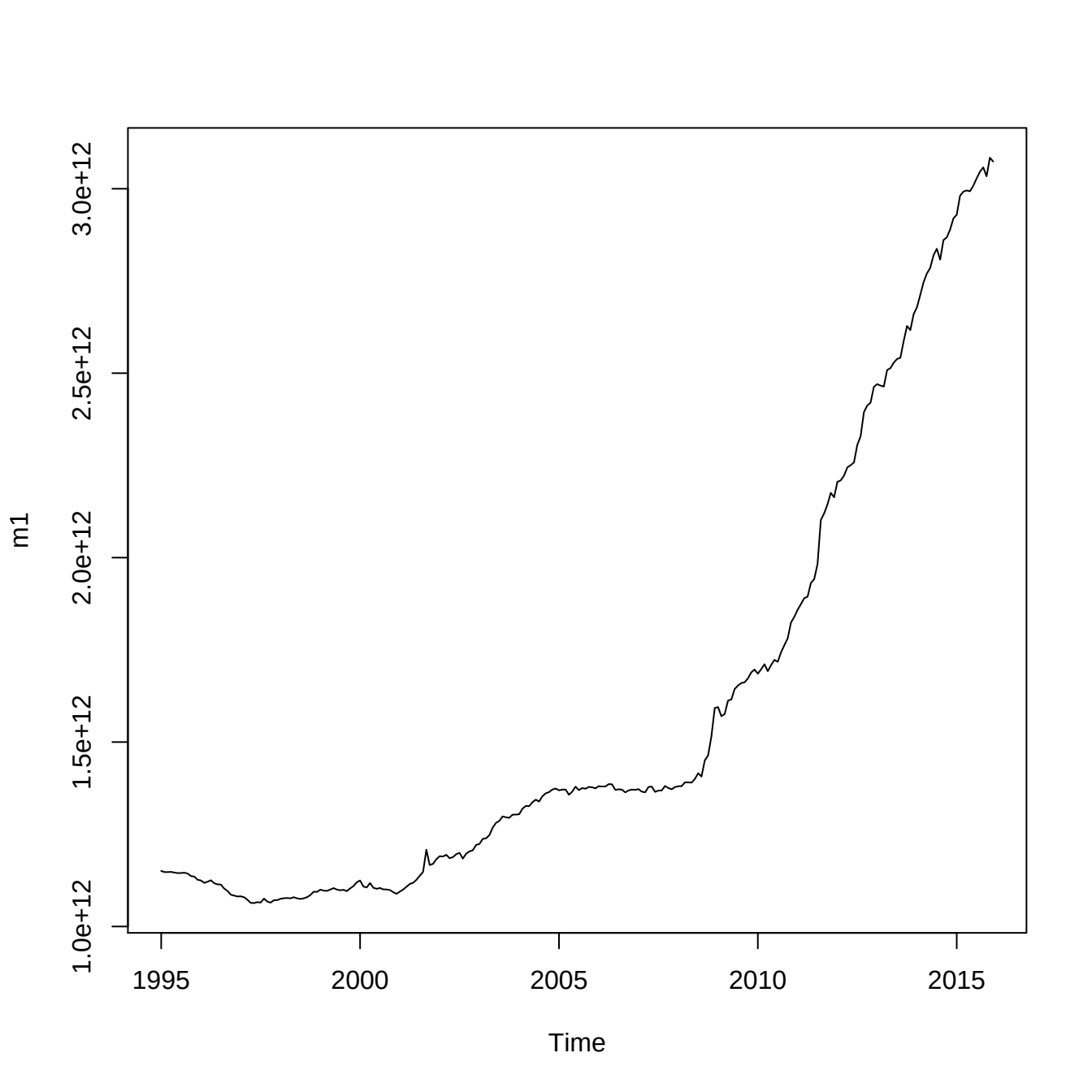
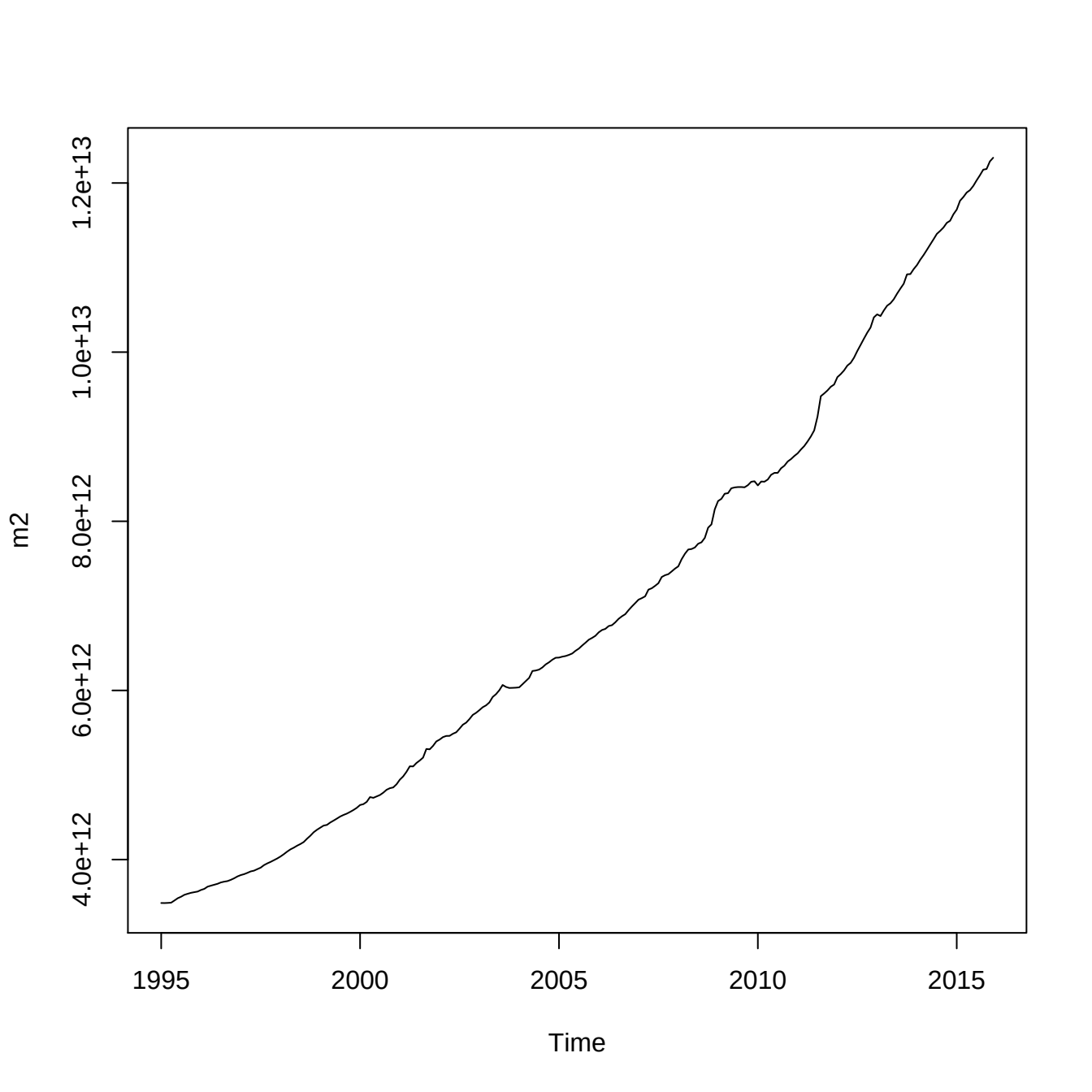
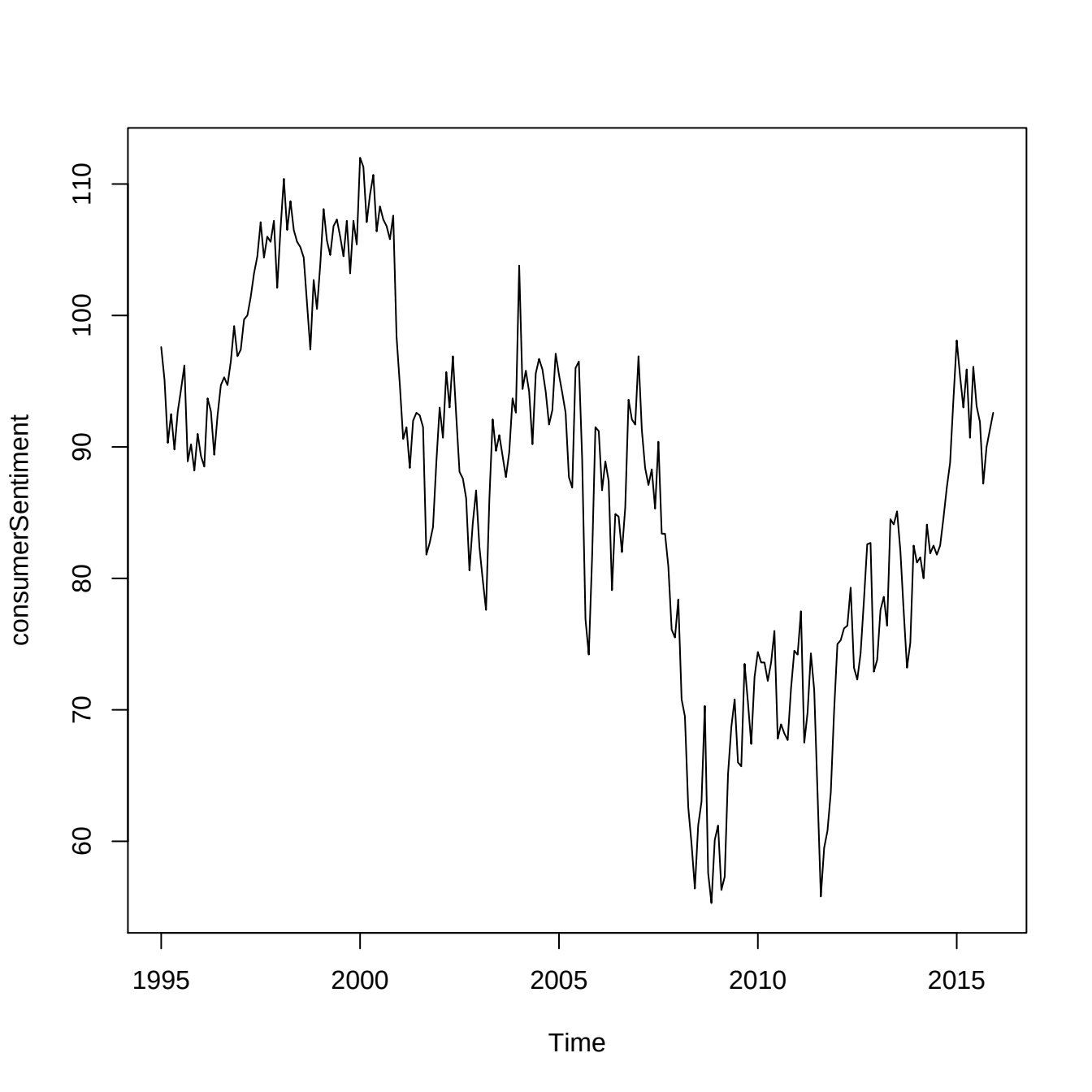
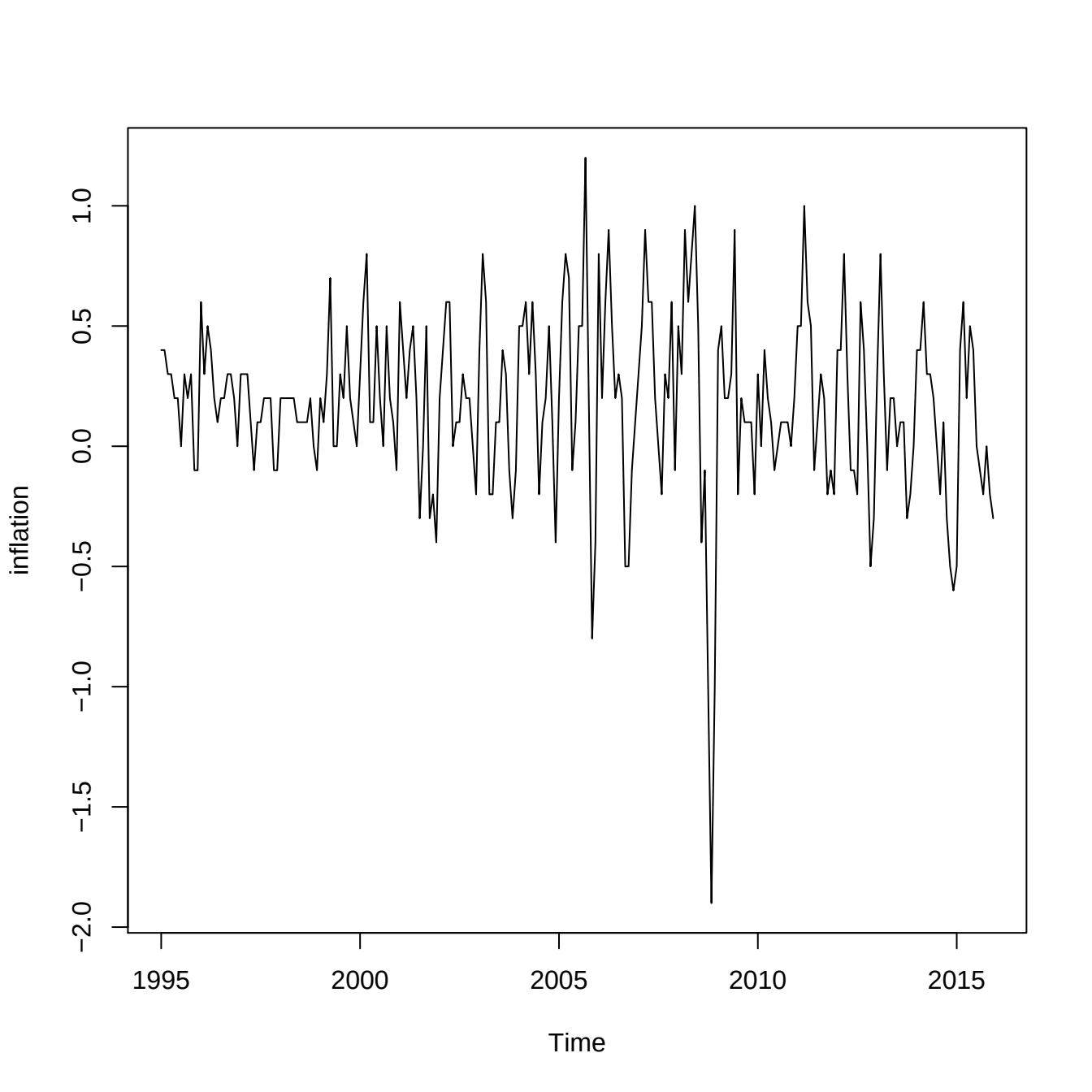
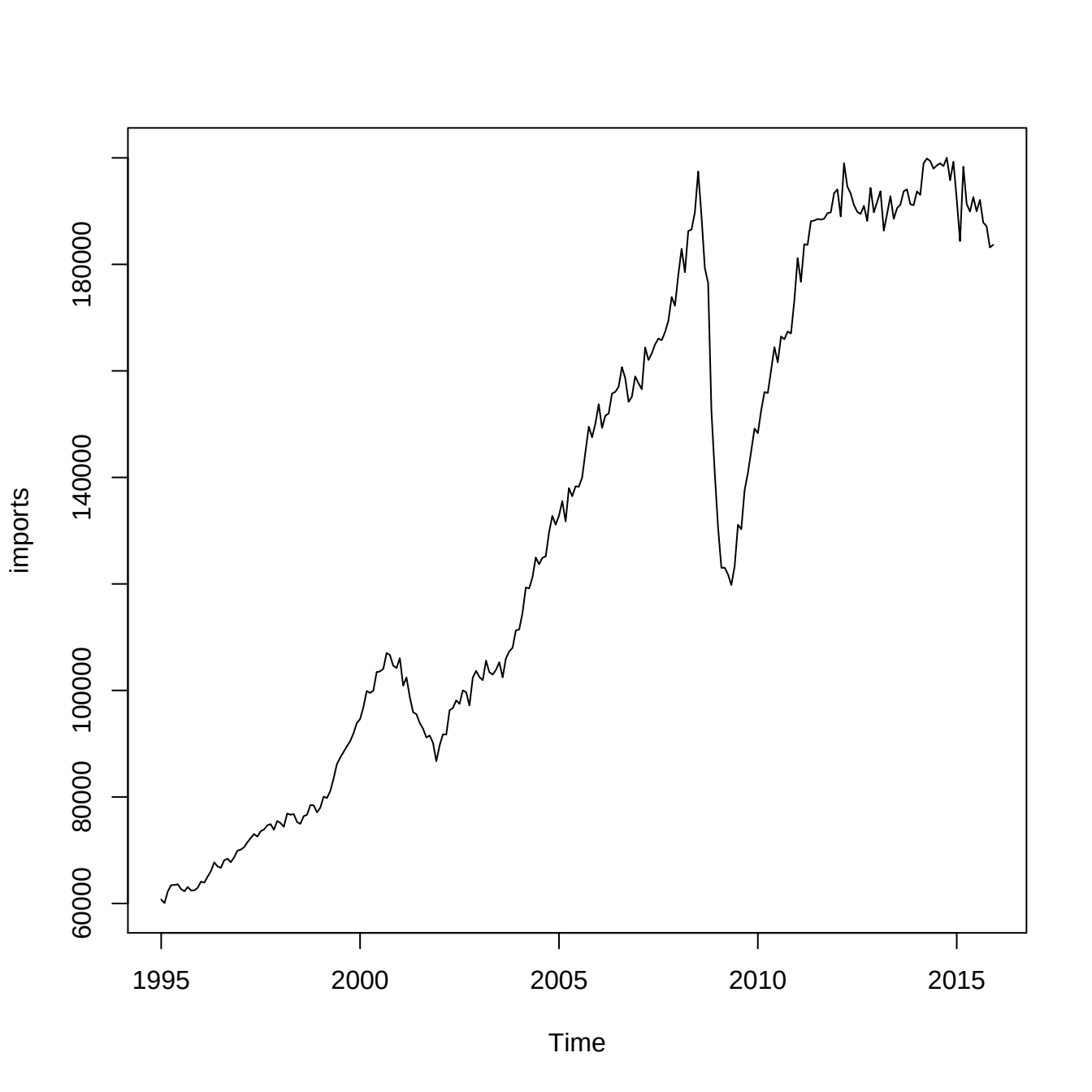
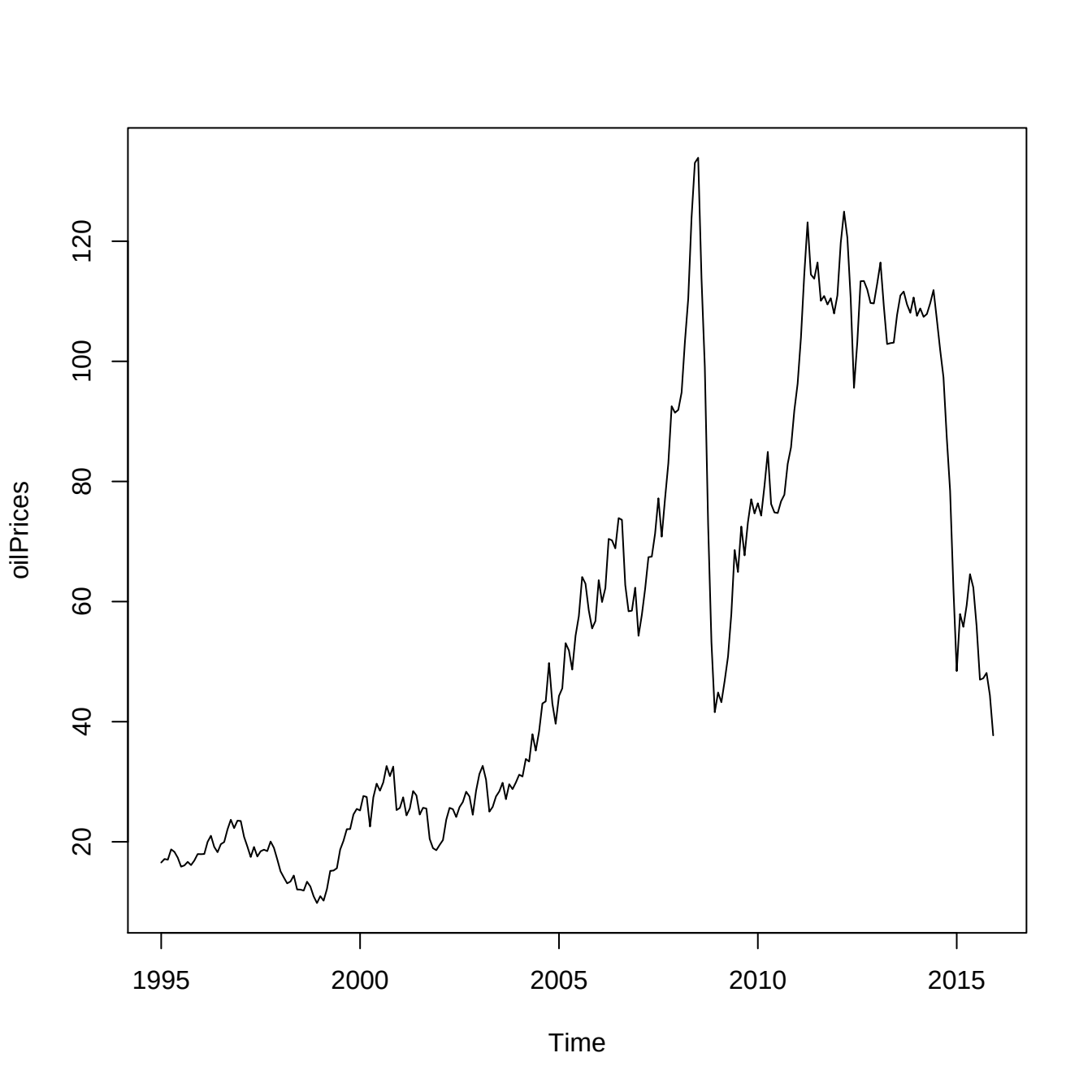

m1
1.0e+12
1.5e+12
2.0e+12
2.5e+12
3.0e+12
1995
2000
2005
2010
2015
Time

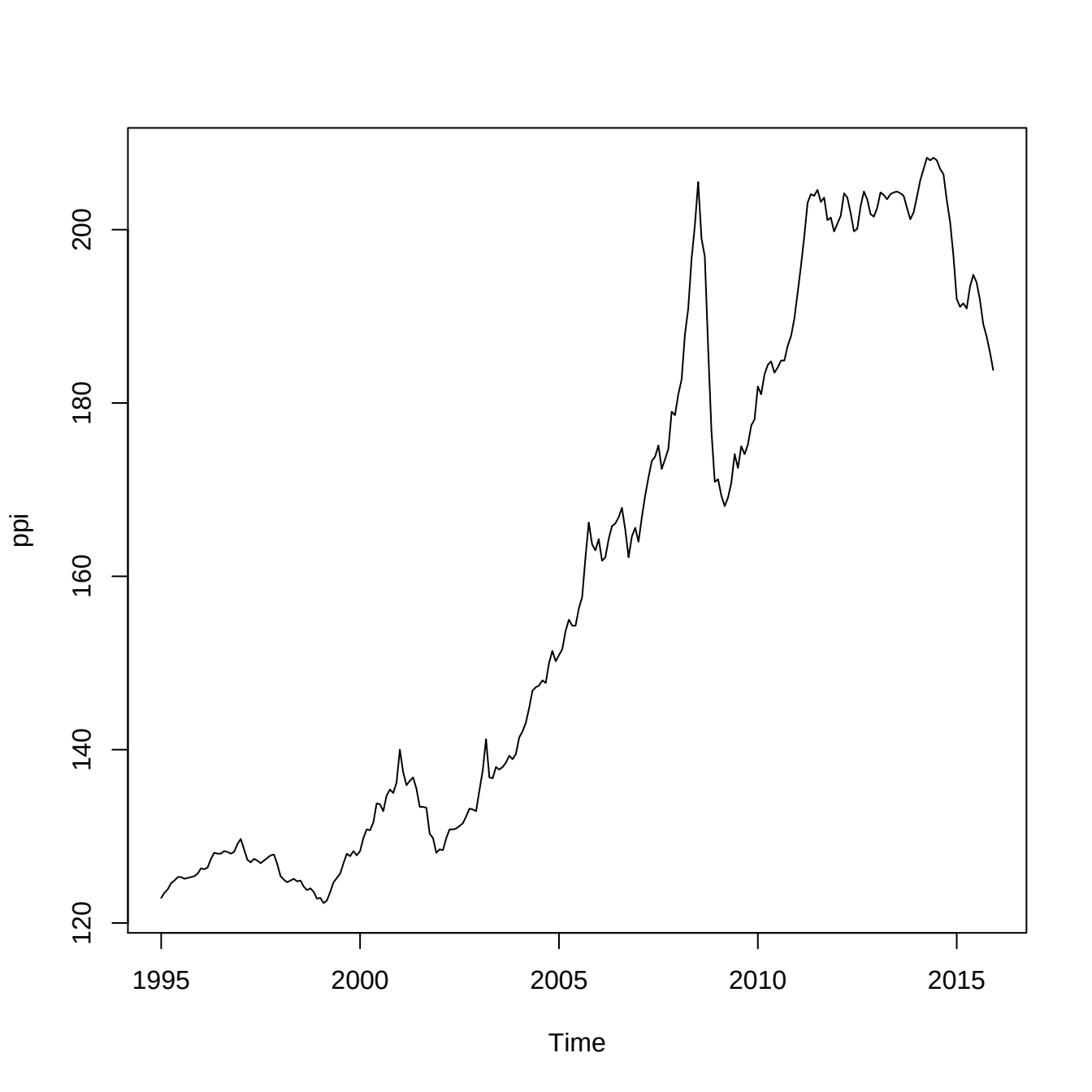

m2
4.0e+12
6.0e+12
8.0e+12
1.0e+13
1.2e+13
1995
2000
2005
2010
2015
Time

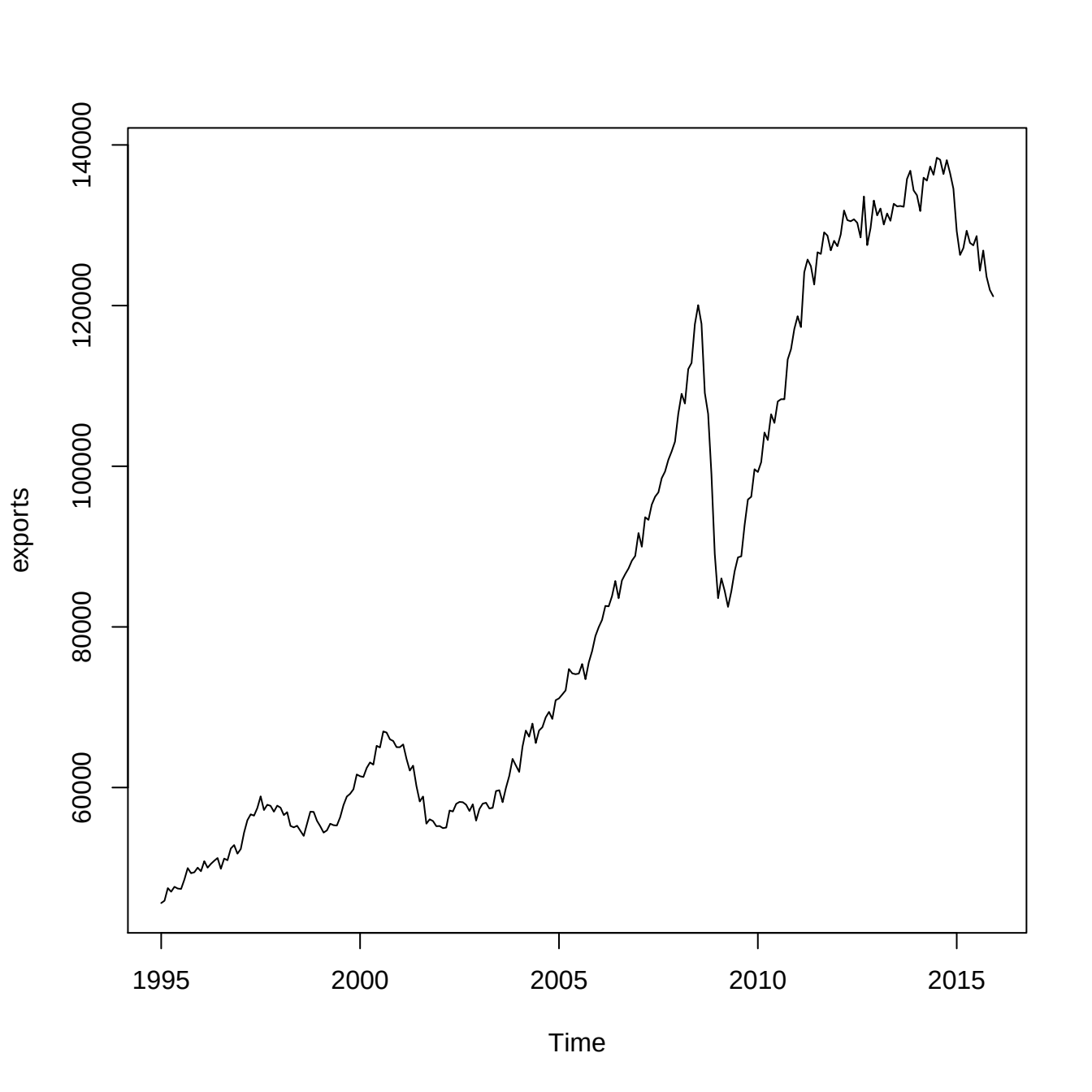

consumerSentiment
60
70
80
90
100
110
1995
2000
2005
2010
2015
Time

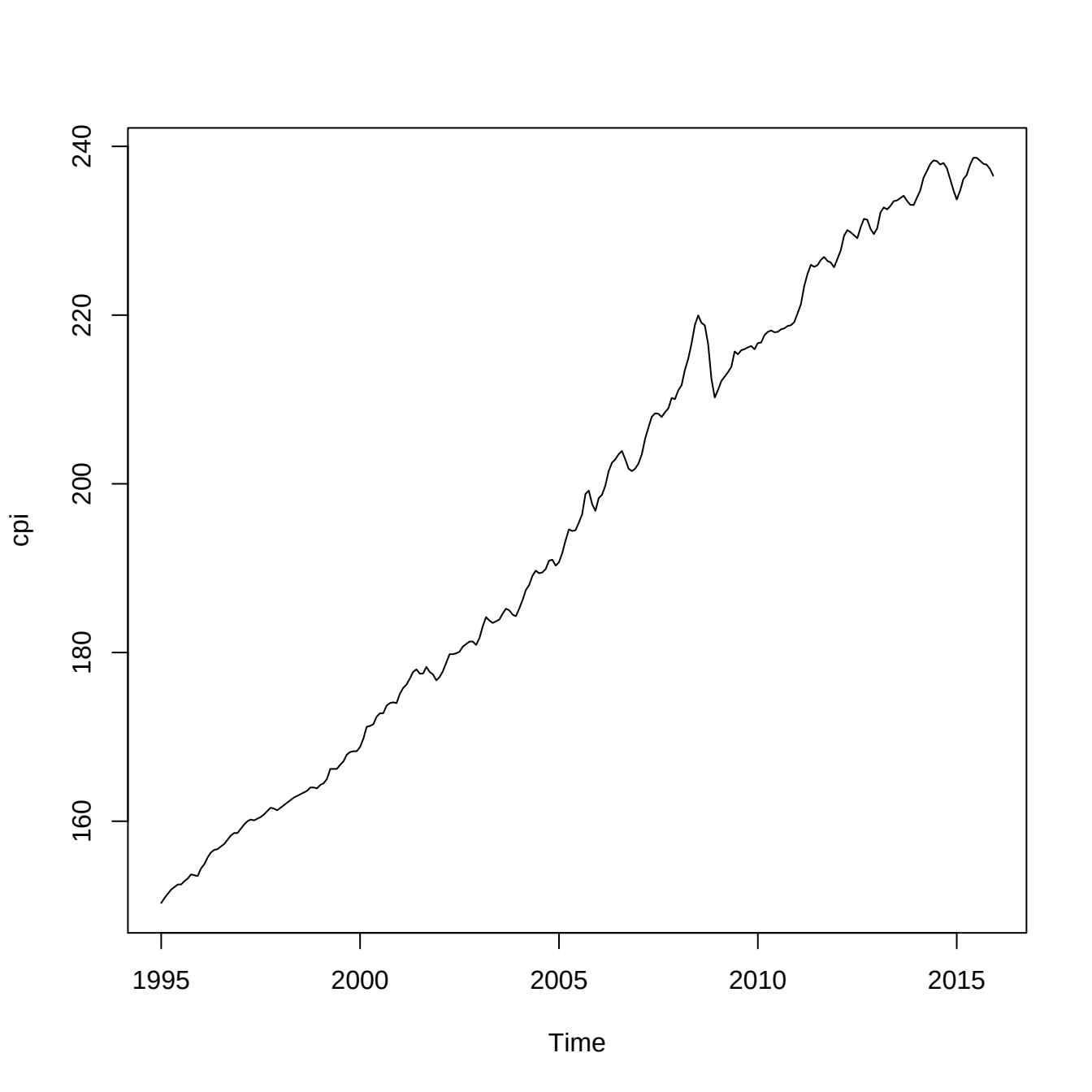

inflation
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
1995
2000
2005
2010
2015
Time

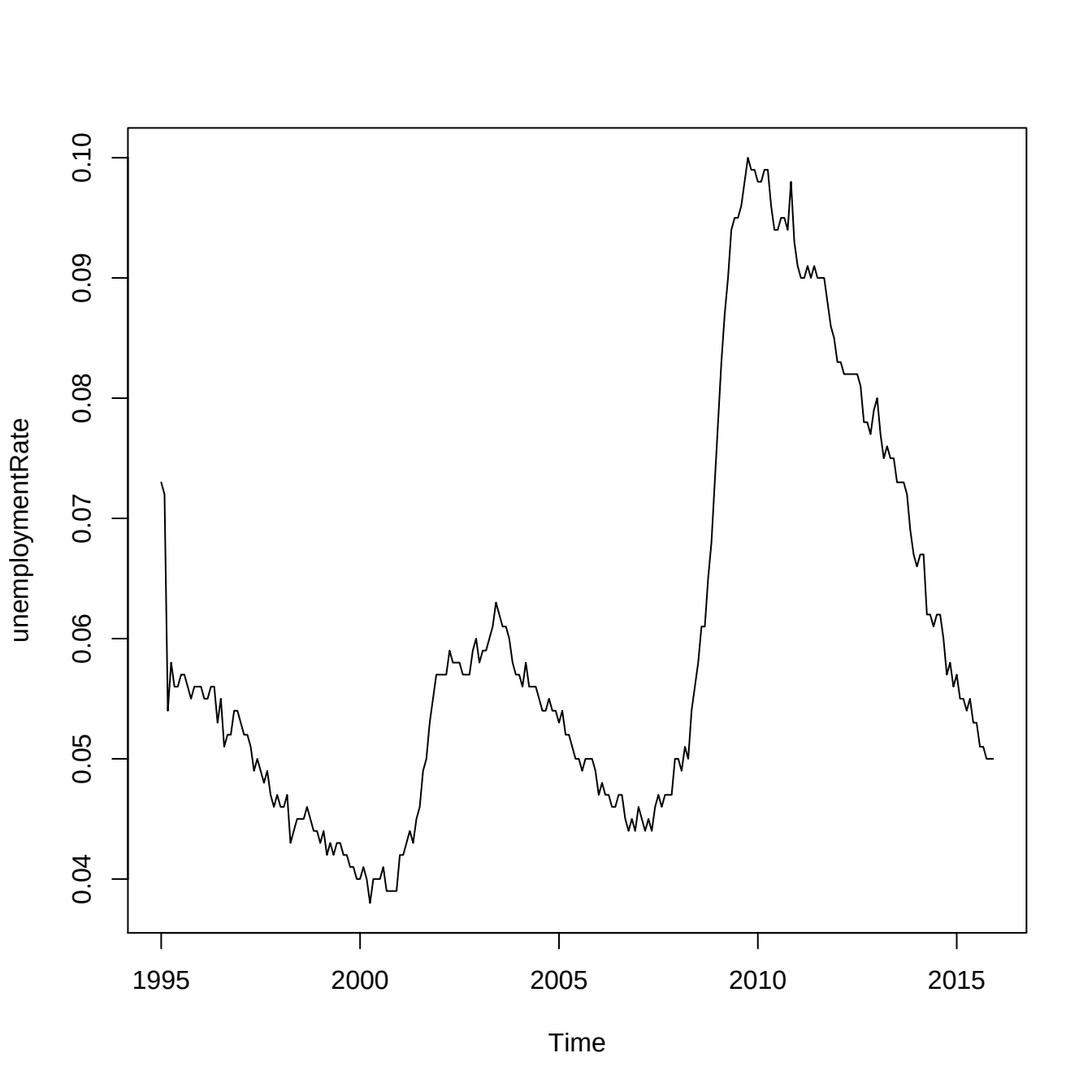

imports
60000
80000
100000
140000
180000
1995
2000
2005
2010
2015
Time

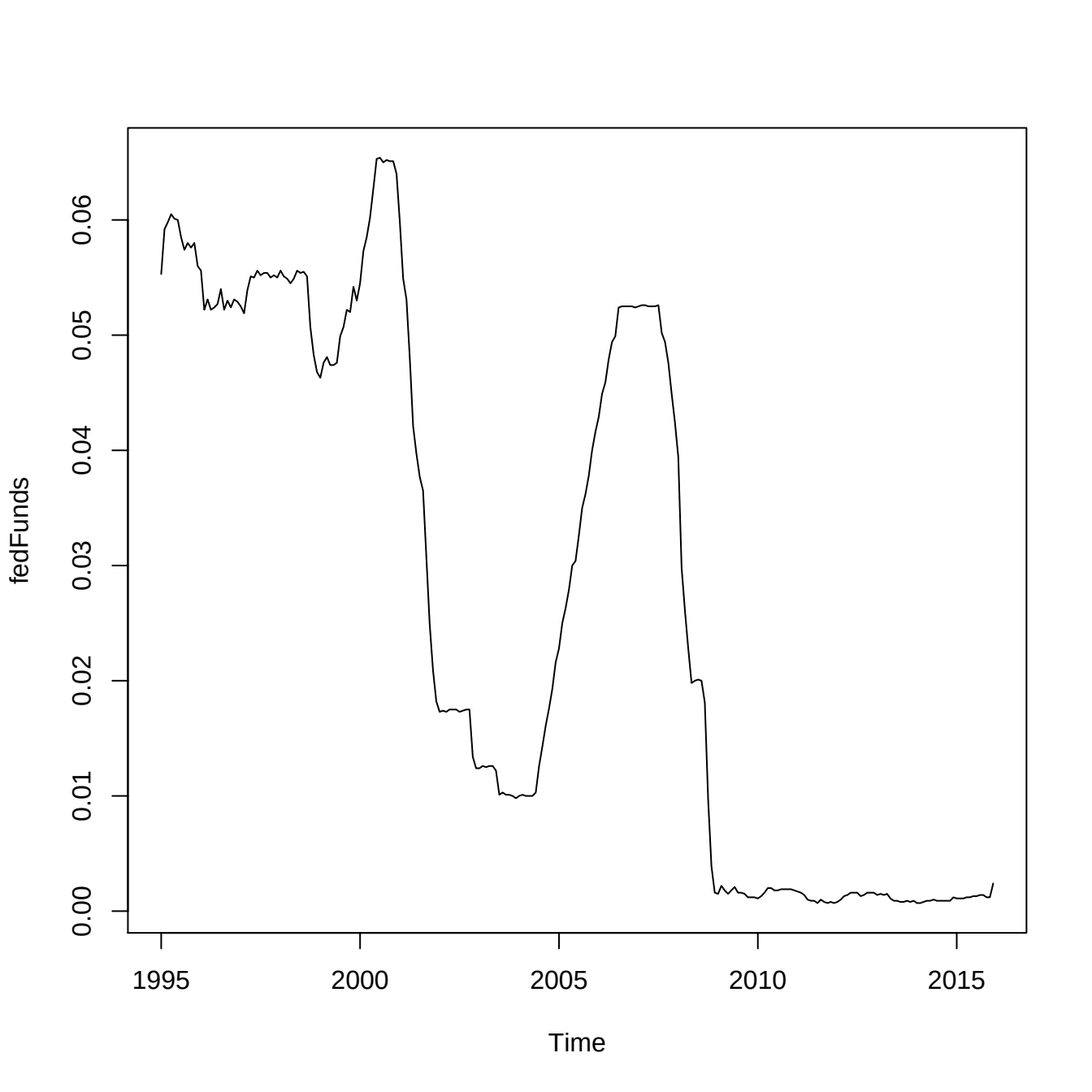

oilPrices
20
40
60
80
100
120
1995
2000
2005
2010
2015
Time


ppi
120
140
160
180
200
1995
2000
2005
2010
2015
Time

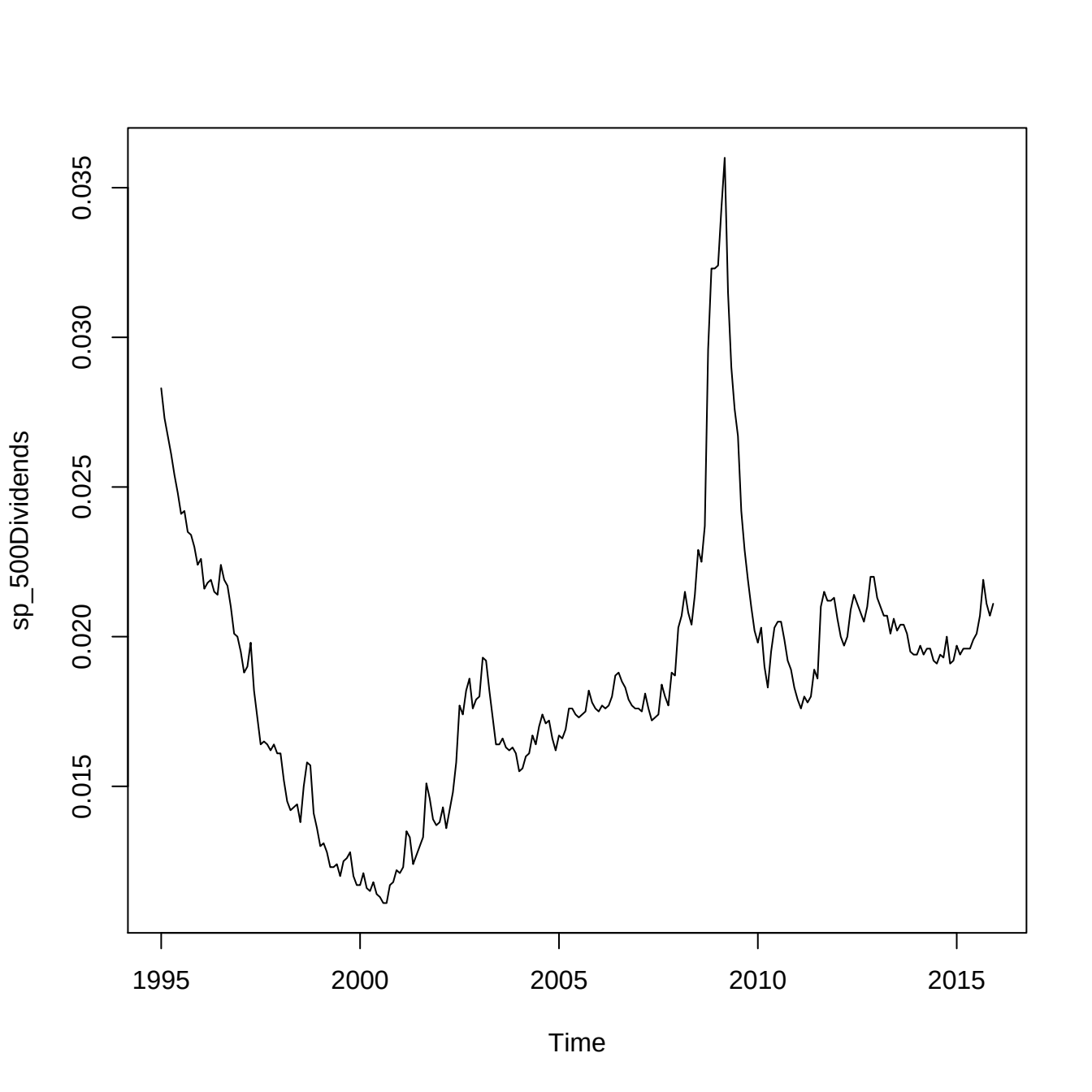

exports
60000
80000
100000
120000
140000
1995
2000
2005
2010
2015
Time

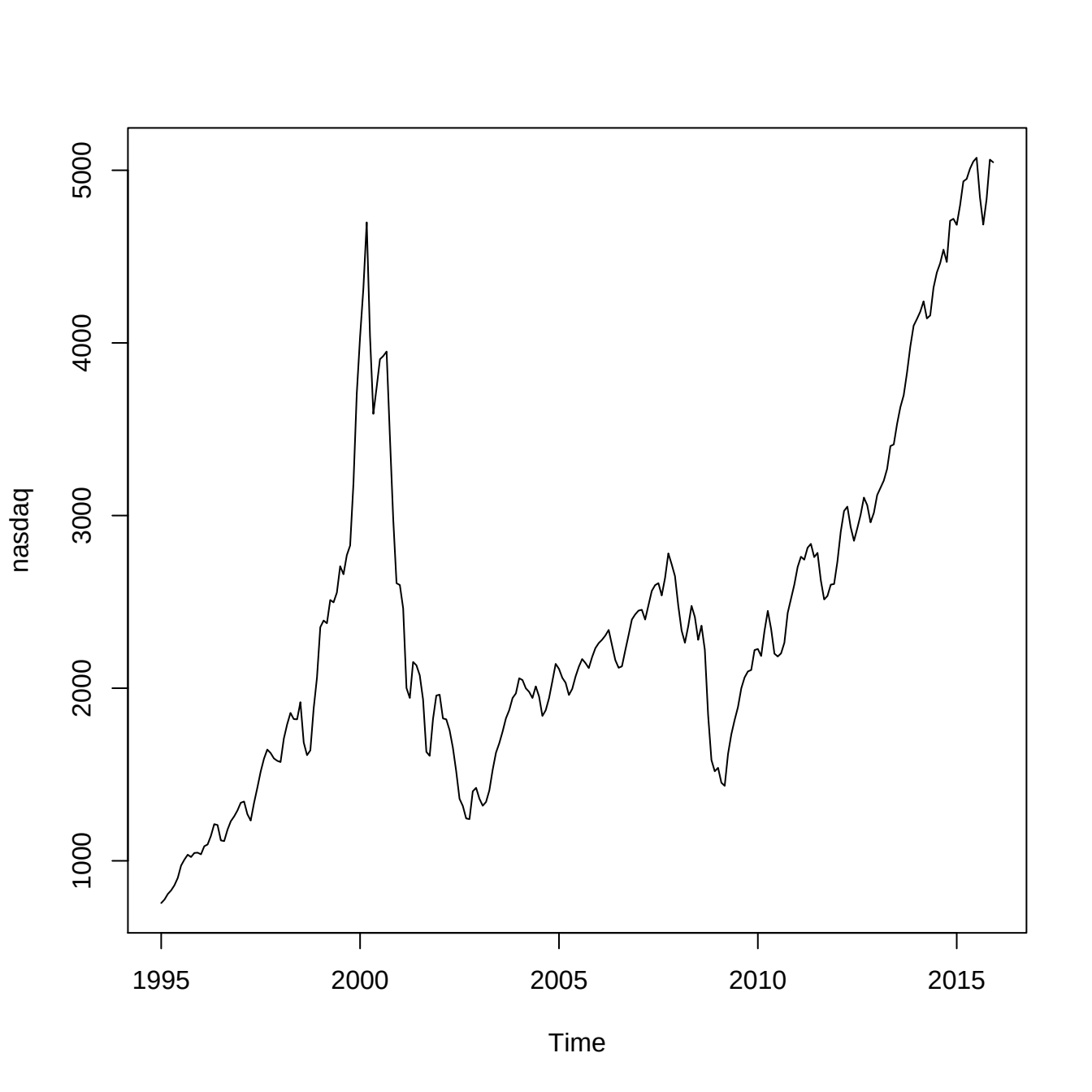

cpi
160
180
200
220
240
1995
2000
2005
2010
2015
Time

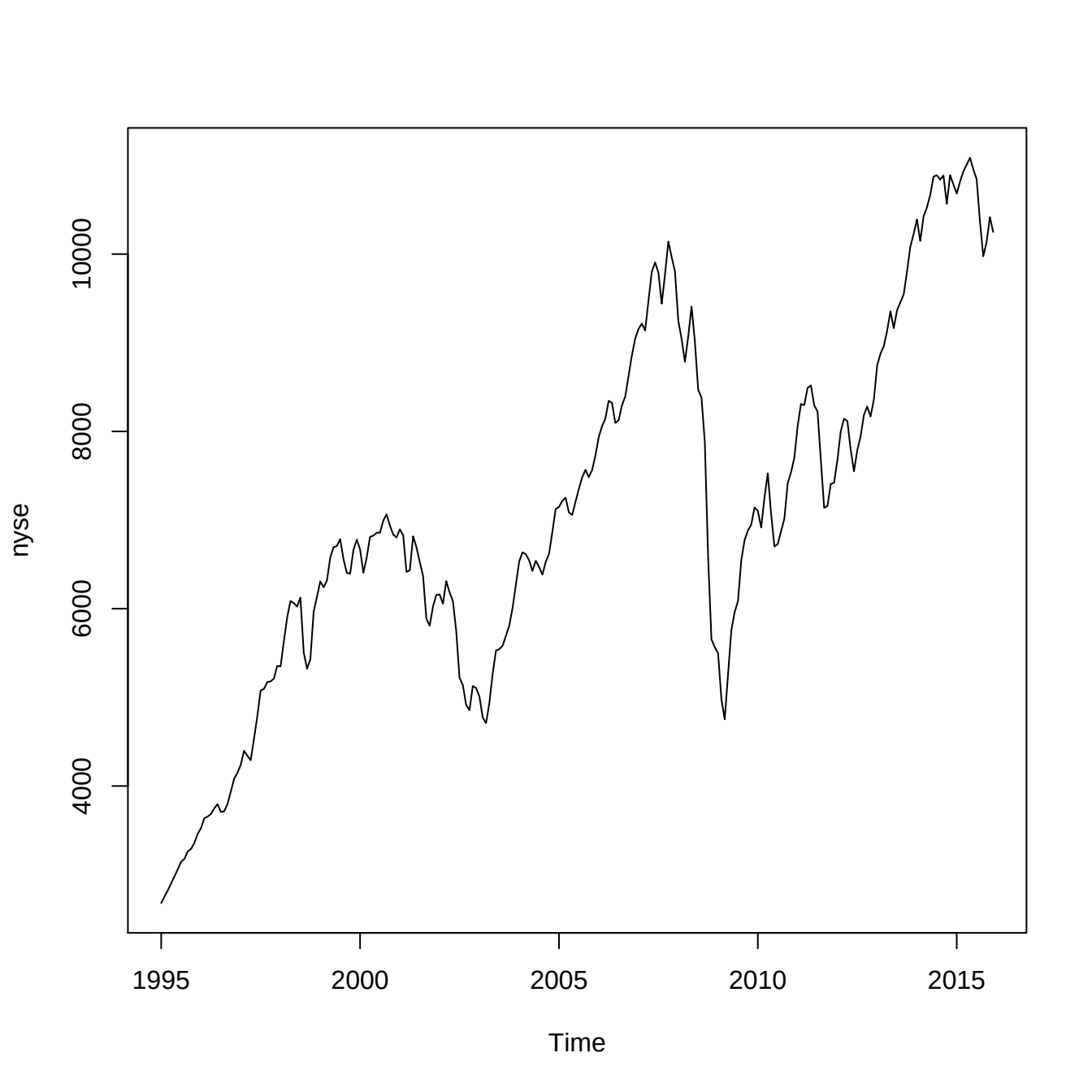

unemploymentRate
0.04
0.05
0.06
0.07
0.08
0.09
0.10
1995
2000
2005
2010
2015
Time

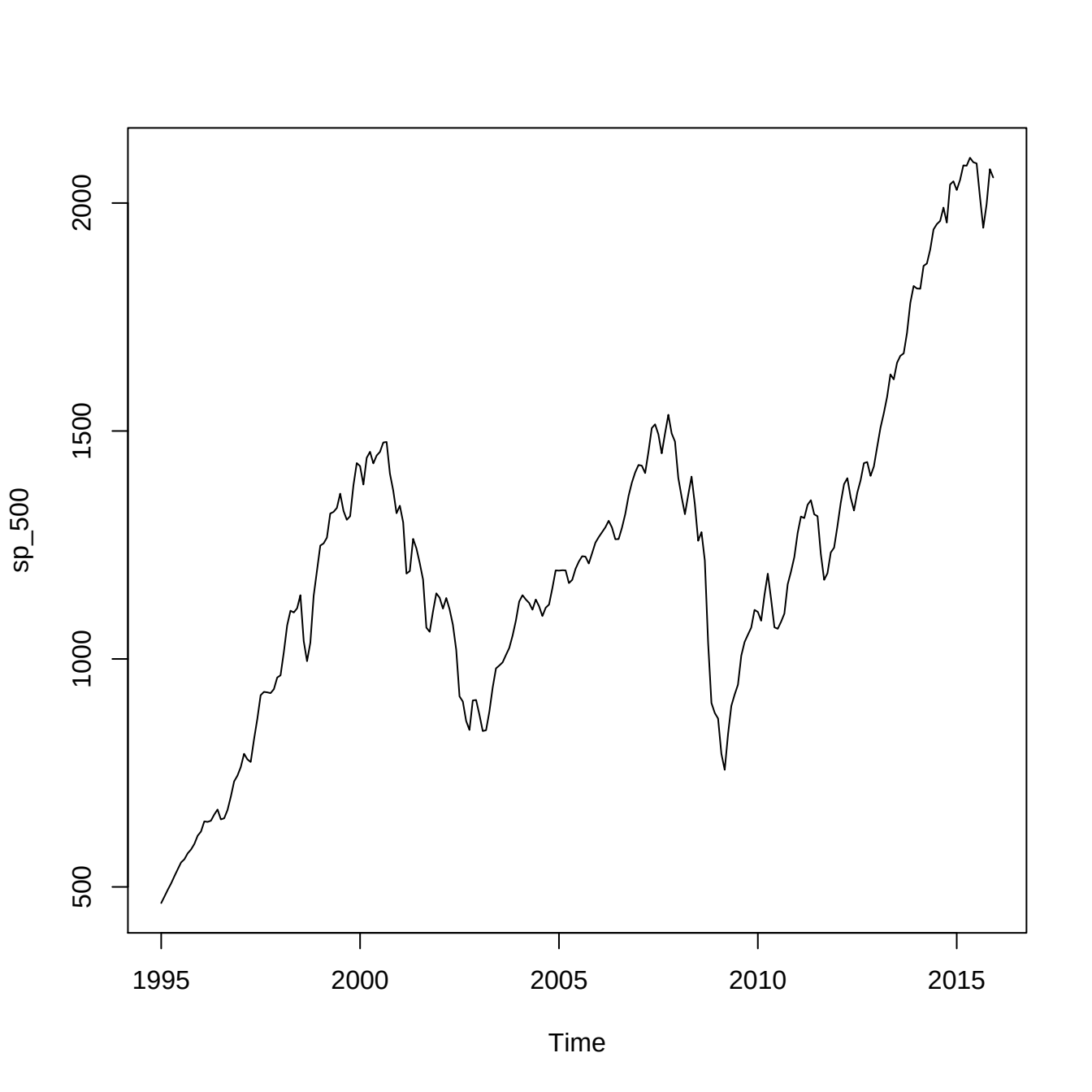

fedFunds
0.00
0.01
0.02
0.03
0.04
0.05
0.06
1995
2000
2005
2010
2015
Time

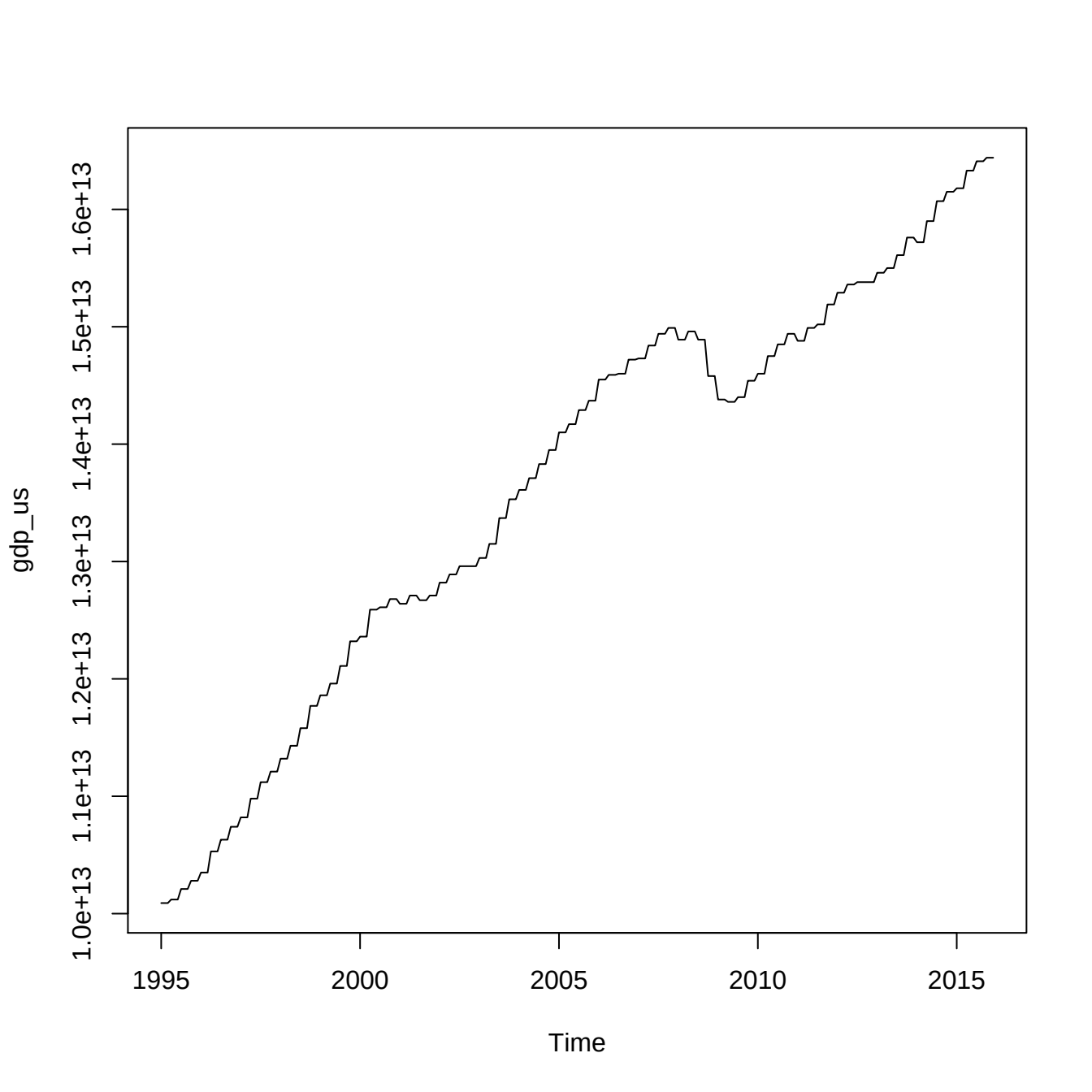
capUtilization
0.85
0.80
0.75
0.70
1995
2000
2005
2010
2015
Time

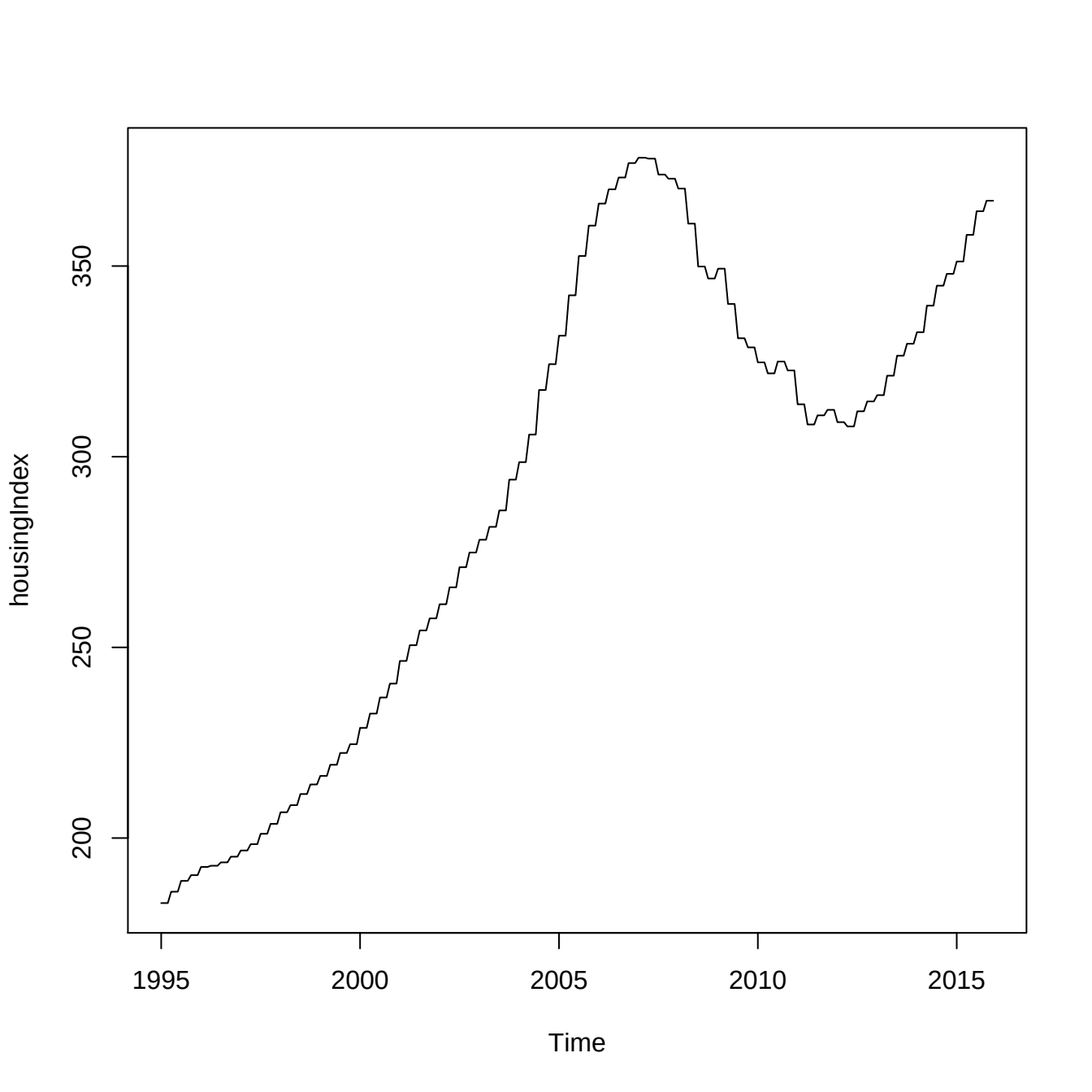

sp_500Dividends
0.015
0.020
0.025
0.030
0.035
1995
2000
2005
2010
2015
Time

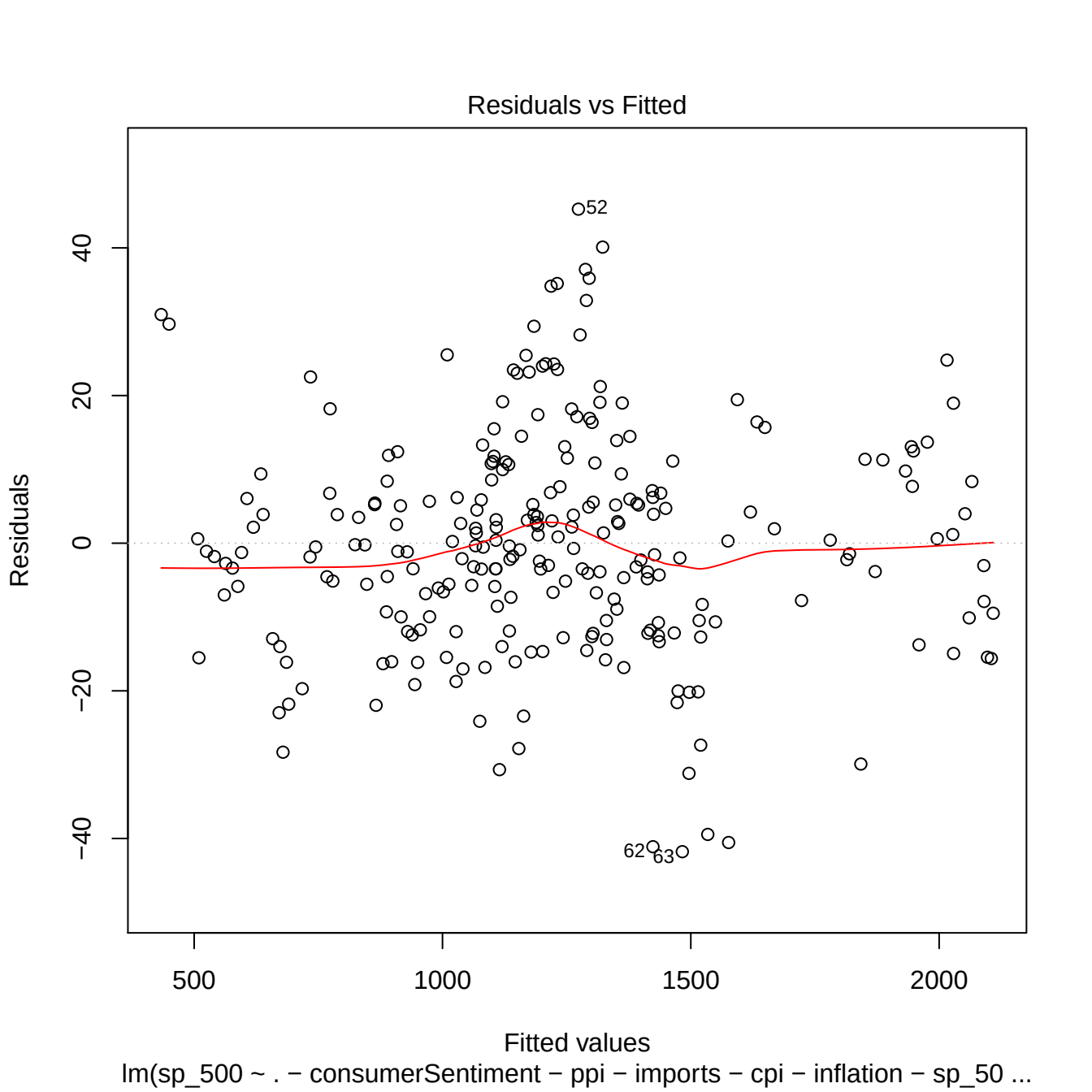

nasdaq
1000
2000
3000
4000
5000
1995
2000
2005
2010
2015
Time

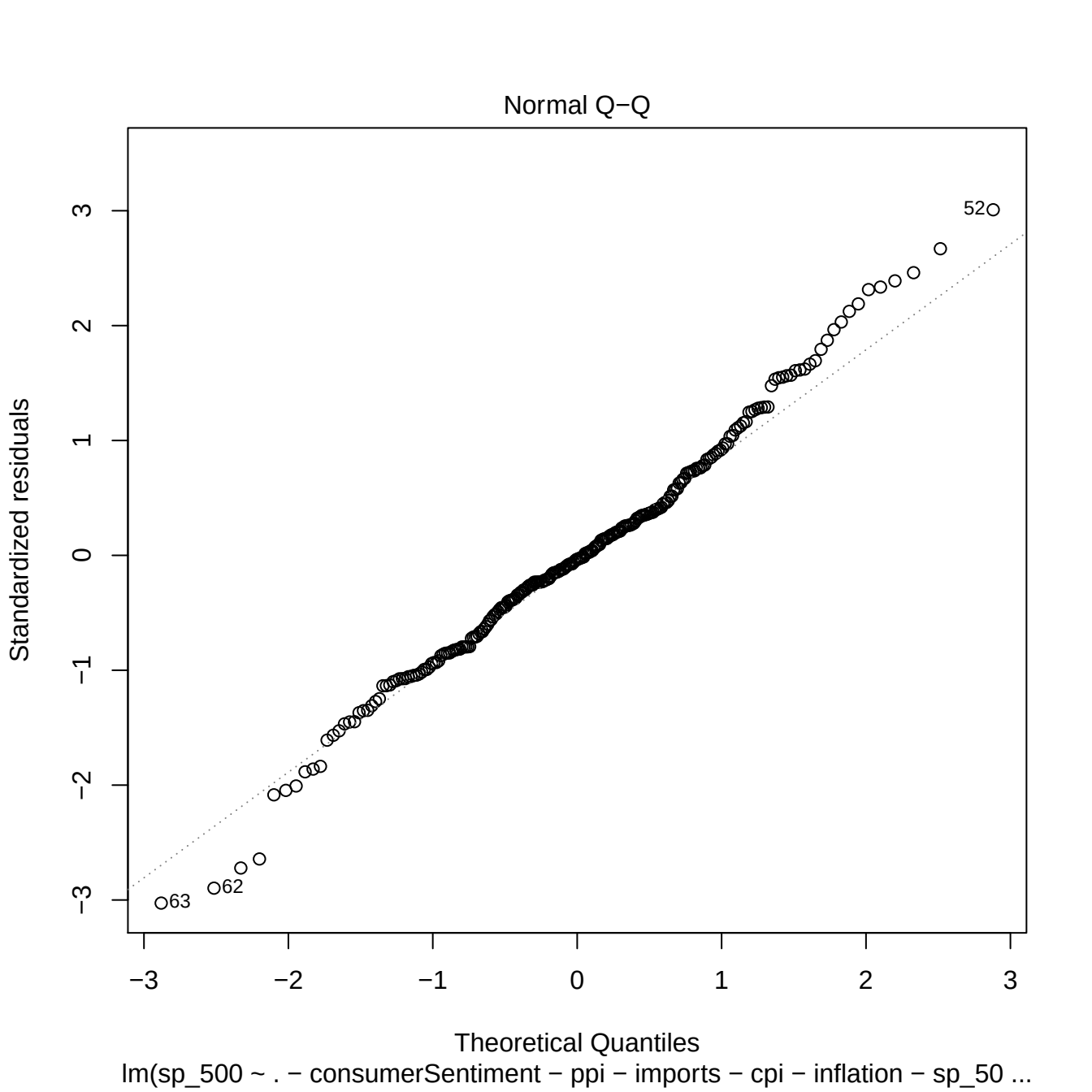

nyse
4000
6000
8000
10000
1995
2000
2005
2010
2015
Time

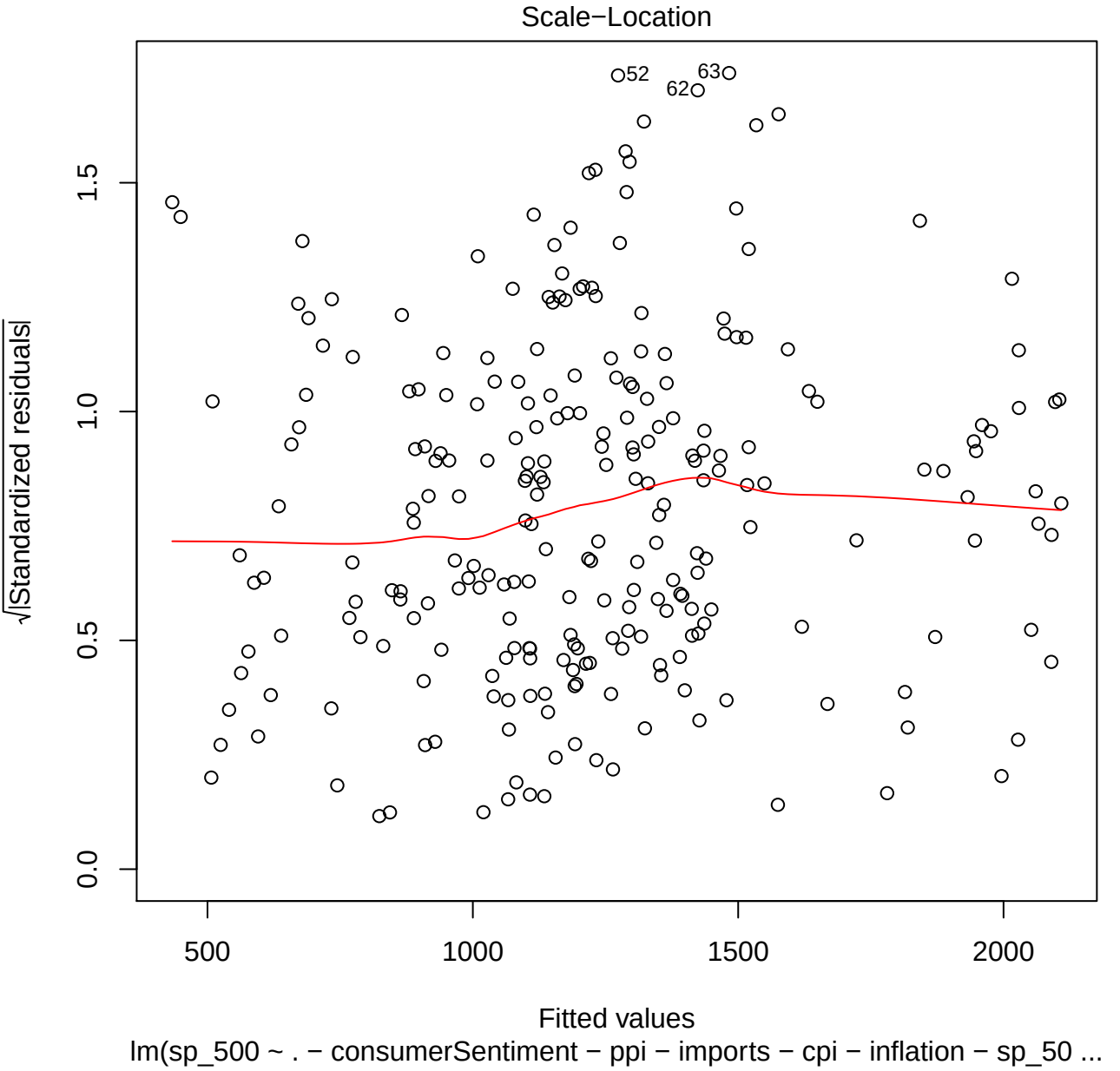

sp_500
500
1000
1500
2000
1995
2000
2005
2010
2015
Time

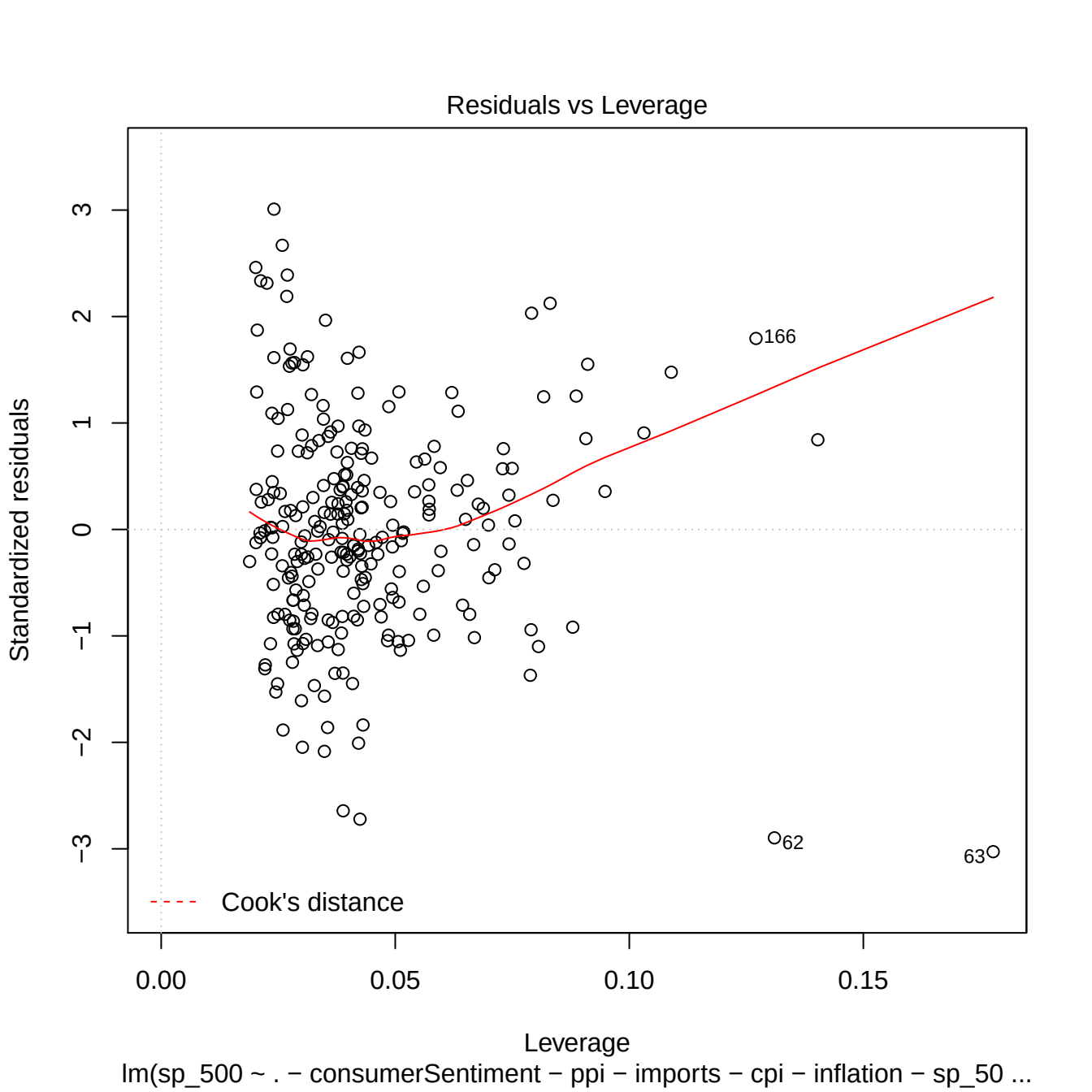

gdp_us
1.0e+13
1.1e+13
1.2e+13
1.3e+13
1.4e+13
1.5e+13
1.6e+13
1995
2000
2005
2010
2015
Time


housingIndex
200
250
300
350
1995
2000
2005
2010
2015
Time

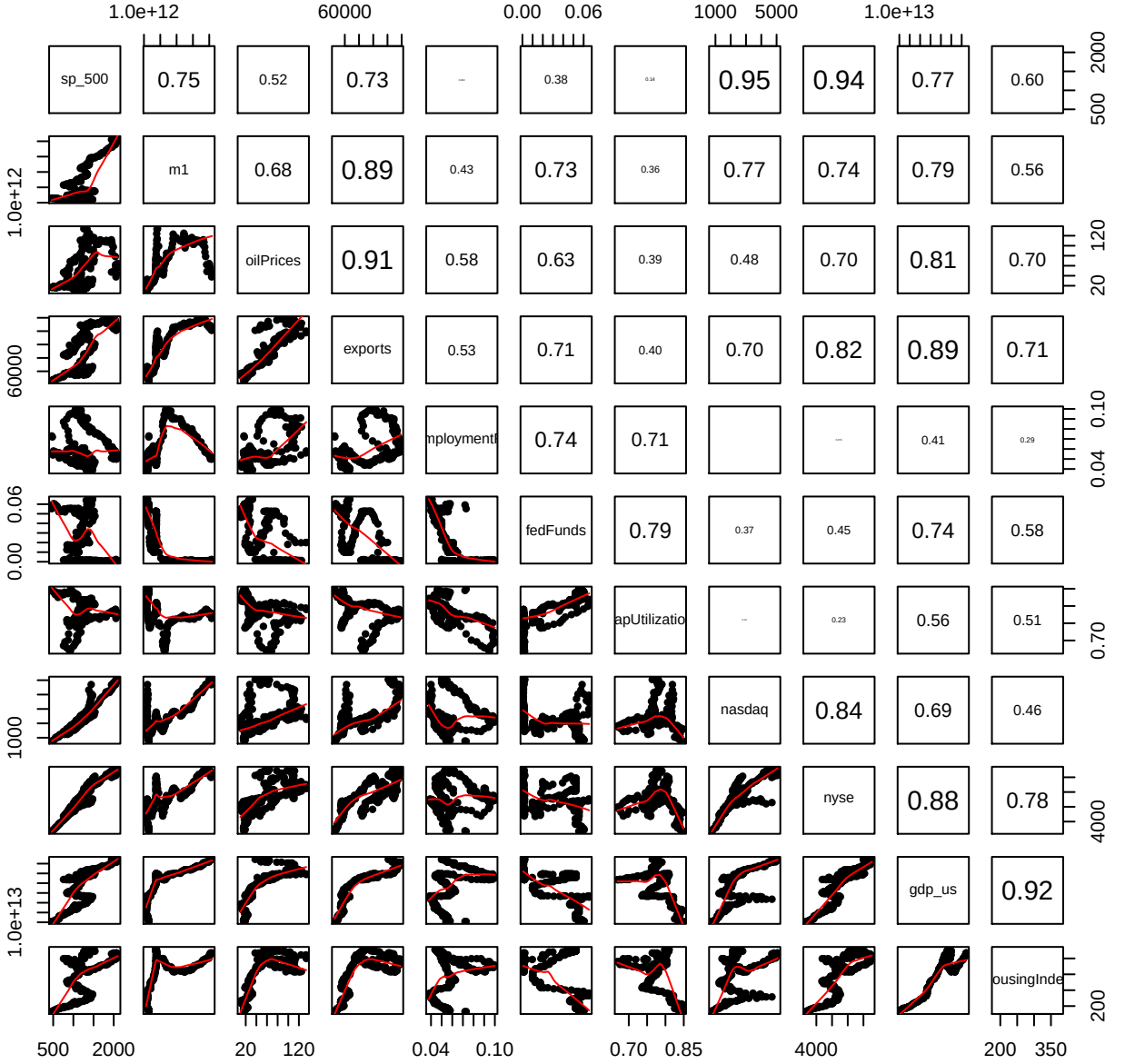

Residuals vs Fitted
Residuals
Fitted values
lm(sp_500 ~ . − consumerSentiment − ppi − imports − cpi − inflation − sp_50 ...
52
62
63
40
20
0
−20
−40
500
1000
1500
2000

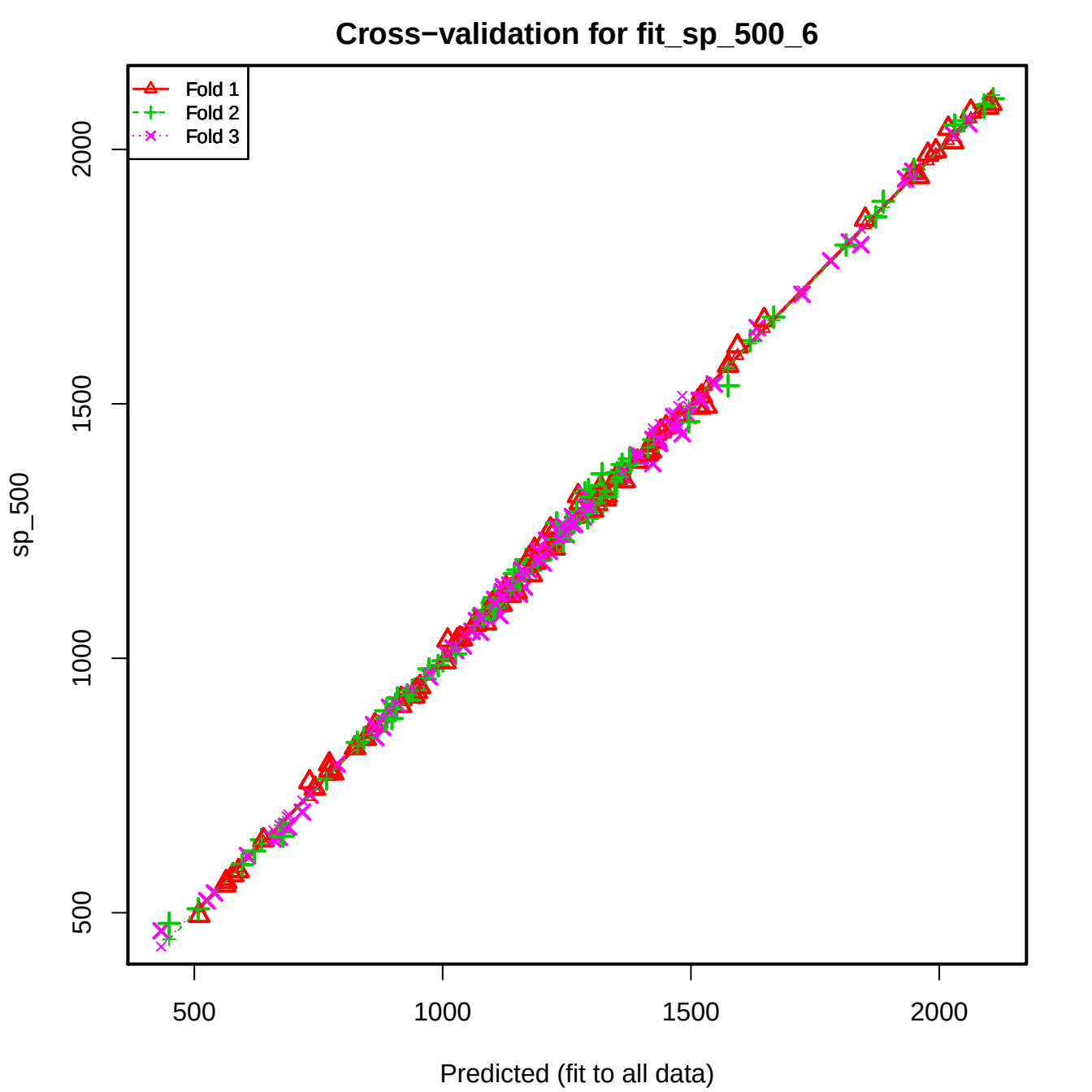

Normal Q−Q
Standardized residuals
Theoretical Quantiles
lm(sp_500 ~ . − consumerSentiment − ppi − imports − cpi − inflation − sp_50 ...
52
62
63
−3
−2
−1
0
1
2
3

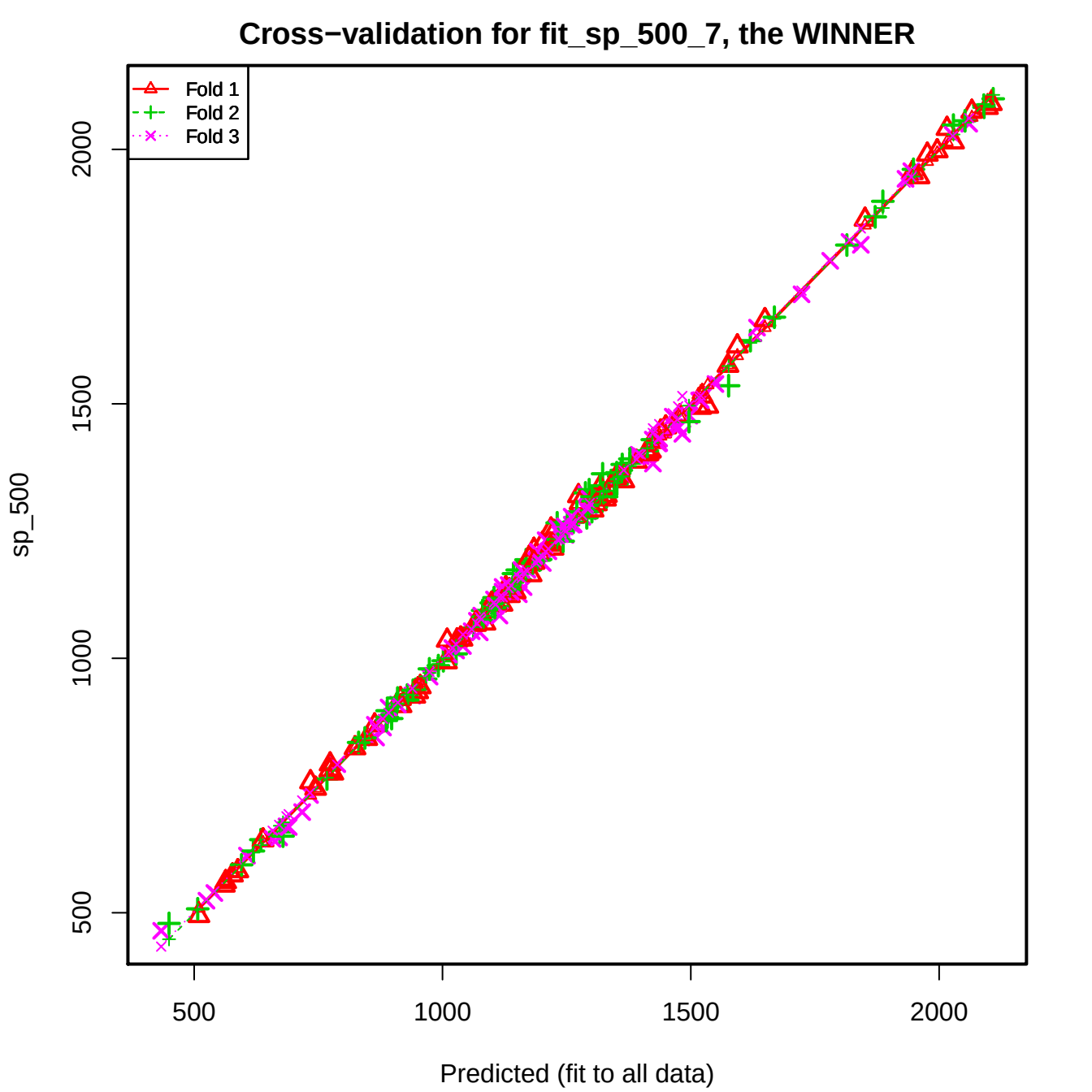

Scale−Location
52
63
62
√|Standardized residuals|
0.0
0.5
1.0
1.5
500
1000
1500
2000
Fitted values
lm(sp_500 ~ . − consumerSentiment − ppi − imports − cpi − inflation − sp_50 ...

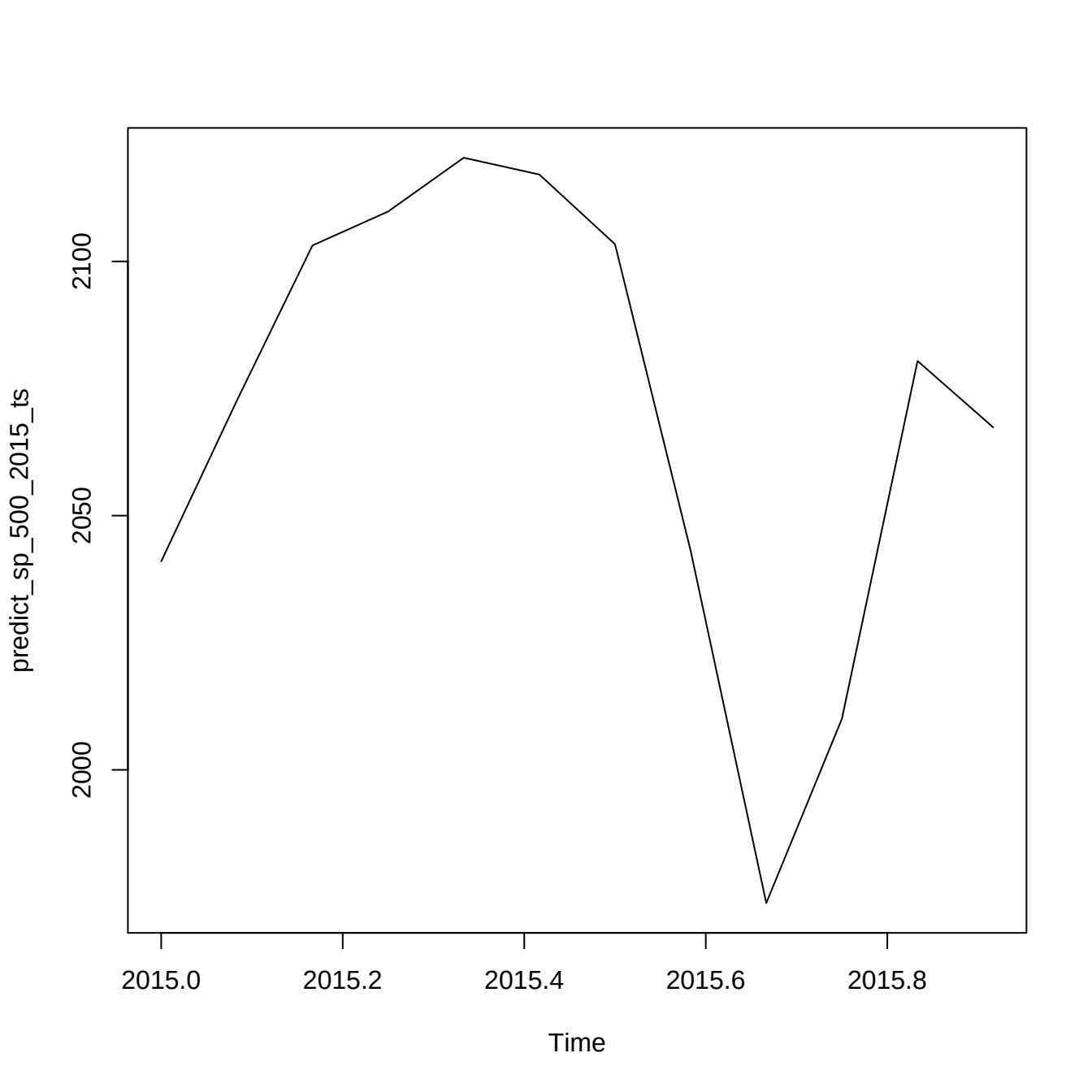

Residuals vs Leverage
Standardized residuals
3
2
1
0
−1
−2
−3
166
62
63
Cook's distance
0.00
0.05
0.10
0.15
Leverage
lm(sp_500 ~ . − consumerSentiment − ppi − imports − cpi − inflation − sp_50 ...

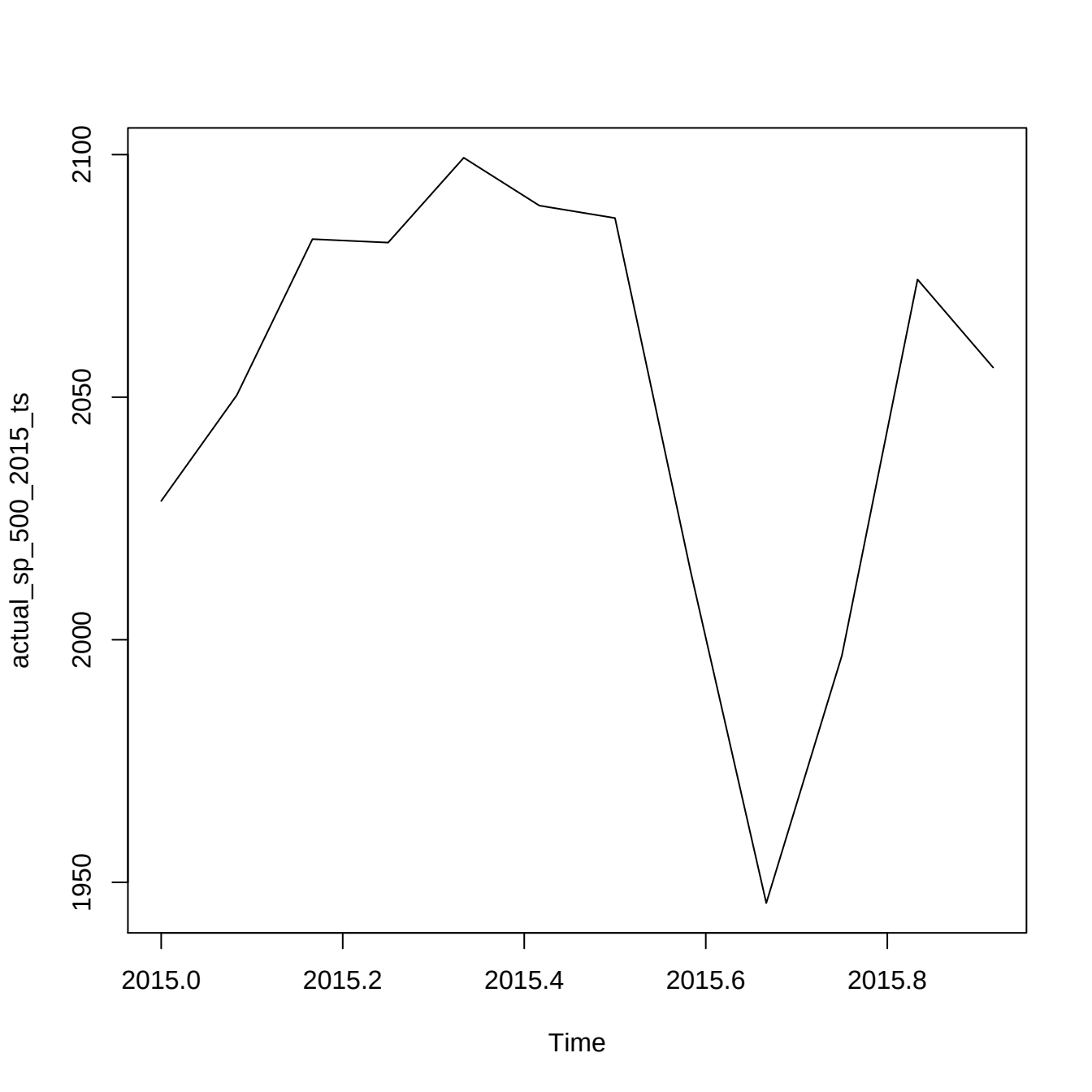
SP_500 Scatter Plot Matrix for fit_sp_500_7

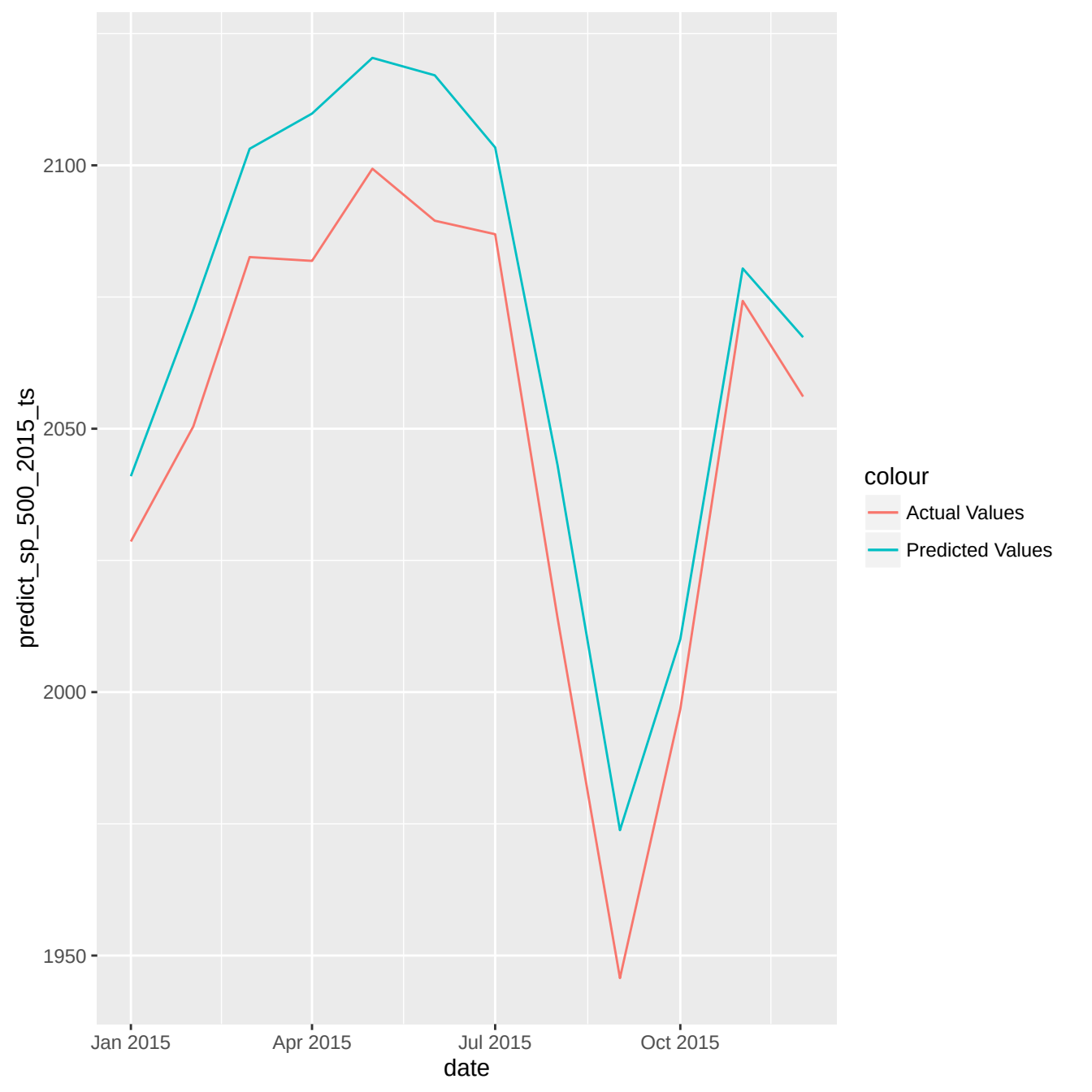



Cross−validation for fit_sp_500_6
Fold 1
Fold 2
Fold 3
sp_500
500
1000
1500
2000
Predicted (fit to all data)


Cross−validation for fit_sp_500_7, the WINNER
Fold 1
Fold 2
Fold 3
sp_500
500
1000
1500
2000
Predicted (fit to all data)


predict_sp_500_2015_ts
2000
2050
2100
2015.0
2015.2
2015.4
2015.6
2015.8
Time


actual_sp_500_2015_ts
2100
2050
2000
1950
2015.0
2015.2
2015.4
2015.6
2015.8
Time


predict_sp_500_2015_ts
2100
2050
2000
1950
Jan 2015
Apr 2015
Jul 2015
Oct 2015
date
colour
Actual Values
Predicted Values