Inspection of new elasticities (with standard errors, max 12+ lags)

Simulation scheme

- 1000 draws from variance-covariance matrix of parameter estimates
- one-period shock (which is mathematically equivalent to shocks in *any* other period, and hence also the mean of those); this has been empirically verified

Definition of elasticities:

- "dust settling period": sum of difference of log-level sales on a dataset with shocked mmix instruments, and baseline log-level sales
- "long-term elasticity: difference of log-level sales on a dataset with shocked mmix instruments, and baseline log-level sales in one period (e.g., 12 months after shock)

Measures:

1. elast1: short-term elasticities (difference of log level sales w/ shocked mmix, and baseline log level sales)
2. elast6: sum of (1) over 6 months
3. elast12: sum of (1) over 12 months
4. elast12lt: difference in log-level sales 12 months after shock

Variables:

a. Price (ln rwpspr)
b. Distribution (ln wpswdst)
c. Line length (ln llen)

Descriptive statistics

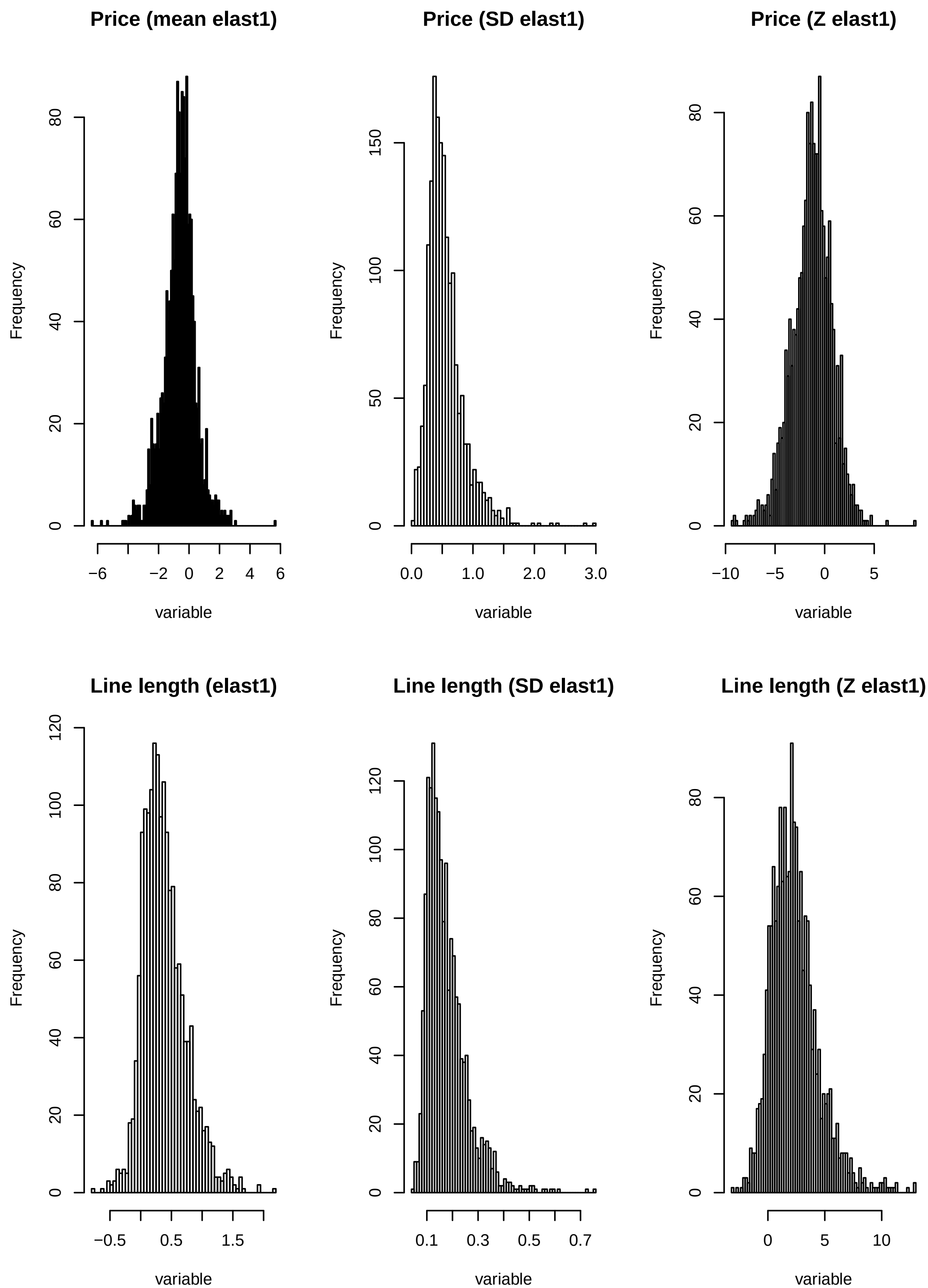
Overview includes weighted mean elasticities, and an assessment about significance (percentage positive/negative & significant, percentage not significant).

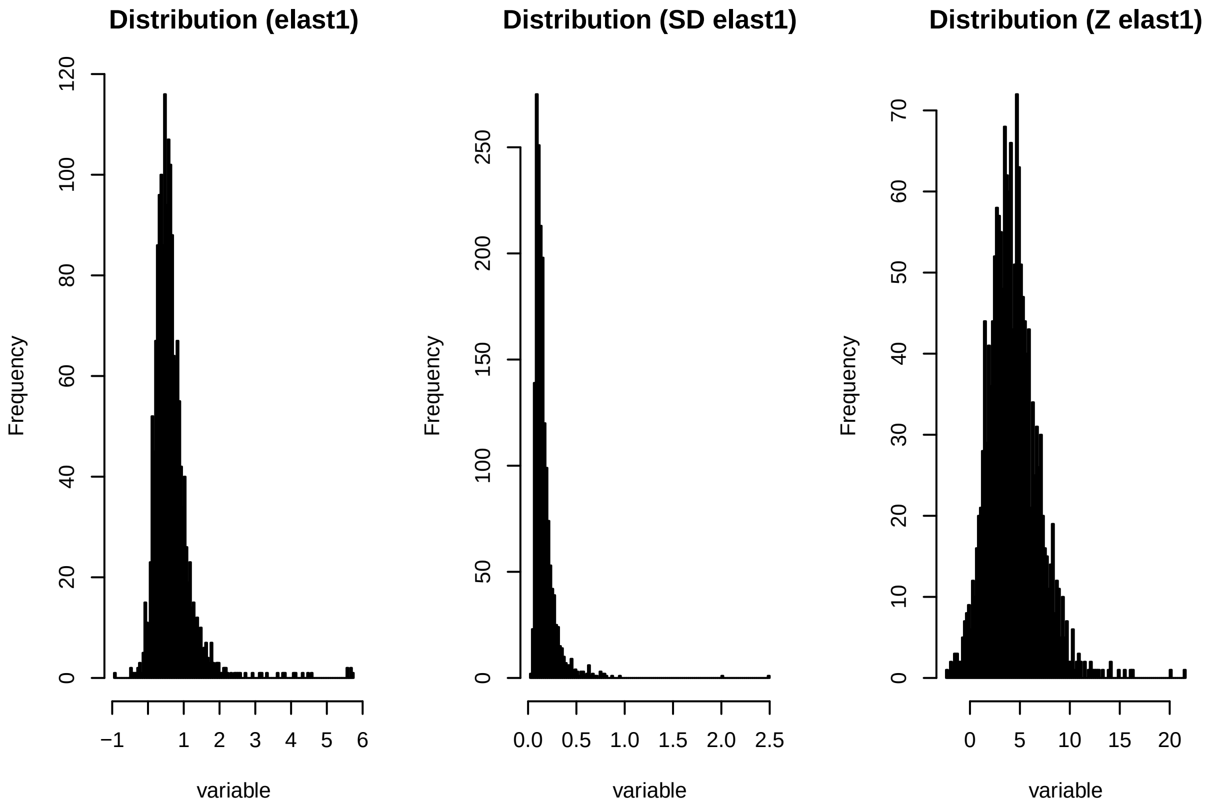
varname	variable	N	mean	median	weightedmean	min	max	perc_positive	perc_negative	perc_ns
lnrwpspr	elast1	1687	-0.611	-0.561	-0.527	-6.383	5.696	0.059	0.388	0.552
lnrwpspr	elast12	1687	-0.941	-0.702	-0.631	-82.376	97.621	0.065	0.237	0.698
lnrwpspr	elast6	1687	-0.796	-0.612	-0.599	-16.921	39.095	0.064	0.272	0.664
lnrwpspr	elastlt12	1687	-0.022	0.000	0.000	-20.247	13.145	0.027	0.032	0.941
lnwpswdst	elast1	1687	0.650	0.564	0.549	-0.934	5.723	0.874	0.002	0.123
lnwpswdst	elast12	1687	1.246	0.834	0.822	-37.347	16.284	0.582	0.013	0.405
lnwpswdst	elast6	1687	0.992	0.744	0.762	-10.448	11.598	0.646	0.010	0.344
lnwpswdst	elastlt12	1687	0.033	0.002	0.000	-6.078	1.854	0.081	0.018	0.902
lnllen	elast1	1686	0.382	0.333	0.350	-0.767	2.152	0.585	0.007	0.408
lnllen	elast12	1686	1.080	0.800	0.837	-67.388	21.586	0.468	0.014	0.518
lnllen	elast6	1686	0.867	0.681	0.741	-12.135	8.655	0.514	0.012	0.474
lnllen	elastlt12	1686	0.024	0.003	0.000	-17.103	3.006	0.078	0.013	0.909

Plots

- Distribution of mean parameter
- Distribution of standard errors
- Distribution of z values

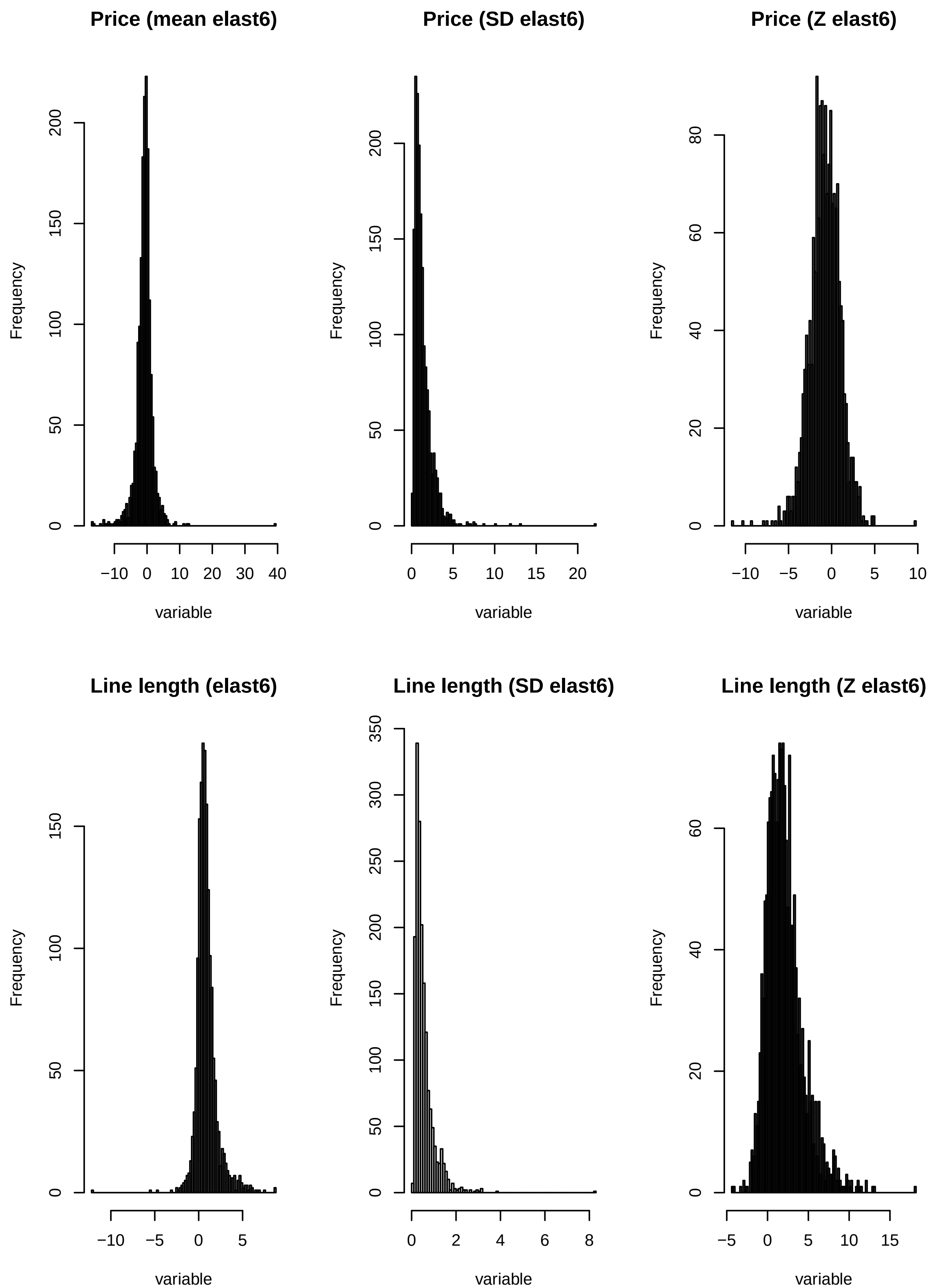
Short-term (elast1)

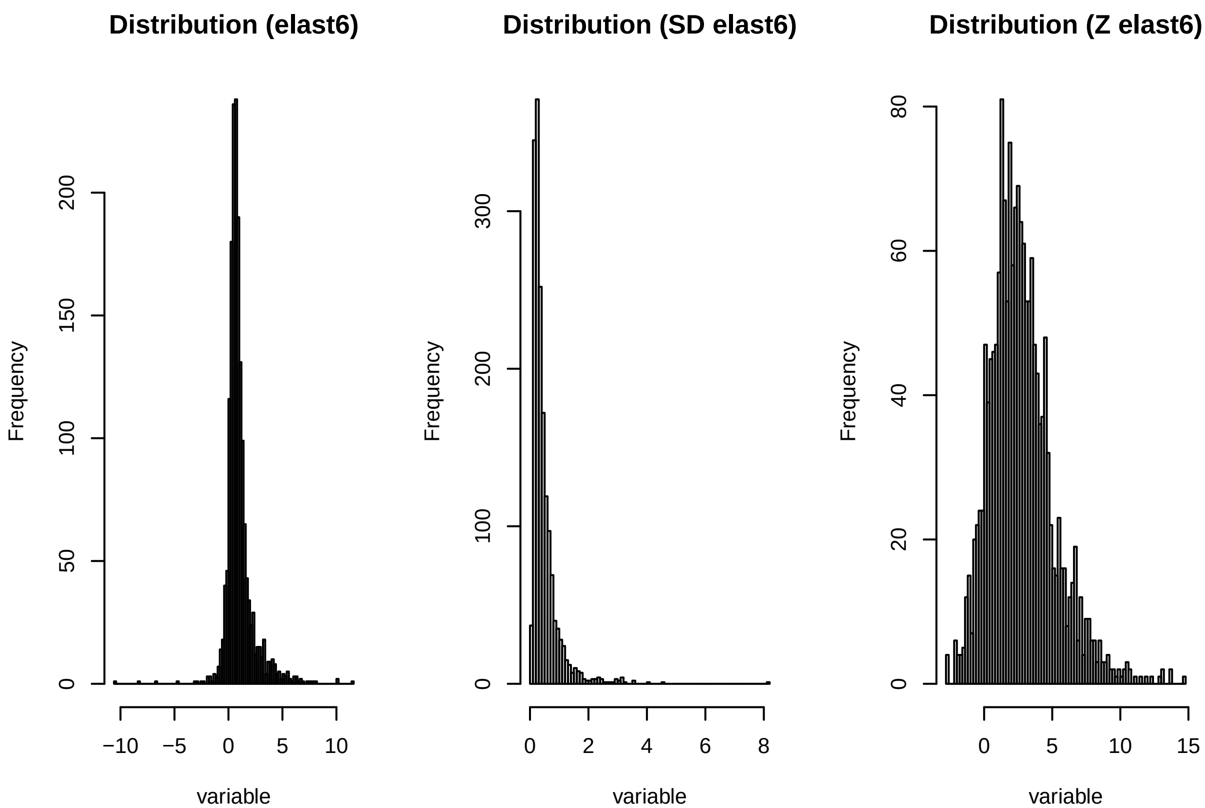




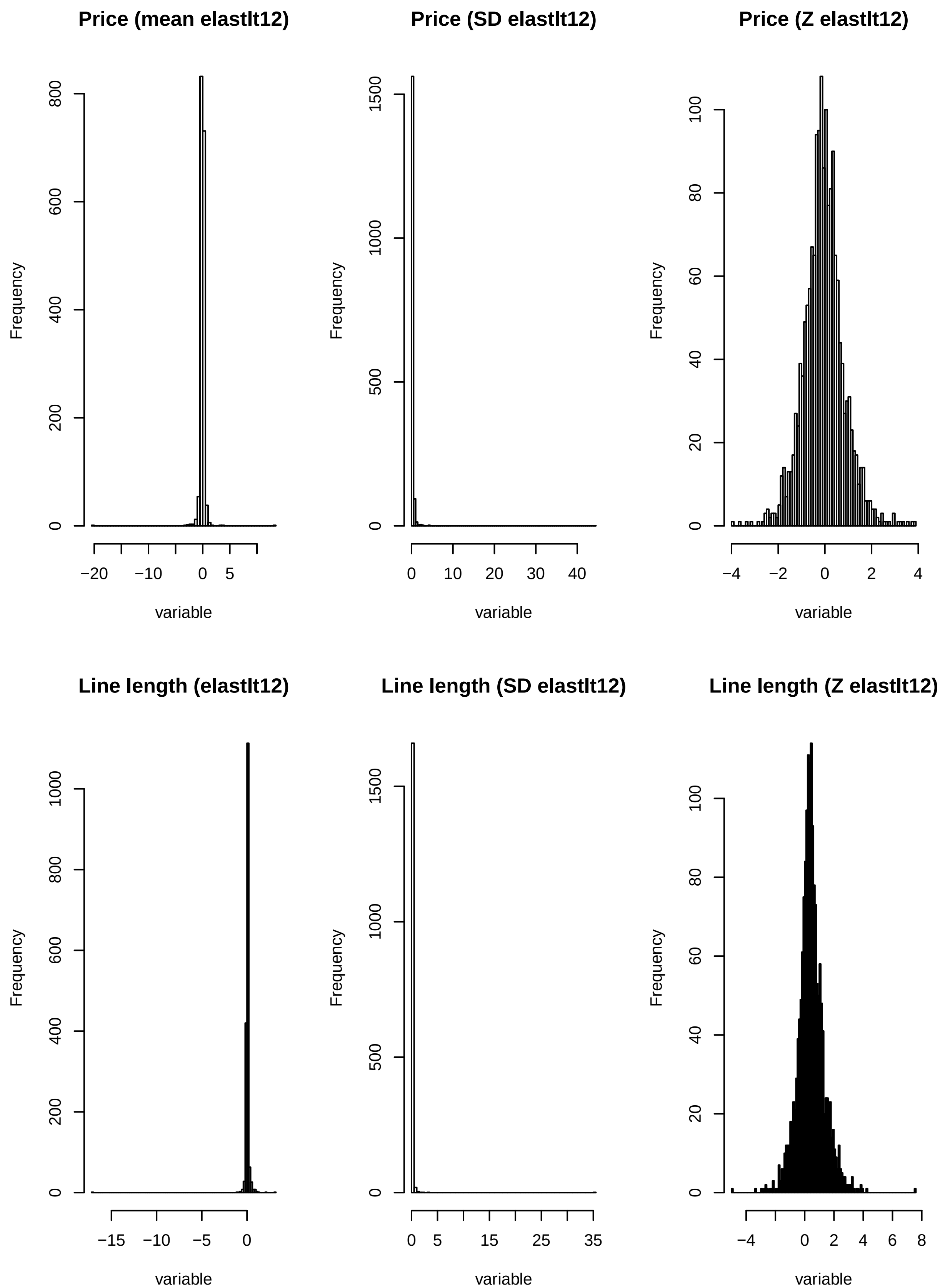
Distribution (elast1)
Frequency
variable
Distribution (SD elast1)
Frequency
variable
Distribution (Z elast1)
Frequency
variable

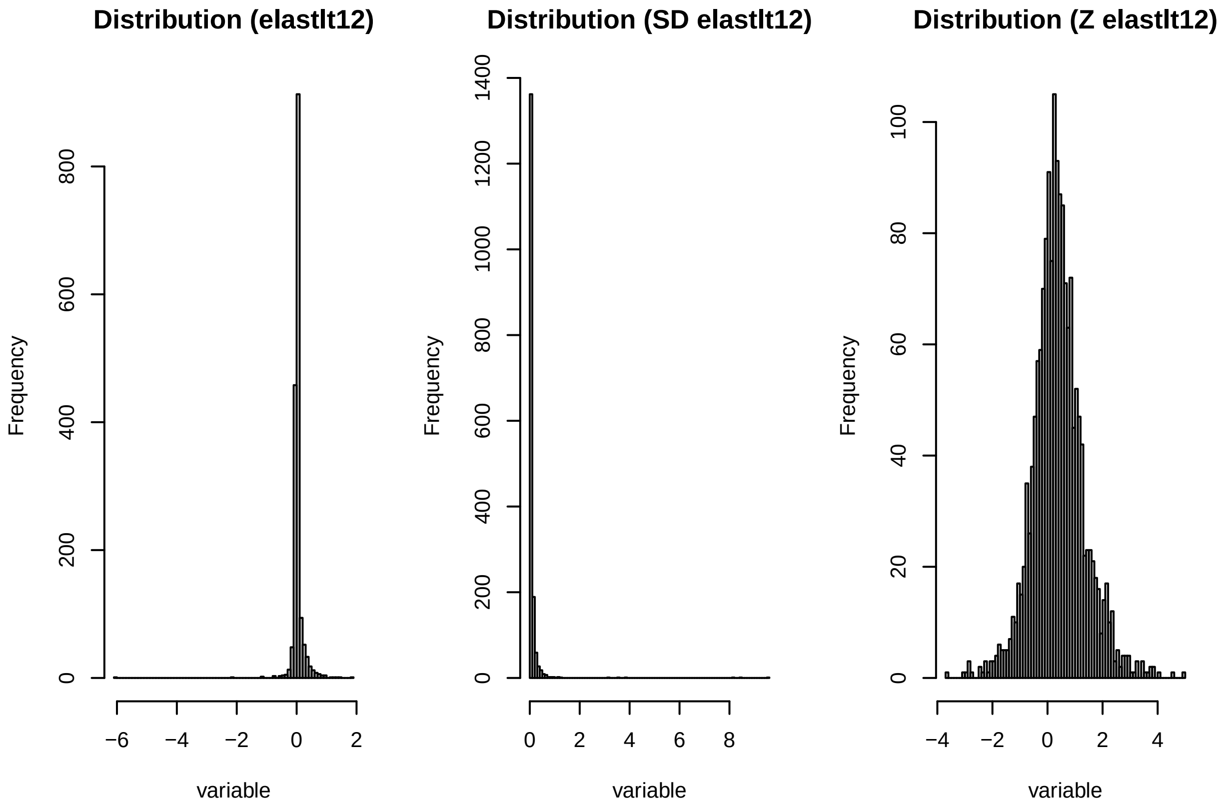
Dust-settling (6 months) (elast6)




Distribution (elast6)
Frequency
variable
Distribution (SD elast6)
Frequency
variable
Distribution (Z elast6)
Frequency
variable

Long-term (12 months) (elast12lt)




Distribution (elastlt12)
Distribution (SD elastlt12)
Distribution (Z elastlt12)
Frequency
variable
0
200
400
600
800
1000
1200
1400
−6
−4
−2
2
4
6
8
20
40
60
80
100