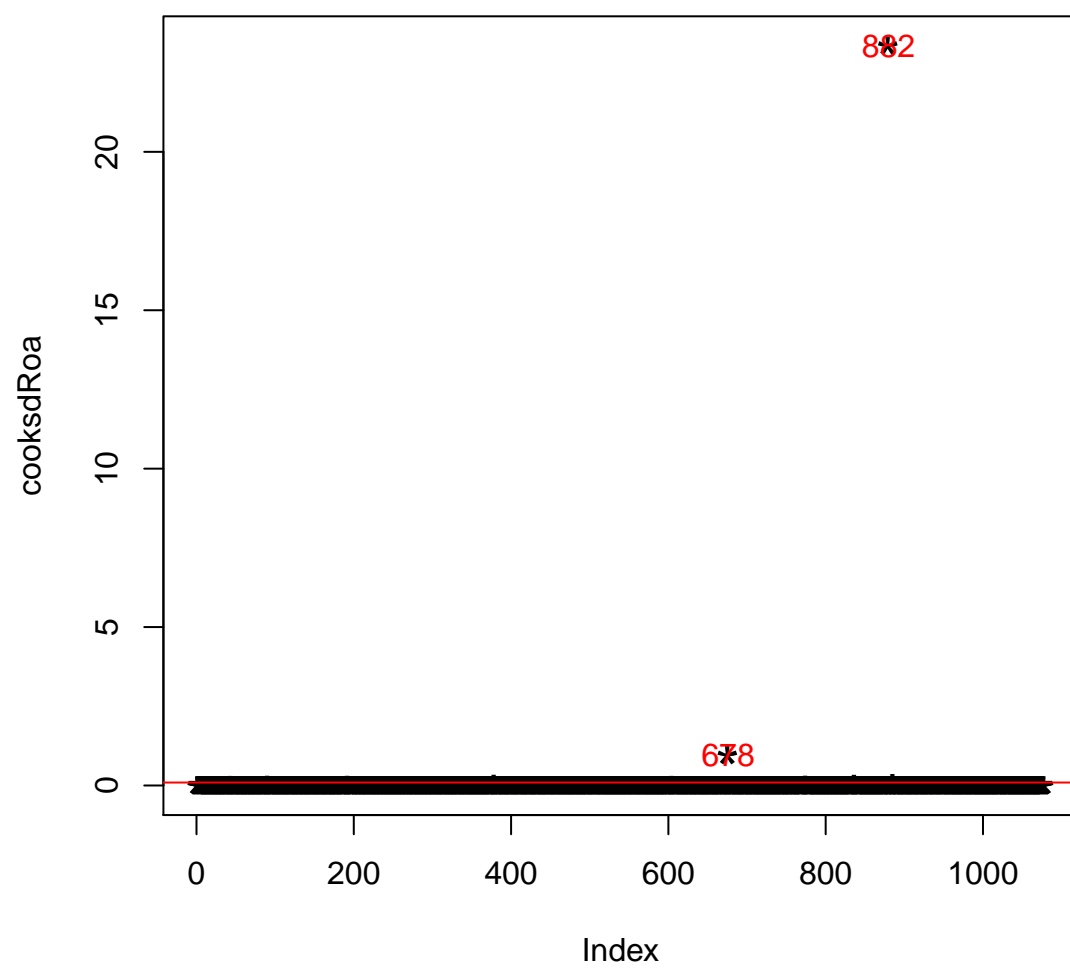


Figure 2: Observations considered as outliers in model 2 (i.e. Tobin's Q)

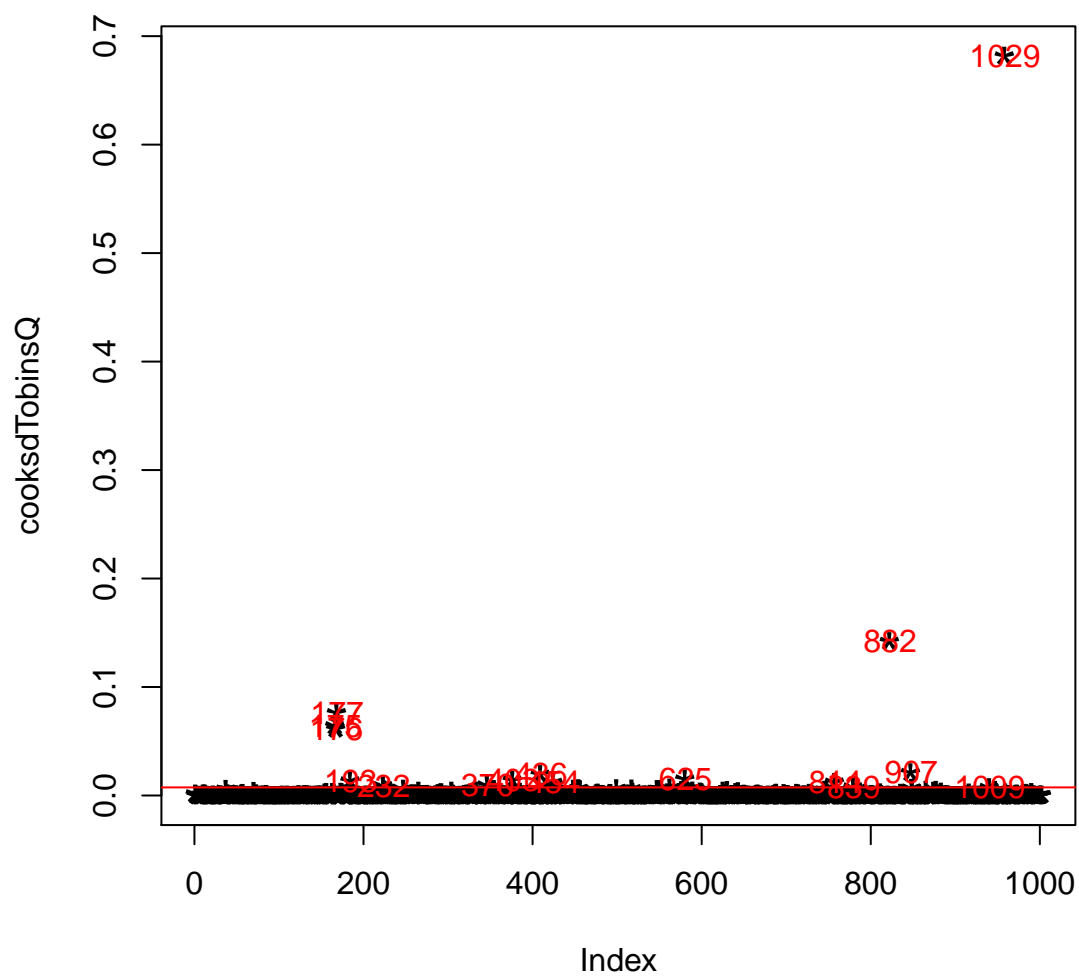


Figure 3: Observations considered as outliers in model 1 (i.e. Roe)

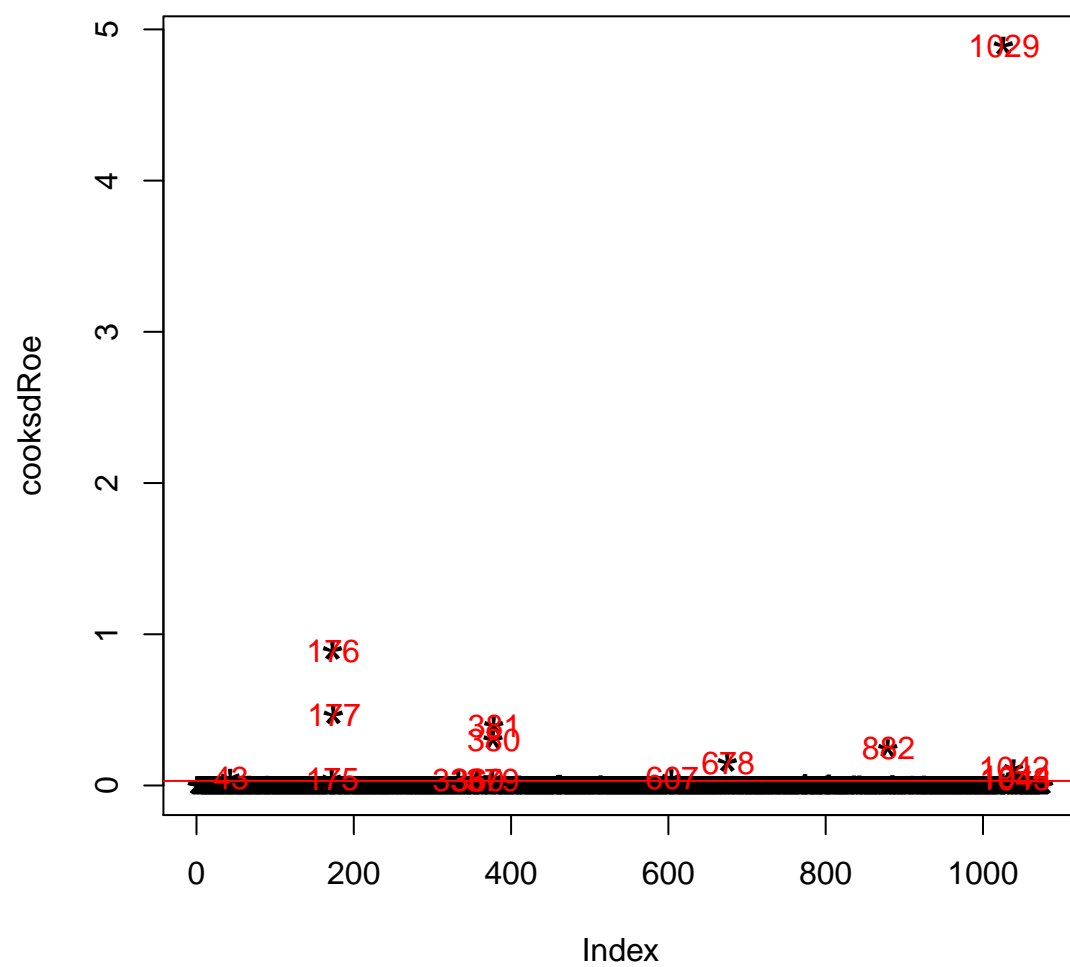


Figure 4: Observations considered as outliers in model 4 (i.e. Jensen's Alpha)

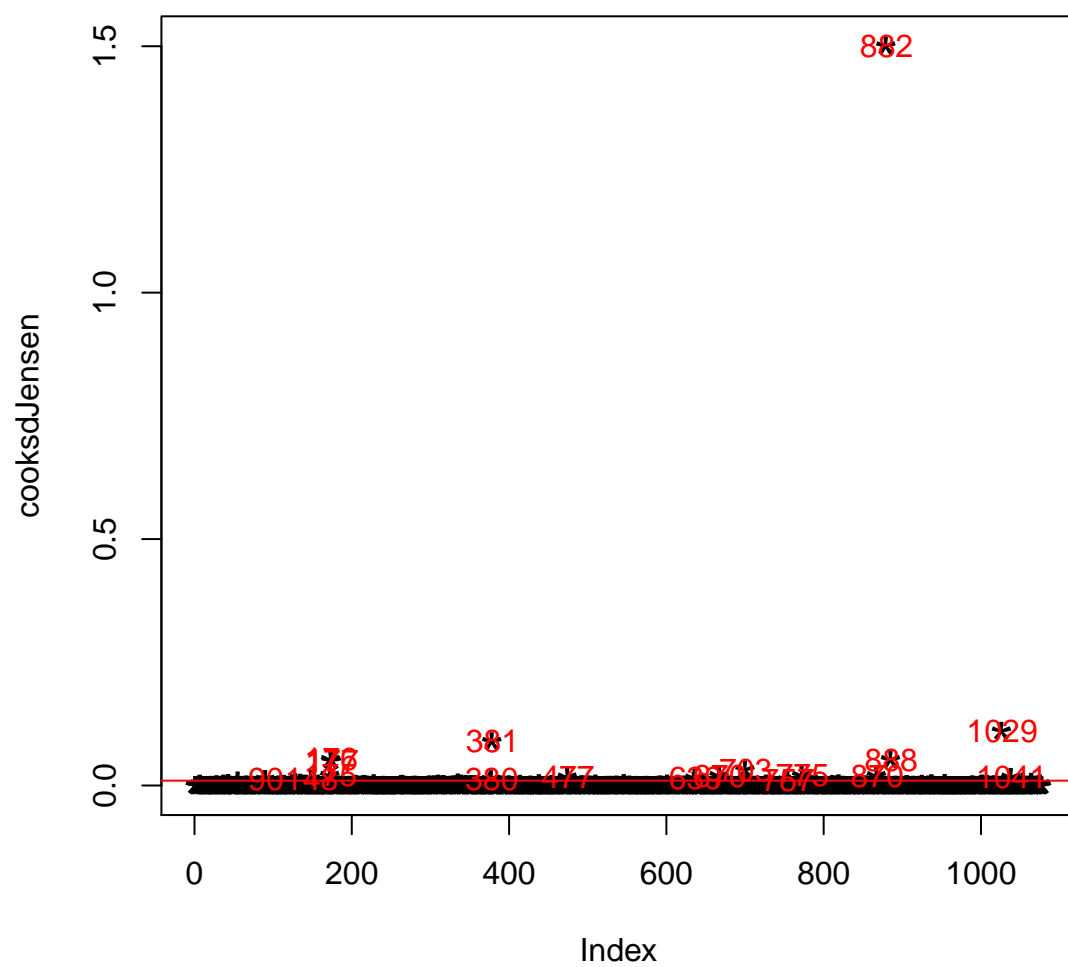


Figure 5: Observations considered as outliers in model 5 (i.e.Compounded Returns)

