

Obs	id	assets	sector	nation	interlocks	assets2	xlx	lassets2
1	1	147670	BNK	CAN	87	147.670	737.609	4.99498
2	2	133000	BNK	CAN	107	133.000	650.416	4.89035
3	3	113230	BNK	CAN	94	113.230	535.512	4.72942
4	4	85418	BNK	CAN	48	85.418	379.901	4.44756
5	5	75477	BNK	CAN	66	75.477	326.350	4.32383
6	6	40742	FIN	CAN	69	40.742	151.041	3.70726
7	7	40140	TRN	CAN	46	40.140	148.212	3.69237
8	8	26866	BNK	CAN	16	26.866	88.412	3.29086
9	9	24500	TRN	CAN	77	24.500	78.367	3.19867
10	10	23700	MIN	US	6	23.700	75.022	3.16548

The GENMOD Procedure

Model Information	
Data Set	WORK.ORNSTEIN
Distribution	Poisson
Link Function	Log
Dependent Variable	interlocks

Number of Observations Read	248
Number of Observations Used	248

Class Level Information		
Class	Levels	Values
sector	10	AGR BNK CON FIN HLD MAN MER MIN TRN WOD
nation	4	CAN OTH UK US

Criteria For Assessing Goodness Of Fit			
Criterion	DF	Value	Value/DF
Deviance	234	1887.4021	8.0658
Scaled Deviance	234	237.5975	1.0154
Pearson Chi-Square	234	1858.8250	7.9437
Scaled Pearson X2	234	234.0000	1.0000
Log Likelihood		798.4598	
Full Log Likelihood		-175.3227	
AIC (smaller is better)		378.6454	
AICC (smaller is better)		380.4480	
BIC (smaller is better)		427.8334	

Algorithm converged.

The GENMOD Procedure

Analysis Of Maximum Likelihood Parameter Estimates								
Parameter		DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept		1	2.2102	0.1934	1.8311	2.5893	130.60	<.0001
sector	AGR	1	-0.7116	0.2123	-1.1276	-0.2955	11.23	0.0008
sector	BNK	1	-1.1207	0.4433	-1.9896	-0.2518	6.39	0.0115
sector	CON	1	-1.3311	0.6005	-2.5081	-0.1541	4.91	0.0266
sector	FIN	1	-0.0346	0.2060	-0.4384	0.3693	0.03	0.8667
sector	HLD	1	-0.5031	0.3426	-1.1745	0.1683	2.16	0.1419
sector	MAN	1	-0.6590	0.2234	-1.0968	-0.2211	8.70	0.0032
sector	MER	1	-0.5339	0.2542	-1.0320	-0.0357	4.41	0.0357
sector	MIN	1	-0.0905	0.1988	-0.4802	0.2992	0.21	0.6491
sector	TRN	1	-0.0337	0.2223	-0.4694	0.4020	0.02	0.8794
sector	WOD	0	0.0000	0.0000	0.0000	0.0000	.	.
nation	CAN	1	0.8259	0.1380	0.5554	1.0964	35.81	<.0001
nation	OTH	1	0.6627	0.2129	0.2455	1.0800	9.69	0.0019
nation	UK	1	0.2488	0.2591	-0.2590	0.7567	0.92	0.3369
nation	US	0	0.0000	0.0000	0.0000	0.0000	.	.
assets2		1	0.0209	0.0034	0.0142	0.0275	37.85	<.0001
Scale		0	2.8185	0.0000	2.8185	2.8185		

Note: The scale parameter was estimated by the square root of Pearson's Chi-Square/DOF.

LR Statistics For Type 3 Analysis						
Source	Num DF	Den DF	F Value	Pr > F	Chi-Square	Pr > ChiSq
sector	9	234	5.06	<.0001	45.50	<.0001
nation	3	234	13.80	<.0001	41.41	<.0001
assets2	1	234	49.21	<.0001	49.21	<.0001

The GENMOD Procedure

Model Information	
Data Set	WORK.ORNSTEIN
Distribution	Poisson
Link Function	Log
Dependent Variable	interlocks

Number of Observations Read	248
Number of Observations Used	248

Class Level Information		
Class	Levels	Values
sector	10	AGR BNK CON FIN HLD MAN MER MIN TRN WOD
nation	4	CAN OTH UK US

Criteria For Assessing Goodness Of Fit			
Criterion	DF	Value	Value/DF
Deviance	233	1657.5737	7.1141
Scaled Deviance	233	240.8373	1.0336
Pearson Chi-Square	233	1603.6328	6.8825
Scaled Pearson X2	233	233.0000	1.0000
Log Likelihood		938.2630	
Full Log Likelihood		-185.6575	
AIC (smaller is better)		401.3151	
AICC (smaller is better)		403.3840	
BIC (smaller is better)		454.0165	

Algorithm converged.

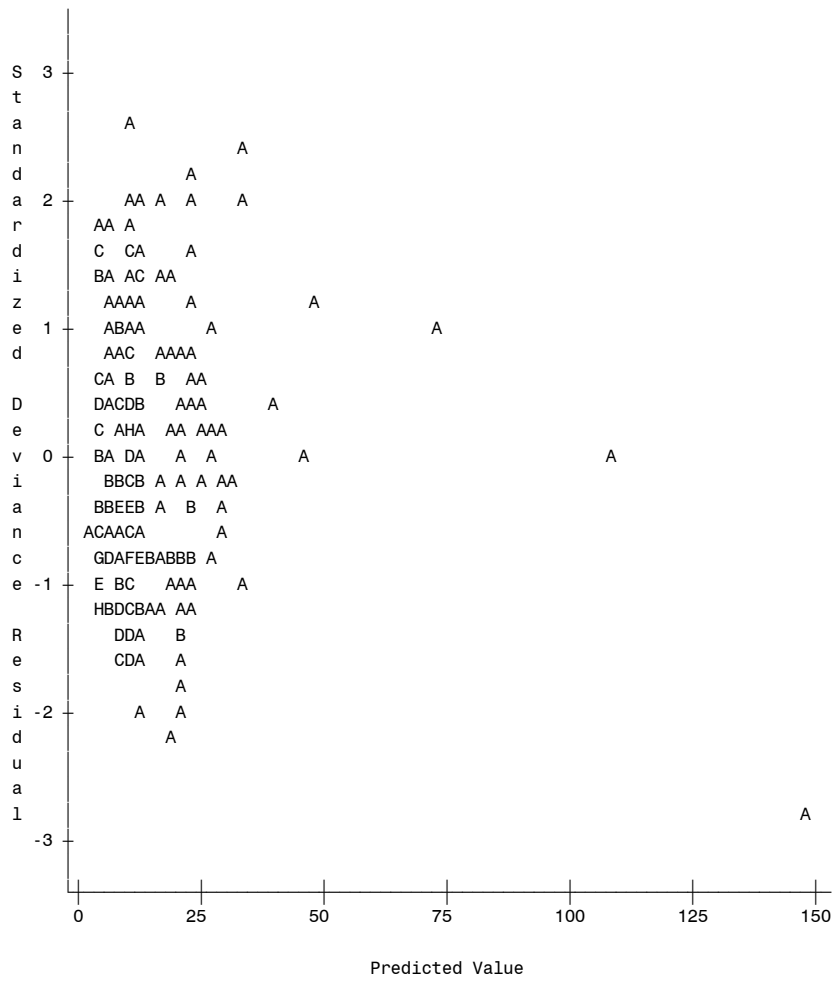
The GENMOD Procedure

Analysis Of Maximum Likelihood Parameter Estimates								
Parameter		DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept		1	2.0316	0.1841	1.6707	2.3925	121.71	<.0001
sector	AGR	1	-0.6587	0.1978	-1.0463	-0.2711	11.09	0.0009
sector	BNK	1	-1.4678	0.3710	-2.1949	-0.7407	15.66	<.0001
sector	CON	1	-1.2780	0.5604	-2.3764	-0.1796	5.20	0.0226
sector	FIN	1	-0.5357	0.2115	-0.9502	-0.1213	6.42	0.0113
sector	HLD	1	-0.5416	0.3191	-1.1671	0.0839	2.88	0.0897
sector	MAN	1	-0.5988	0.2087	-1.0078	-0.1898	8.23	0.0041
sector	MER	1	-0.4827	0.2369	-0.9470	-0.0184	4.15	0.0416
sector	MIN	1	-0.2346	0.1885	-0.6041	0.1348	1.55	0.2133
sector	TRN	1	-0.3721	0.2197	-0.8028	0.0585	2.87	0.0904
sector	WOD	0	0.0000	0.0000	0.0000	0.0000	.	.
nation	CAN	1	0.7672	0.1310	0.5104	1.0240	34.29	<.0001
nation	OTH	1	0.7222	0.1986	0.3330	1.1114	13.23	0.0003
nation	UK	1	0.3253	0.2418	-0.1487	0.7993	1.81	0.1786
nation	US	0	0.0000	0.0000	0.0000	0.0000	.	.
assets2		1	0.1304	0.0188	0.0935	0.1672	48.11	<.0001
xlx		1	-0.0218	0.0037	-0.0290	-0.0145	34.50	<.0001
Scale		0	2.6235	0.0000	2.6235	2.6235		

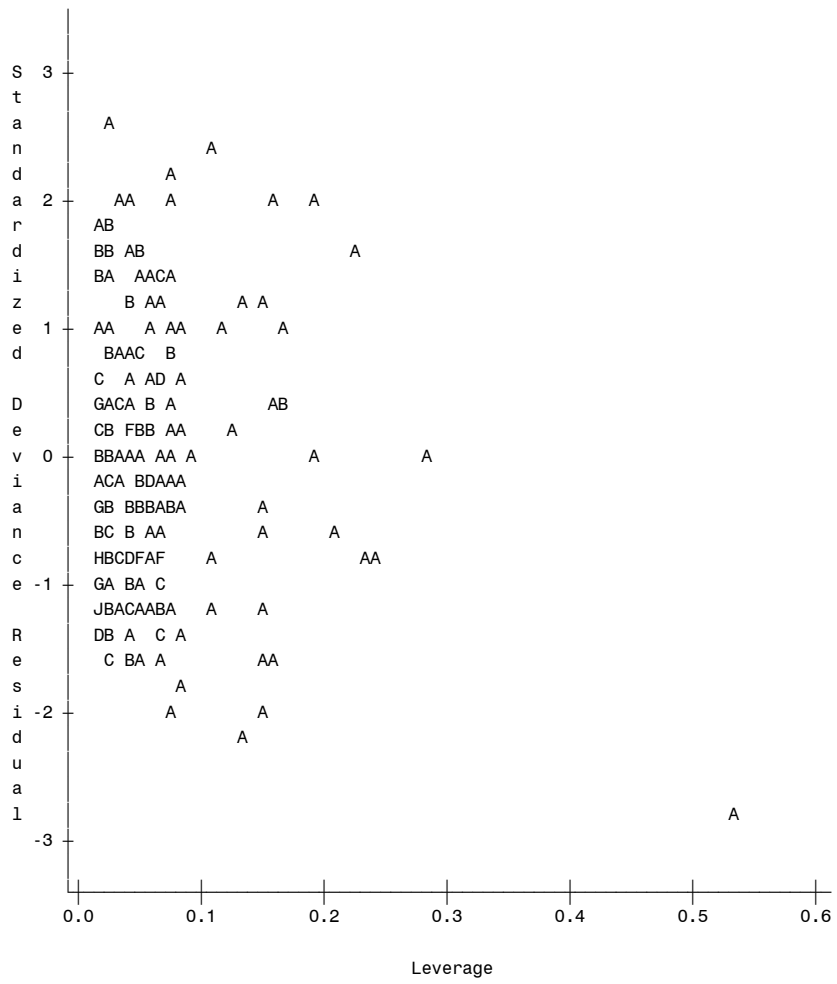
Note: The scale parameter was estimated by the square root of Pearson's Chi-Square/DOF.

LR Statistics For Type 3 Analysis						
Source	Num DF	Den DF	F Value	Pr > F	Chi-Square	Pr > ChiSq
sector	9	233	3.66	0.0003	32.96	0.0001
nation	3	233	13.55	<.0001	40.64	<.0001
assets2	1	233	45.69	<.0001	45.69	<.0001
xlx	1	233	33.39	<.0001	33.39	<.0001

Plot of $\text{strdev} \cdot \text{pred}$. Legend: A = 1 obs, B = 2 obs, etc.

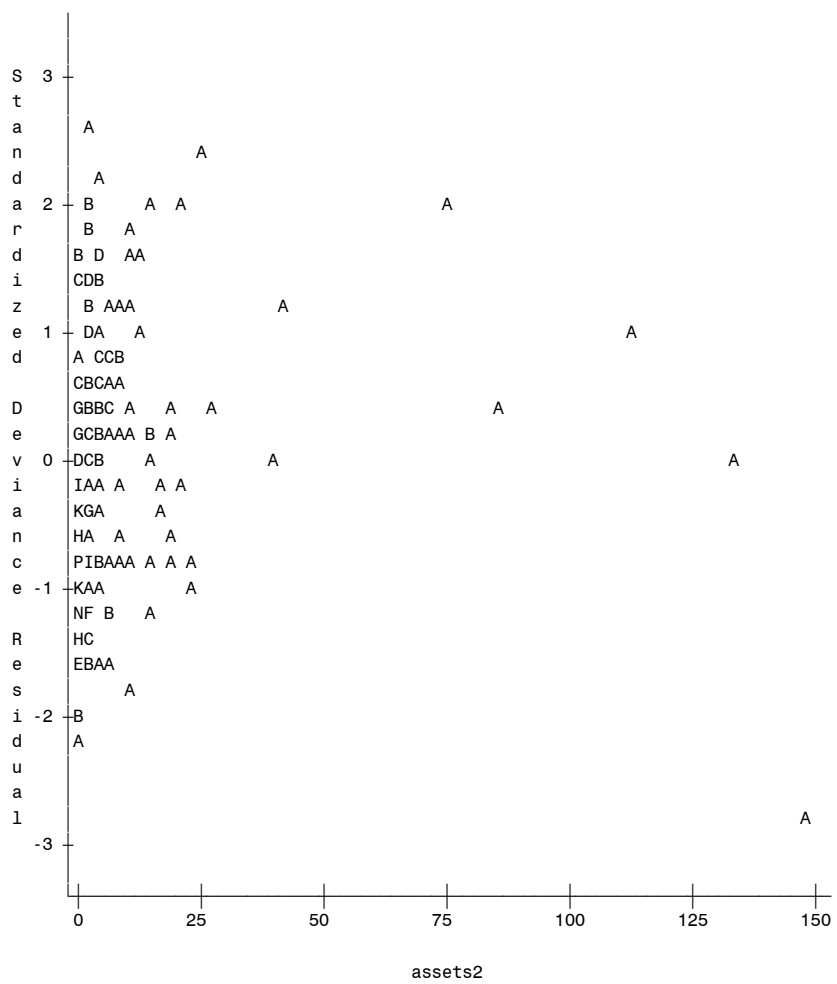


Plot of $\text{strdev} \cdot \hat{h}$. Legend: A = 1 obs, B = 2 obs, etc.



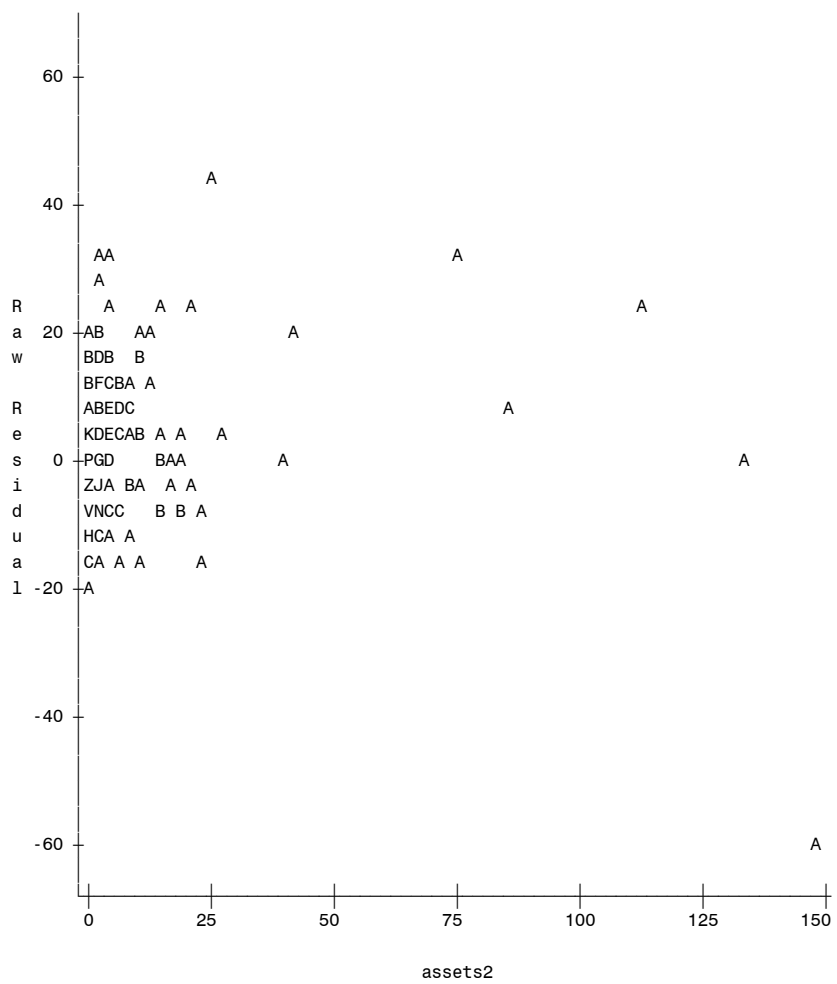
Bubble Plot similar to Figure 15.7

Plot of strdev*assets2. Legend: A = 1 obs, B = 2 obs, etc.



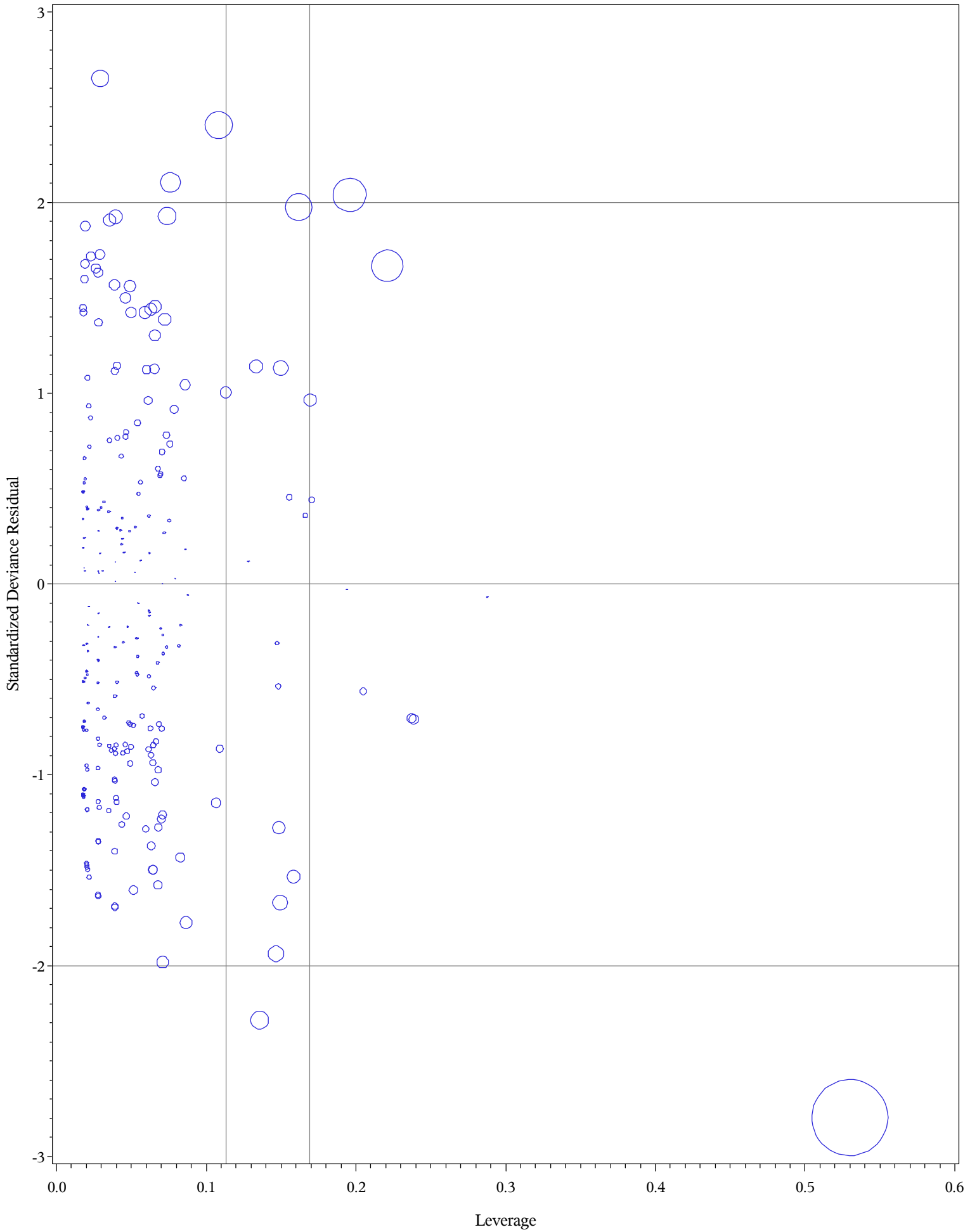
Bubble Plot similar to Figure 15.7

Plot of rawres*assets2. Legend: A = 1 obs, B = 2 obs, etc.



NOTE: 19 obs hidden.

Bubble Plot similar to Figure 15.7



The GENMOD Procedure

Model Information	
Data Set	WORK.ORNSTEIN
Distribution	Poisson
Link Function	Log
Dependent Variable	interlocks

Number of Observations Read	248
Number of Observations Used	248

Class Level Information		
Class	Levels	Values
sector	10	AGR BNK CON FIN HLD MAN MER MIN TRN WOD
nation	4	CAN OTH UK US

Criteria For Assessing Goodness Of Fit			
Criterion	DF	Value	Value/DF
Deviance	234	1547.0830	6.6115
Scaled Deviance	234	241.7839	1.0333
Pearson Chi-Square	234	1497.2768	6.3986
Scaled Pearson X2	234	234.0000	1.0000
Log Likelihood		1017.8575	
Full Log Likelihood		-191.0648	
AIC (smaller is better)		410.1296	
AICC (smaller is better)		411.9322	
BIC (smaller is better)		459.3176	

Algorithm converged.

The GENMOD Procedure

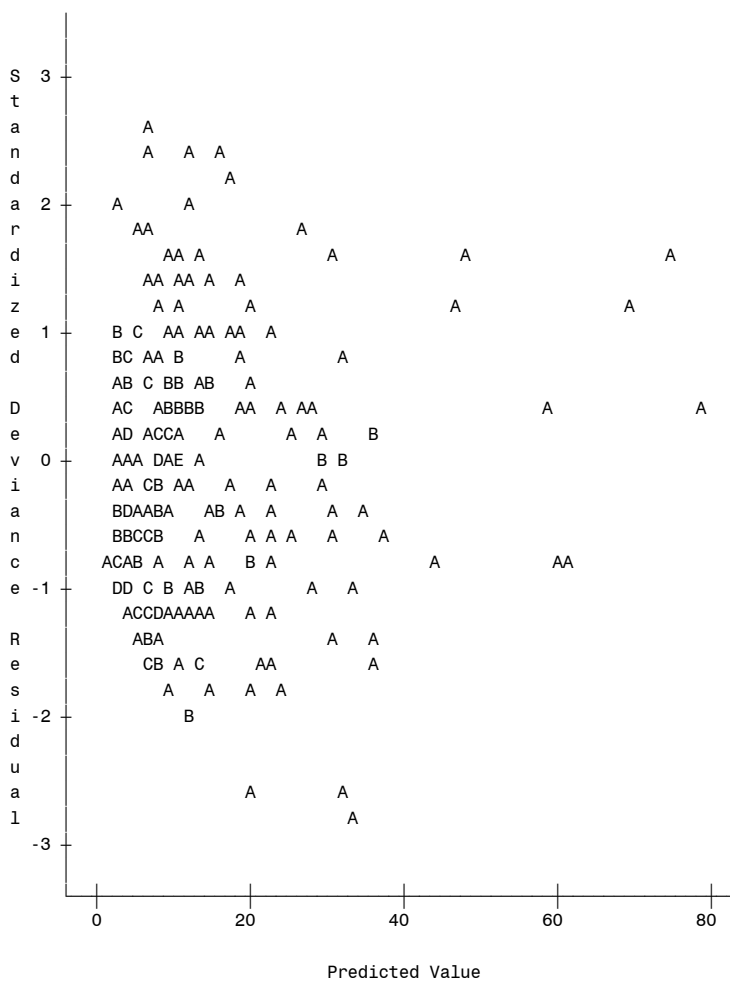
Analysis Of Maximum Likelihood Parameter Estimates								
Parameter		DF	Estimate	Standard Error	Wald 95% Confidence Limits		Wald Chi-Square	Pr > ChiSq
Intercept		1	2.0050	0.1783	1.6555	2.3545	126.42	<.0001
sector	AGR	1	-0.4983	0.1912	-0.8731	-0.1234	6.79	0.0092
sector	BNK	1	-0.6648	0.2400	-1.1351	-0.1944	7.67	0.0056
sector	CON	1	-0.9875	0.5441	-2.0539	0.0788	3.29	0.0695
sector	FIN	1	-0.6099	0.1950	-0.9921	-0.2277	9.78	0.0018
sector	HLD	1	-0.5132	0.3072	-1.1153	0.0890	2.79	0.0948
sector	MAN	1	-0.3764	0.2029	-0.7741	0.0213	3.44	0.0636
sector	MER	1	-0.4367	0.2283	-0.8841	0.0107	3.66	0.0557
sector	MIN	1	-0.2484	0.1820	-0.6052	0.1083	1.86	0.1723
sector	TRN	1	-0.3464	0.2045	-0.7472	0.0543	2.87	0.0902
sector	WOD	0	0.0000	0.0000	0.0000	0.0000	.	.
nation	CAN	1	0.7724	0.1256	0.5263	1.0185	37.85	<.0001
nation	OTH	1	0.6654	0.1927	0.2877	1.0431	11.92	0.0006
nation	UK	1	0.3852	0.2335	-0.0724	0.8427	2.72	0.0990
nation	US	0	0.0000	0.0000	0.0000	0.0000	.	.
lassets2		1	0.4514	0.0430	0.3673	0.5356	110.45	<.0001
Scale		0	2.5295	0.0000	2.5295	2.5295		

Note: The scale parameter was estimated by the square root of Pearson's Chi-Square/DOF.

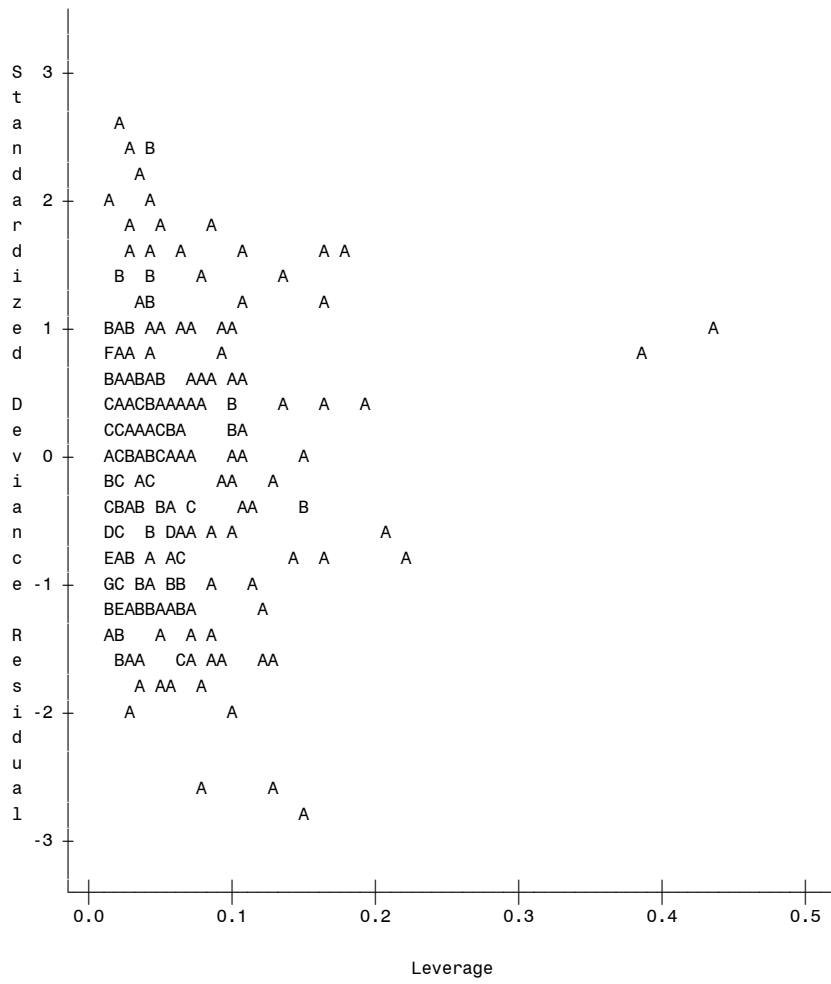
LR Statistics For Type 3 Analysis						
Source	Num DF	Den DF	F Value	Pr > F	Chi-Square	Pr > ChiSq
sector	9	234	1.78	0.0722	16.05	0.0658
nation	3	234	14.38	<.0001	43.14	<.0001
lassets2	1	234	114.28	<.0001	114.28	<.0001

Bubble Plot similar to Figure 15.7

Plot of strdev*pred. Legend: A = 1 obs, B = 2 obs, etc.

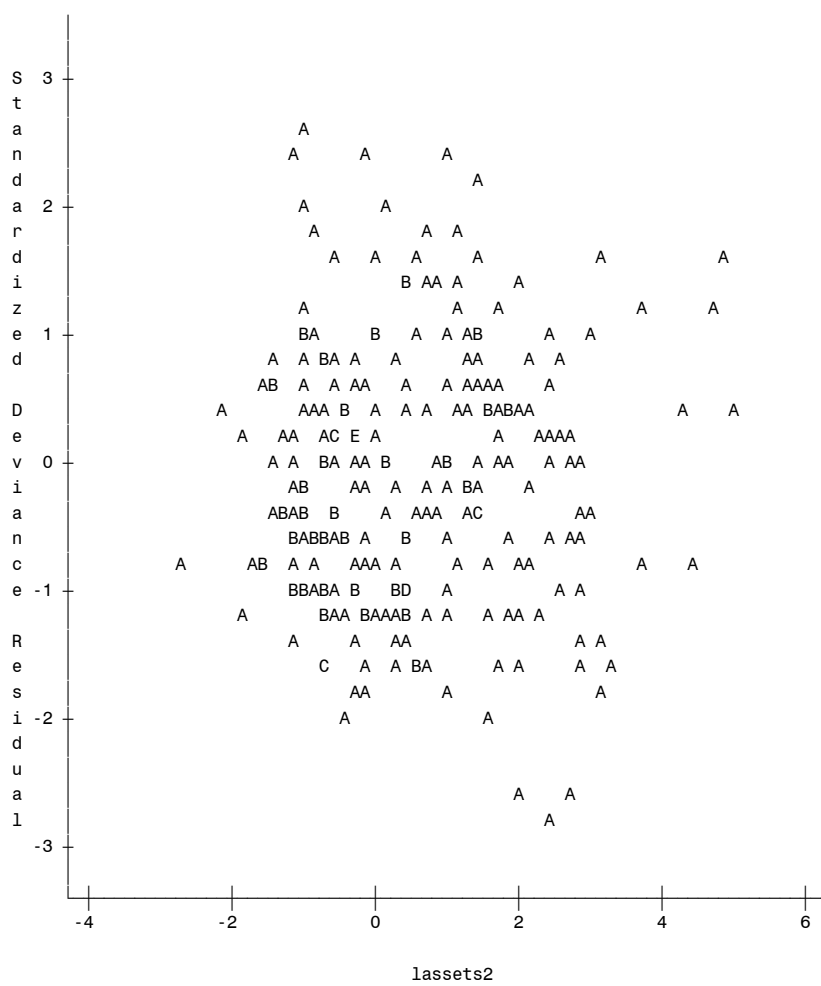


Plot of $\text{strdev} \cdot \hat{h}$. Legend: A = 1 obs, B = 2 obs, etc.



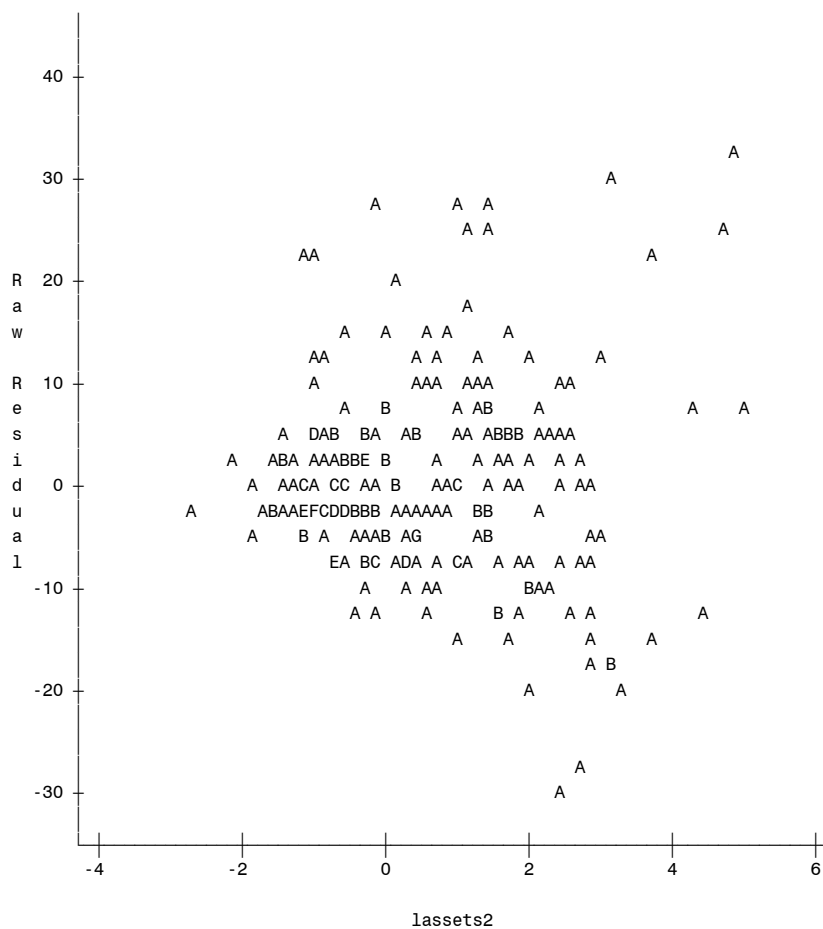
Bubble Plot similar to Figure 15.7

Plot of $\text{strdev} * \text{lassets2}$. Legend: A = 1 obs, B = 2 obs, etc.



Bubble Plot similar to Figure 15.7

Plot of rawres*lassets2. Legend: A = 1 obs, B = 2 obs, etc.



Bubble Plot similar to Figure 15.7

