

The SAS System

The GLMSELECT Procedure

Data Set	MYLIB.ENDVERSION
Dependent Variable	f1_cfo_s_t
Selection Method	LASSO
Stop Criterion	None
Choose Criterion	External Cross Validation
External Cross Validation Method	Random
External Cross Validation Fold	5
Effect Hierarchy Enforced	None
Random Number Seed	123

Number of Observations Read	11589
Number of Observations Used	11589

Dimensions	
Number of Effects	17
Number of Parameters	17

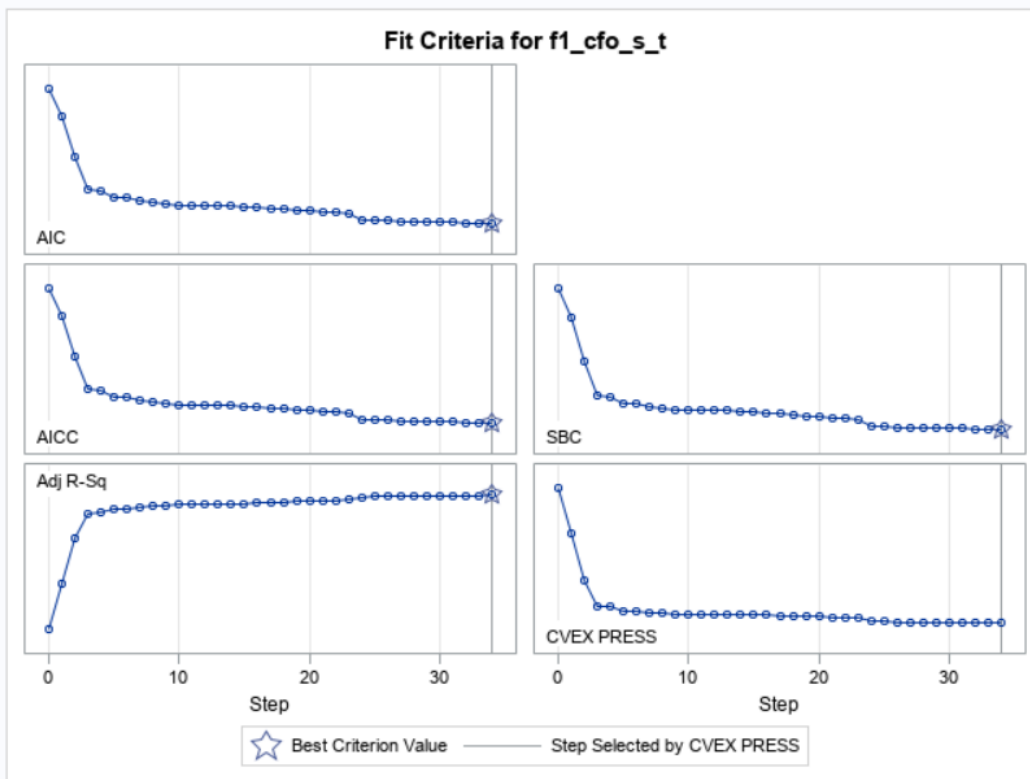
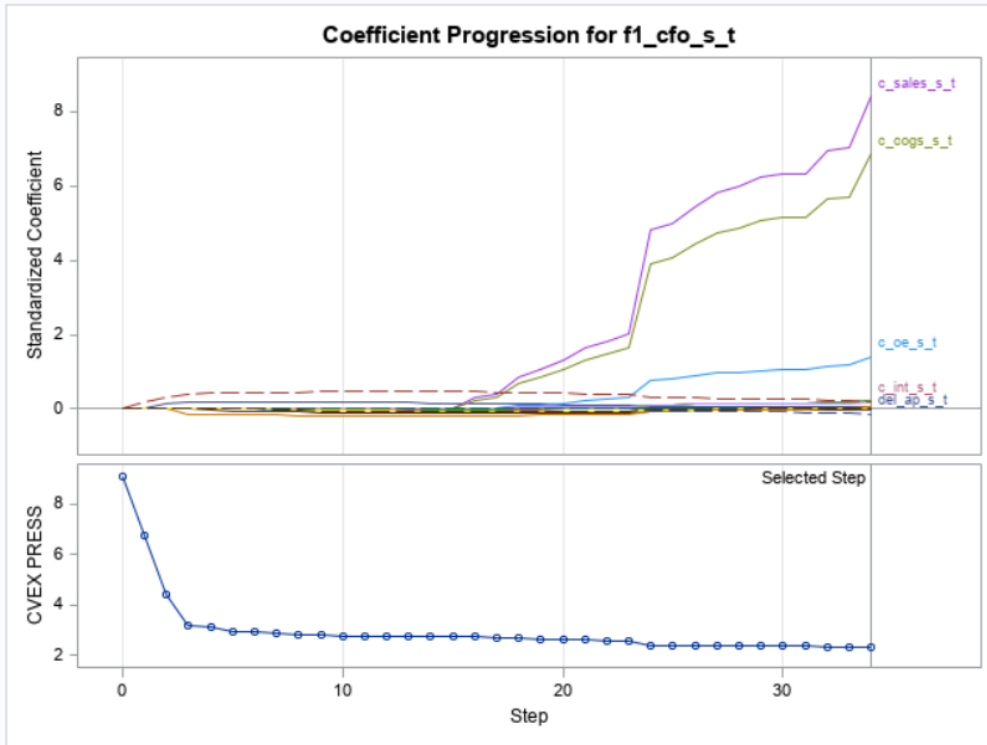
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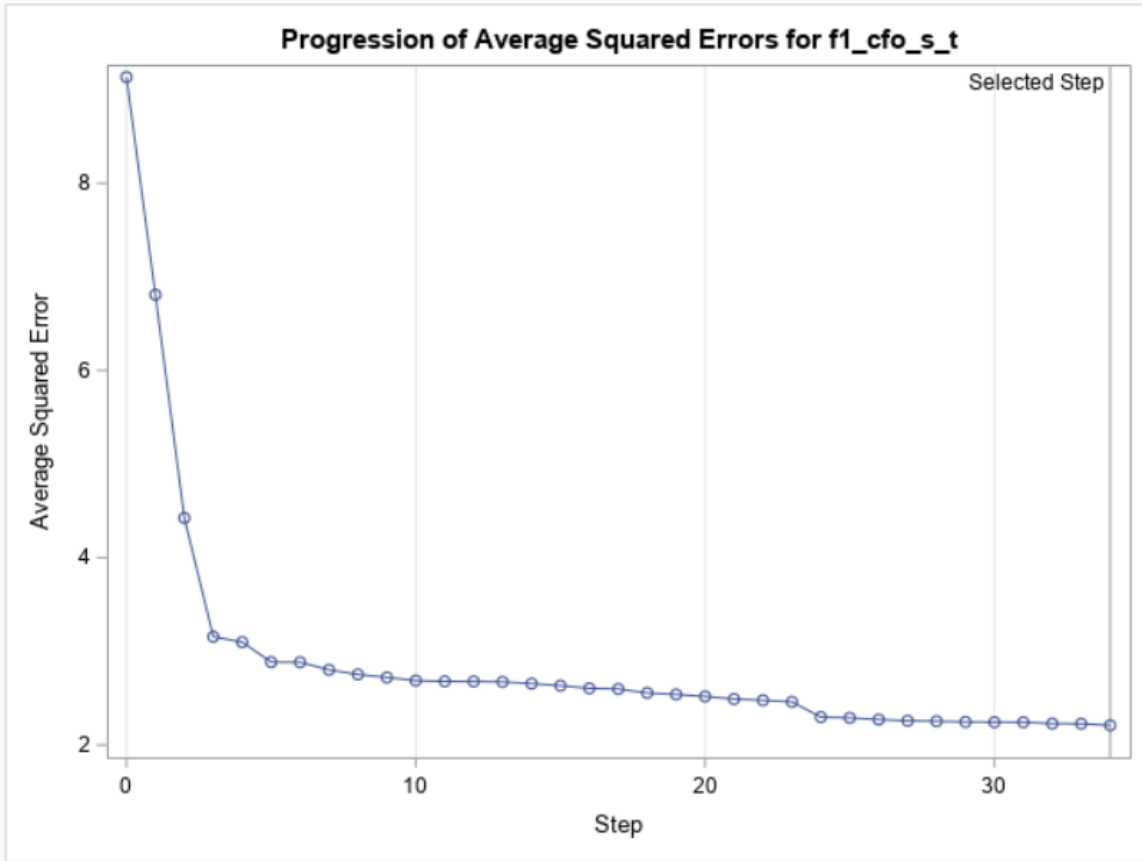
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LASSO Selection Summary				
Step	Effect Entered	Effect Removed	Number Effects In	CVEX PRESS
0	Intercept		1	9.0970
1	depr_s_t		2	6.7786
2	at_s_t		3	4.4106
3	c_tax_s_t		4	3.1717
4	NegE		5	3.1198
5	c_sales_s_t		6	2.9135
6	c_oe_s_t		7	2.9121
7	other_acc_s_t		8	2.8427
8	del_inv_s_t		9	2.8031
9	div_s_t		10	2.7781
10	del_ar_s_t		11	2.7583
11	c_int_s_t		12	2.7548
12	DivD		13	2.7542
13	del_ap_s_t		14	2.7517
14	c_other_s_t		15	2.7440
15	amort_s_t		16	2.7429
16	c_cogs_s_t		17	2.7401
17		c_oe_s_t	16	2.6975

18	c_oe_s_t		17	2.6785
19		c_other_s_t	16	2.6457
20	c_other_s_t		17	2.6324
21		c_int_s_t	16	2.5968
22		del_ap_s_t	15	2.5756
23	c_int_s_t		16	2.5585
24	del_ap_s_t		17	2.4021
25		div_s_t	16	2.3928
26		amort_s_t	15	2.3747
27	div_s_t		16	2.3611
28		del_inv_s_t	15	2.3547
29	del_inv_s_t		16	2.3479
30		other_acc_s_t	15	2.3444
31	amort_s_t		16	2.3440
32	other_acc_s_t		17	2.3309
33		c_tax_s_t	16	2.3287
34	c_tax_s_t		17	2.3150*
* Optimal Value of Criterion				

Selection stopped because all effects are in the final model.





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Selected Model

The selected model, based on External Cross Validation, is the model at Step 34.

Effects: Intercept at_s_t div_s_t DivD NegE c_sales_s_t c_cogs_s_t c_oe_s_t c_int_s_t c_tax_s_t c_other_s_t del_ar_s_t del_inv_s_t del_ap_s_t depr_s_t amort_s_t other_acc_s_t

Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	16	80225	5014.04598	2265.07
Error	11572	25616	2.21364	
Corrected Total	11588	105841		

Root MSE	1.48783
Dependent Mean	1.53160
R-Square	0.7580
Adj R-Sq	0.7576
AIC	20817
AICC	20817
SBC	9351.11781
CVEX PRESS	2.31500

Parameter Estimates		
Parameter	DF	Estimate
Intercept	1	-0.073748
at_s_t	1	0.005843
div_s_t	1	-0.119147
DivD	1	0.078235
NegE	1	0
c_sales_s_t	1	0.649987
c_cogs_s_t	1	0.651326
c_oe_s_t	1	0.623000
c_int_s_t	1	0.554892
c_tax_s_t	1	0.202163
c_other_s_t	1	0.571999
del_ar_s_t	1	0.574511
del_inv_s_t	1	0.156215
del_ap_s_t	1	-0.433071
depr_s_t	1	0.434692
amort_s_t	1	-0.045137
other_acc_s_t	1	0.088154

Code:

```
proc glmselect data=mylib.endversion plots=all seed=123;
where 1998<= Houyear <=2002;
model Fl_cfo_s_t= at_s_t div_s_t divD negE c_sales_s_t c_cogs_s_t c_oe_s_t
c_int_s_t c_tax_s_t c_other_s_t del_ar_s_t del_inv_s_t del_ap_s_t depr_s_t
amort_s_t other_acc_s_t
/selection=LASSO (stop=none choose=cvex);
run;
```