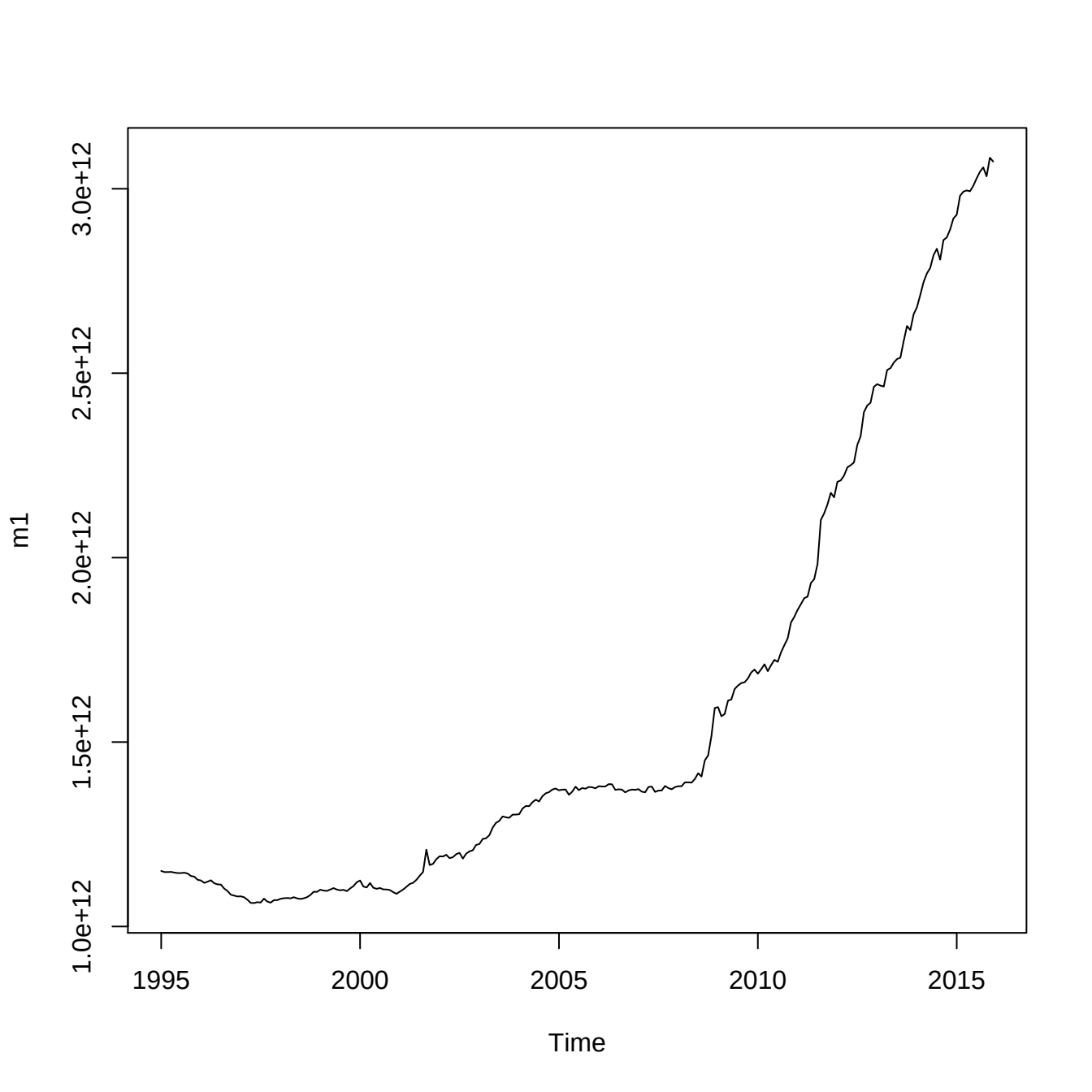
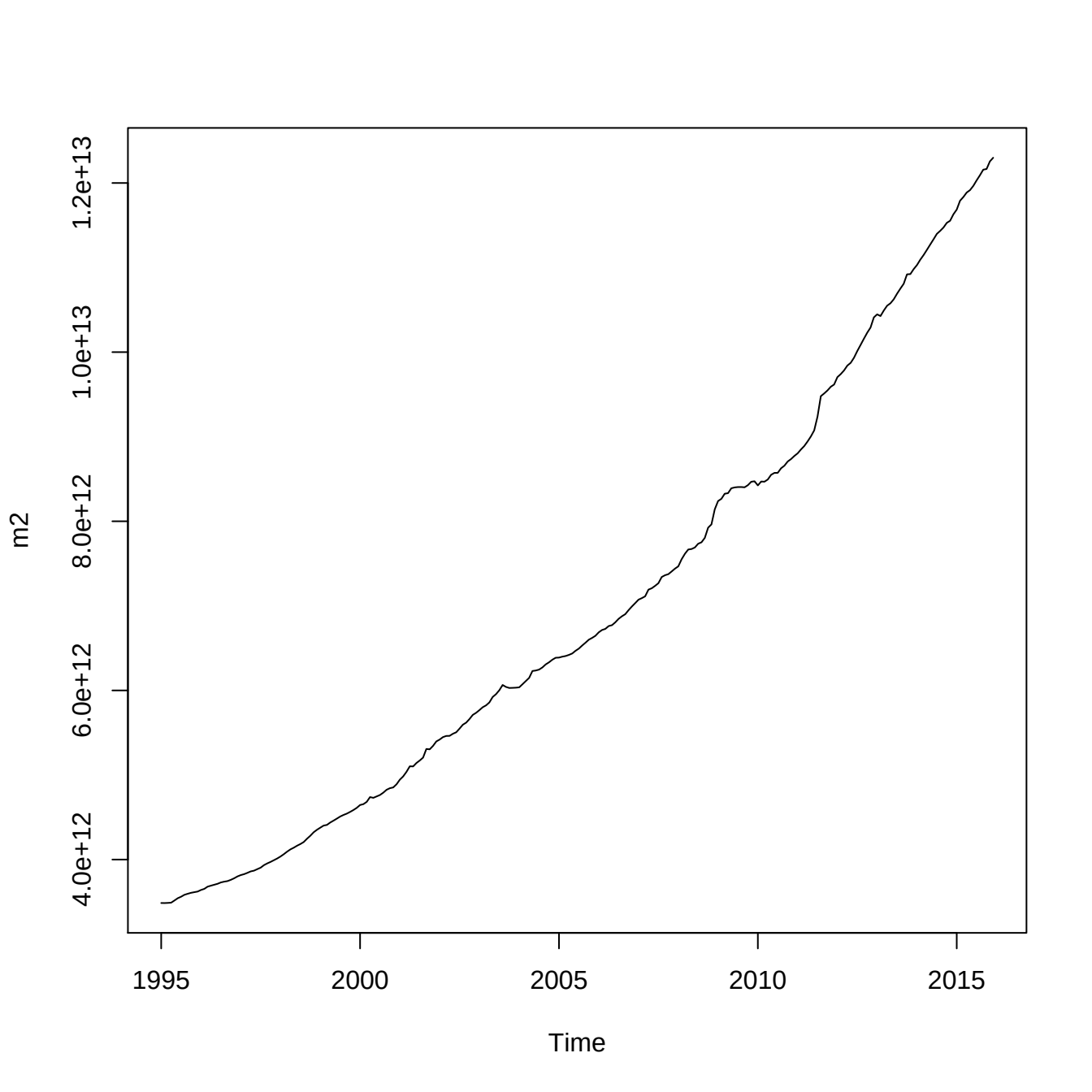
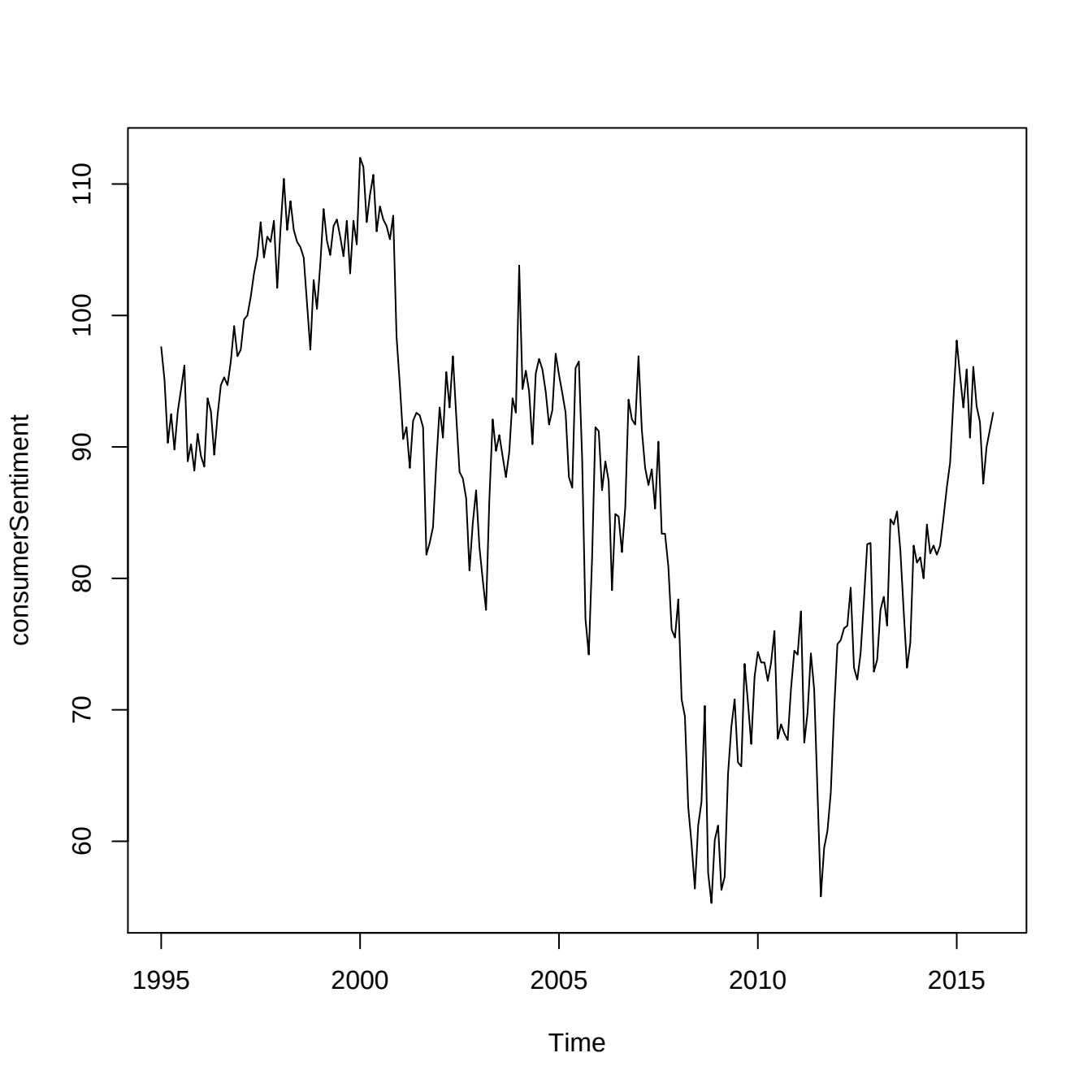
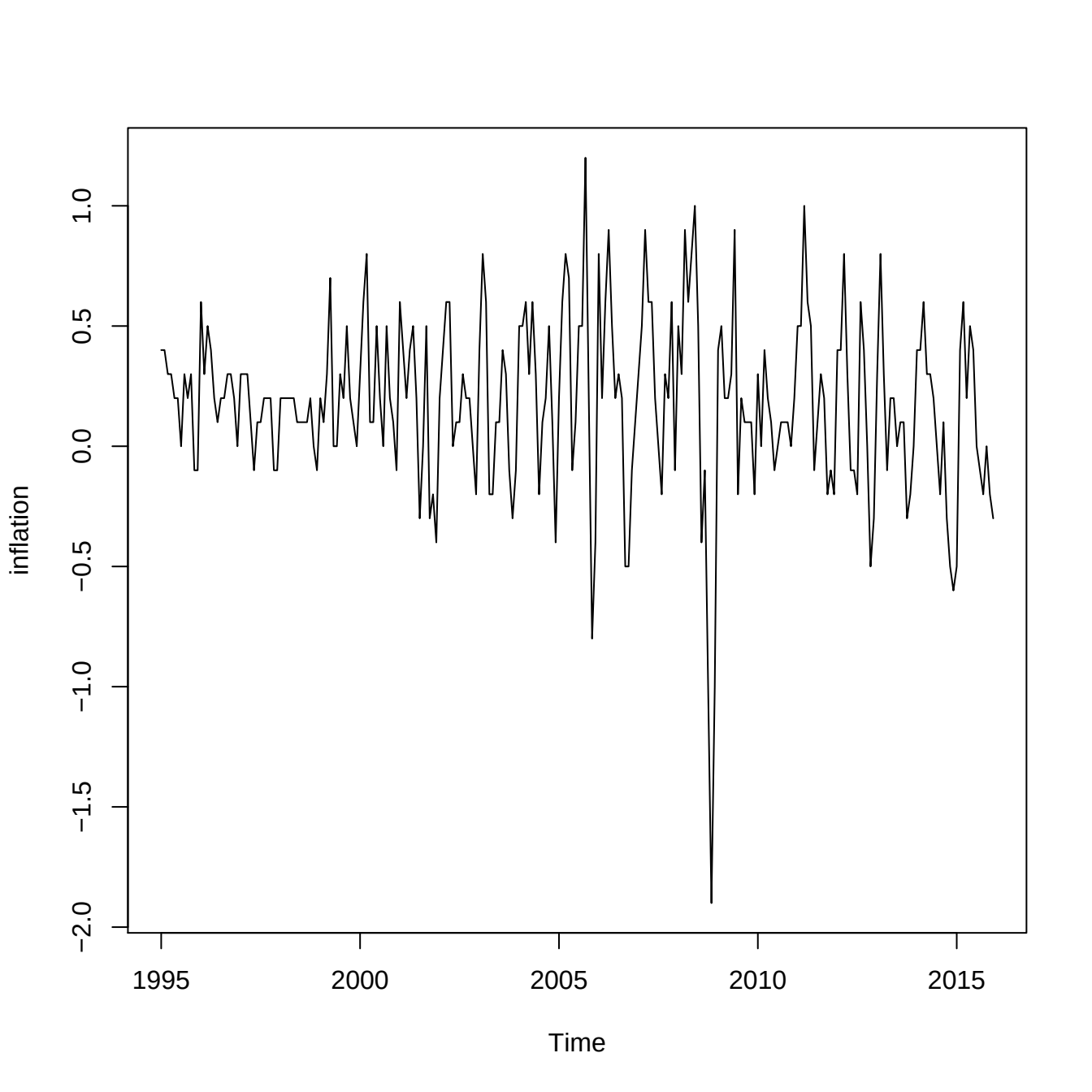
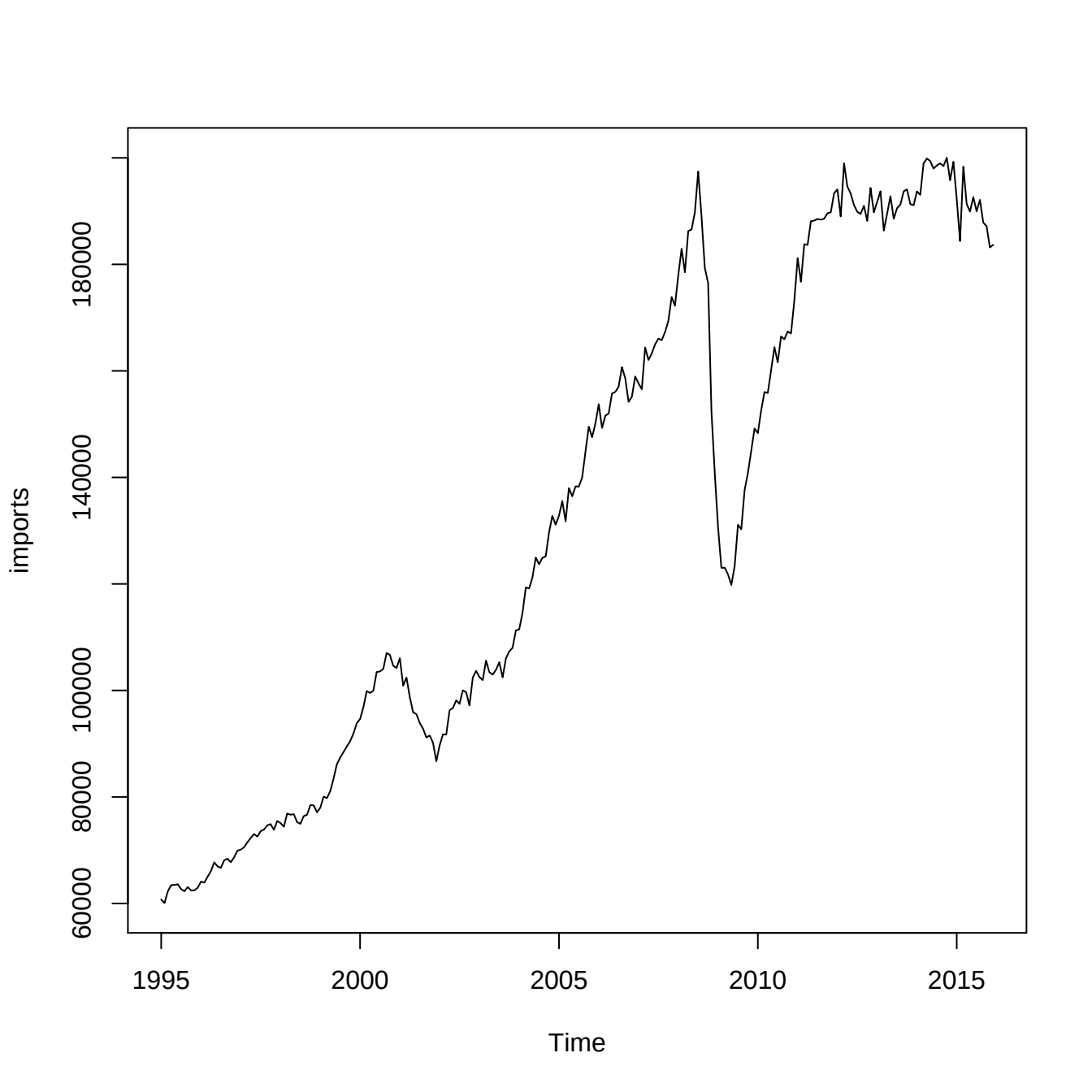
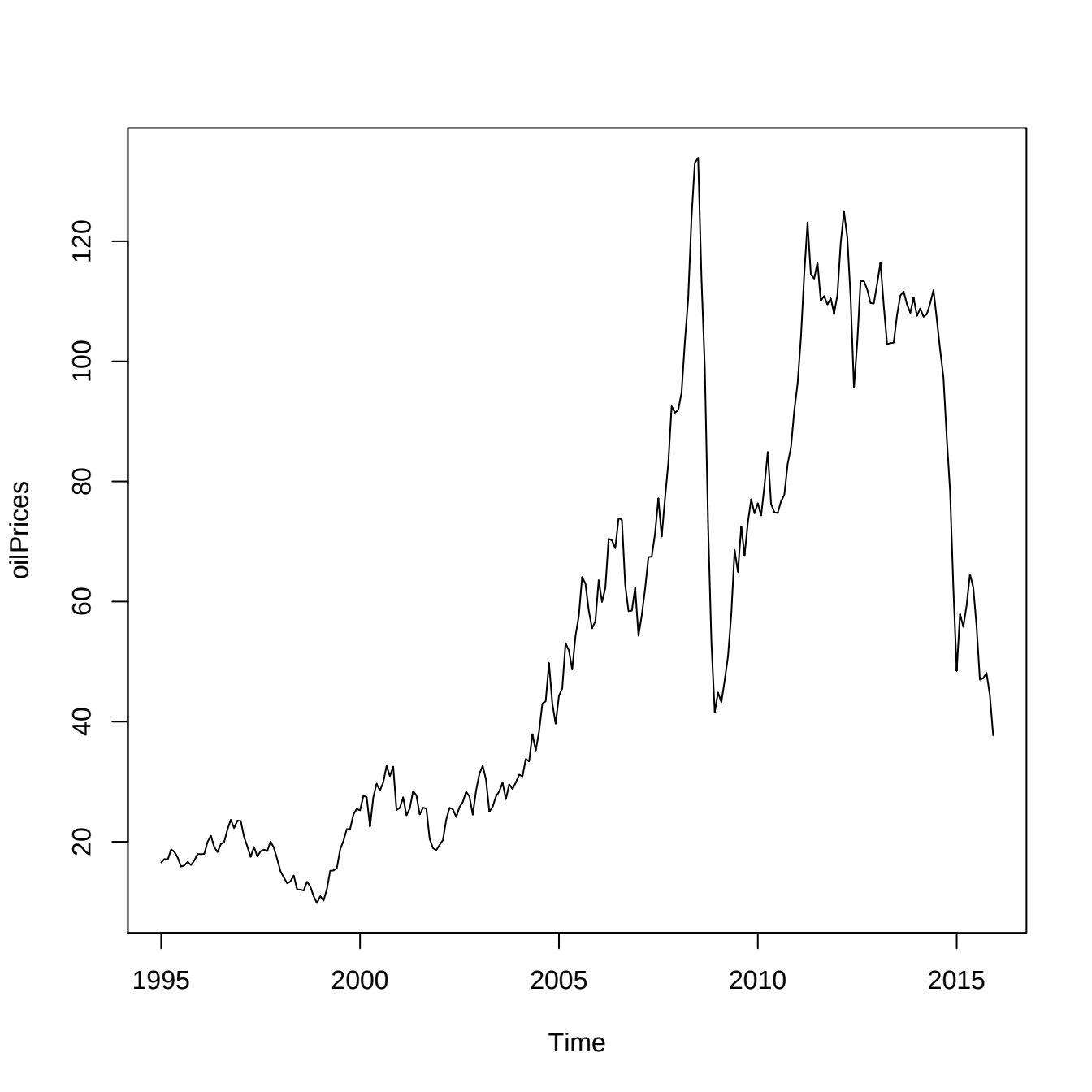

m1
1.0e+12
1.5e+12
2.0e+12
2.5e+12
3.0e+12
1995
2000
2005
2010
2015
Time

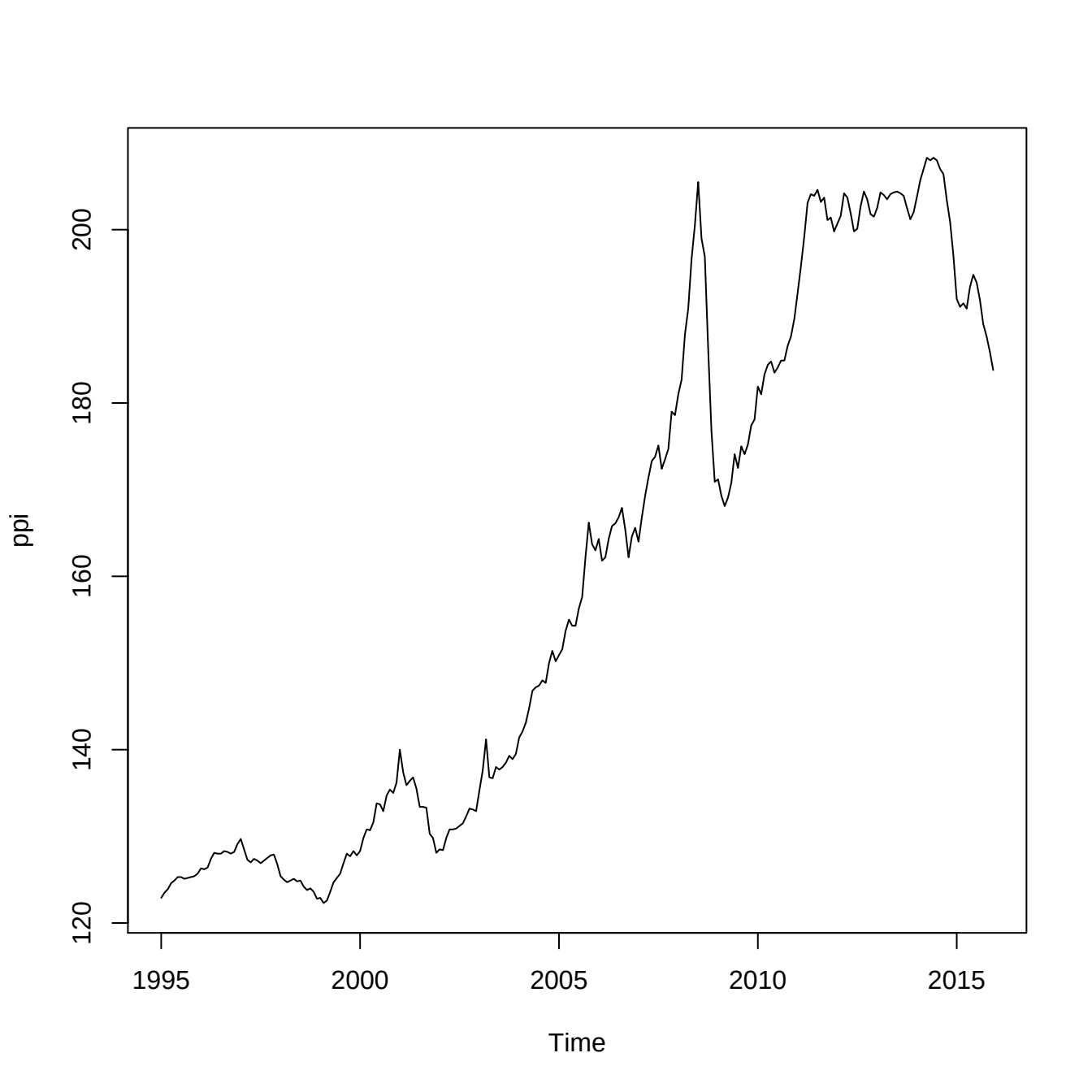

m2
4.0e+12
6.0e+12
8.0e+12
1.0e+13
1.2e+13
1995
2000
2005
2010
2015
Time

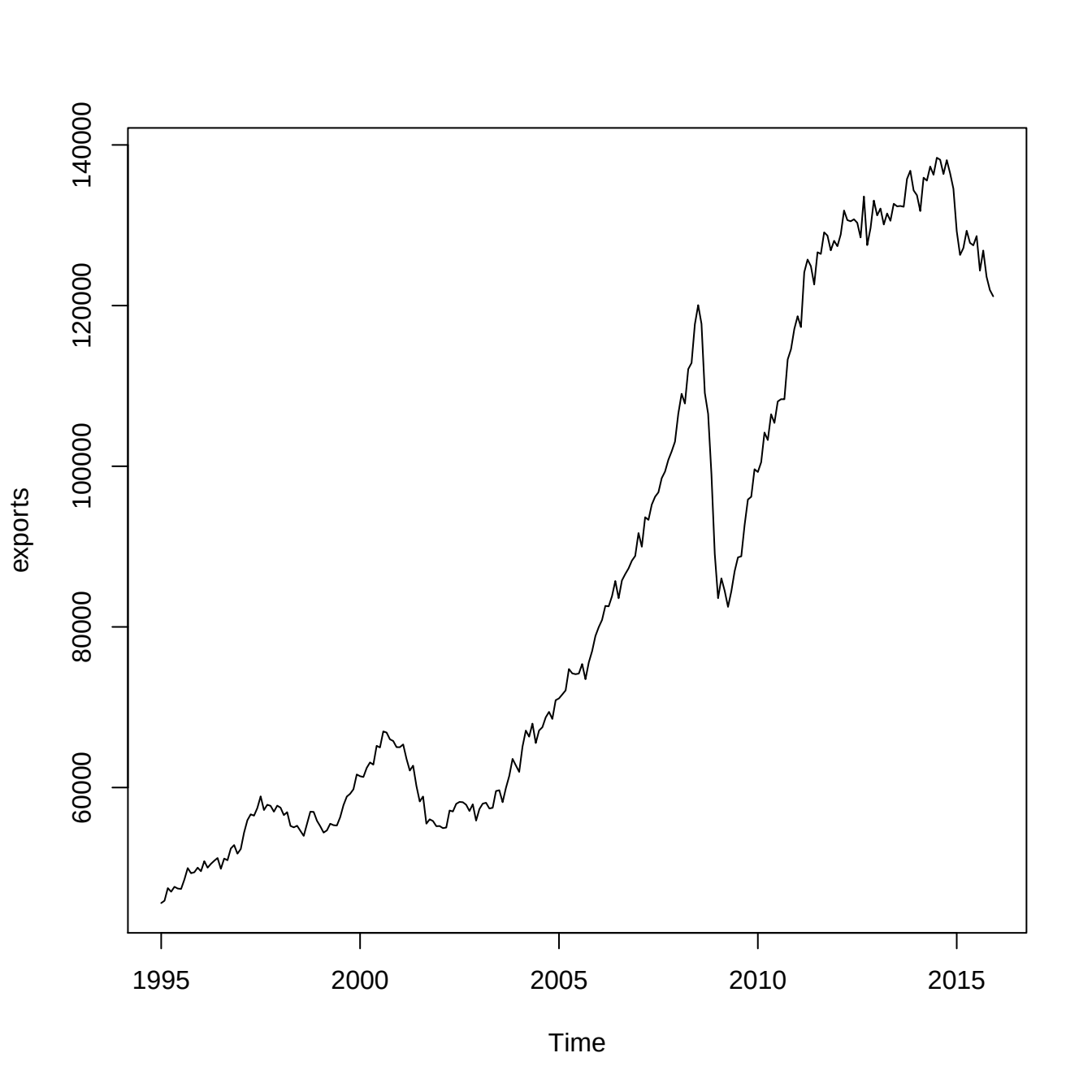

consumerSentiment
60
70
80
90
100
110
1995
2000
2005
2010
2015
Time

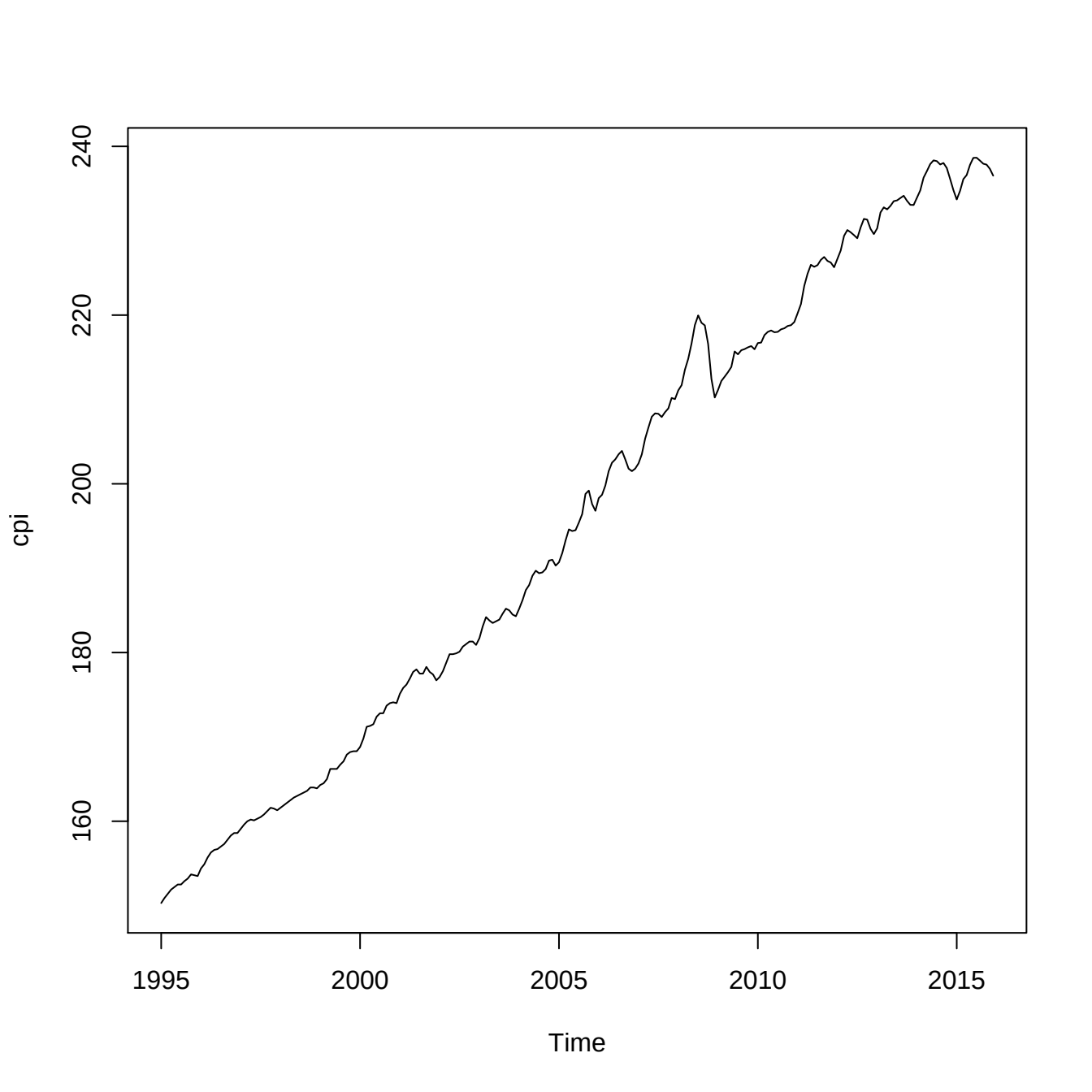

inflation
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
1995
2000
2005
2010
2015
Time

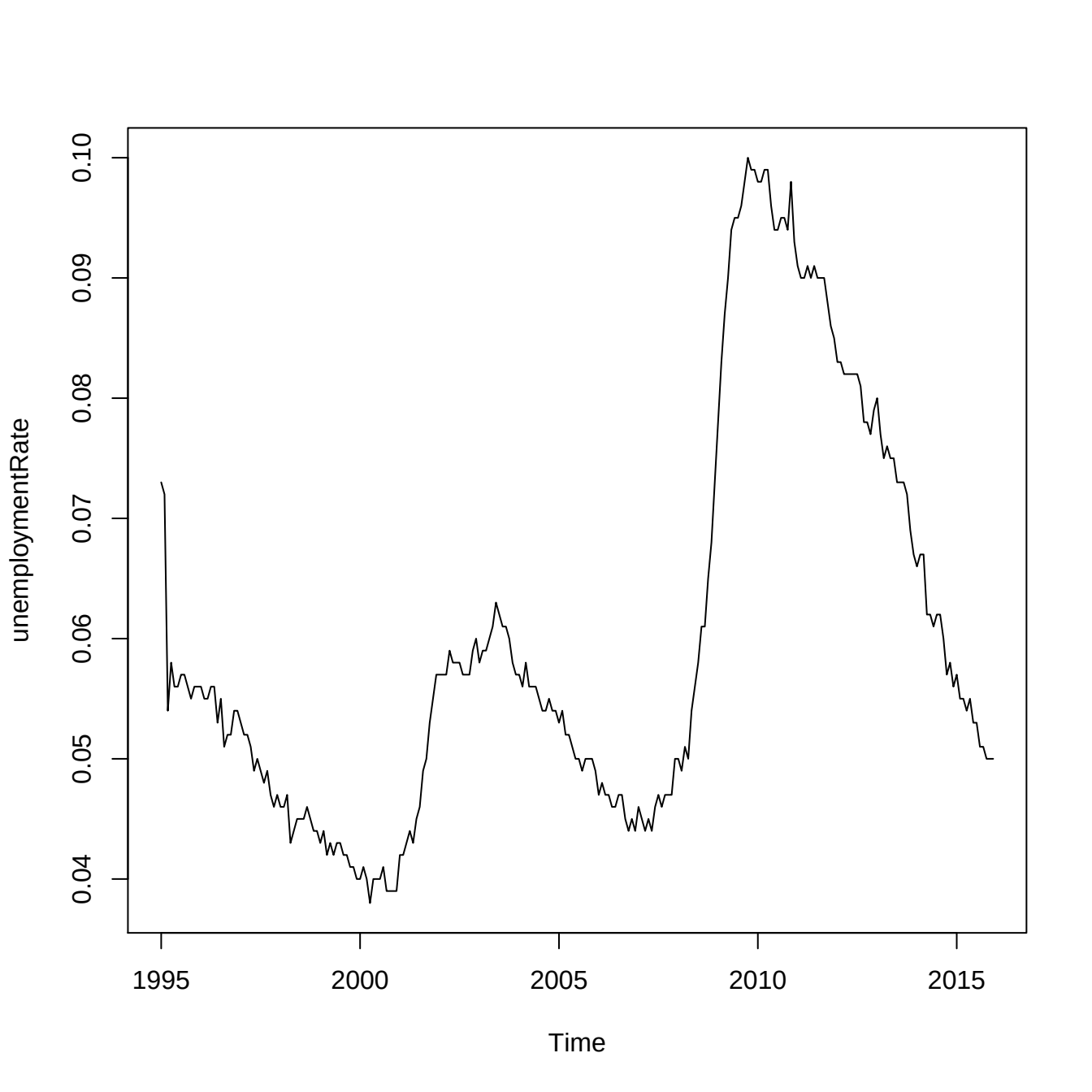

imports
60000
80000
100000
140000
180000
1995
2000
2005
2010
2015
Time

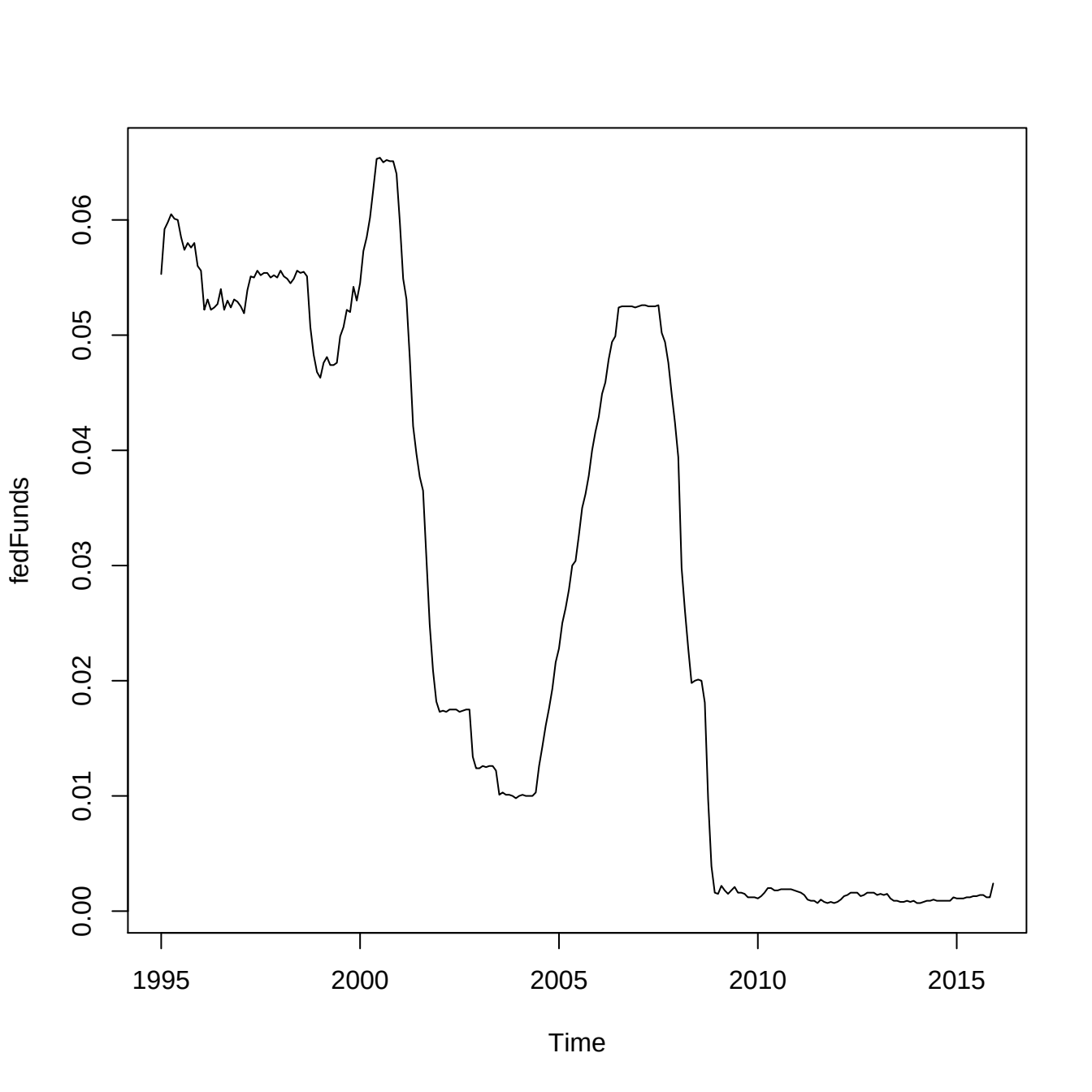

oilPrices
20
40
60
80
100
120
1995
2000
2005
2010
2015
Time


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

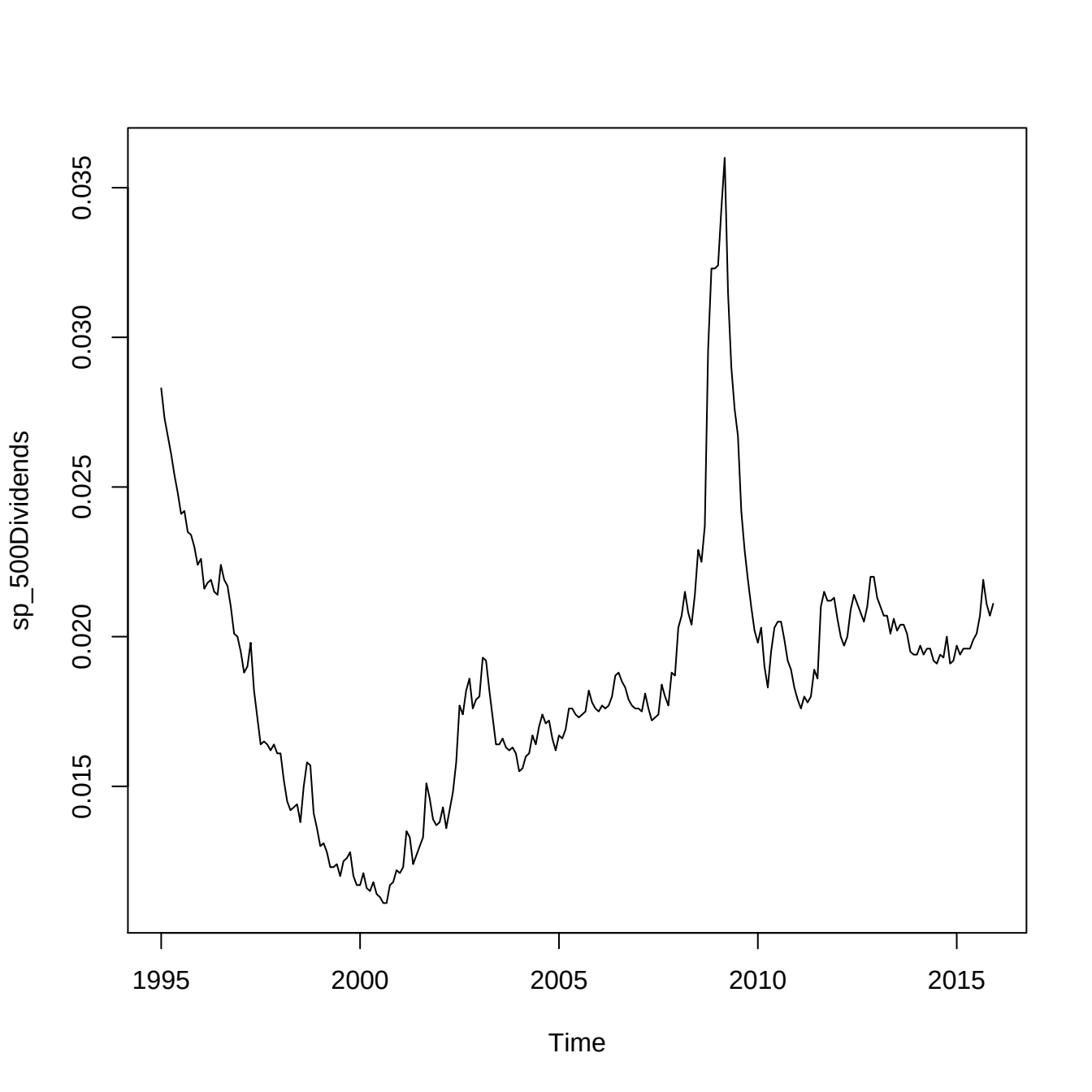

exports
60000
80000
100000
120000
140000
1995
2000
2005
2010
2015
Time

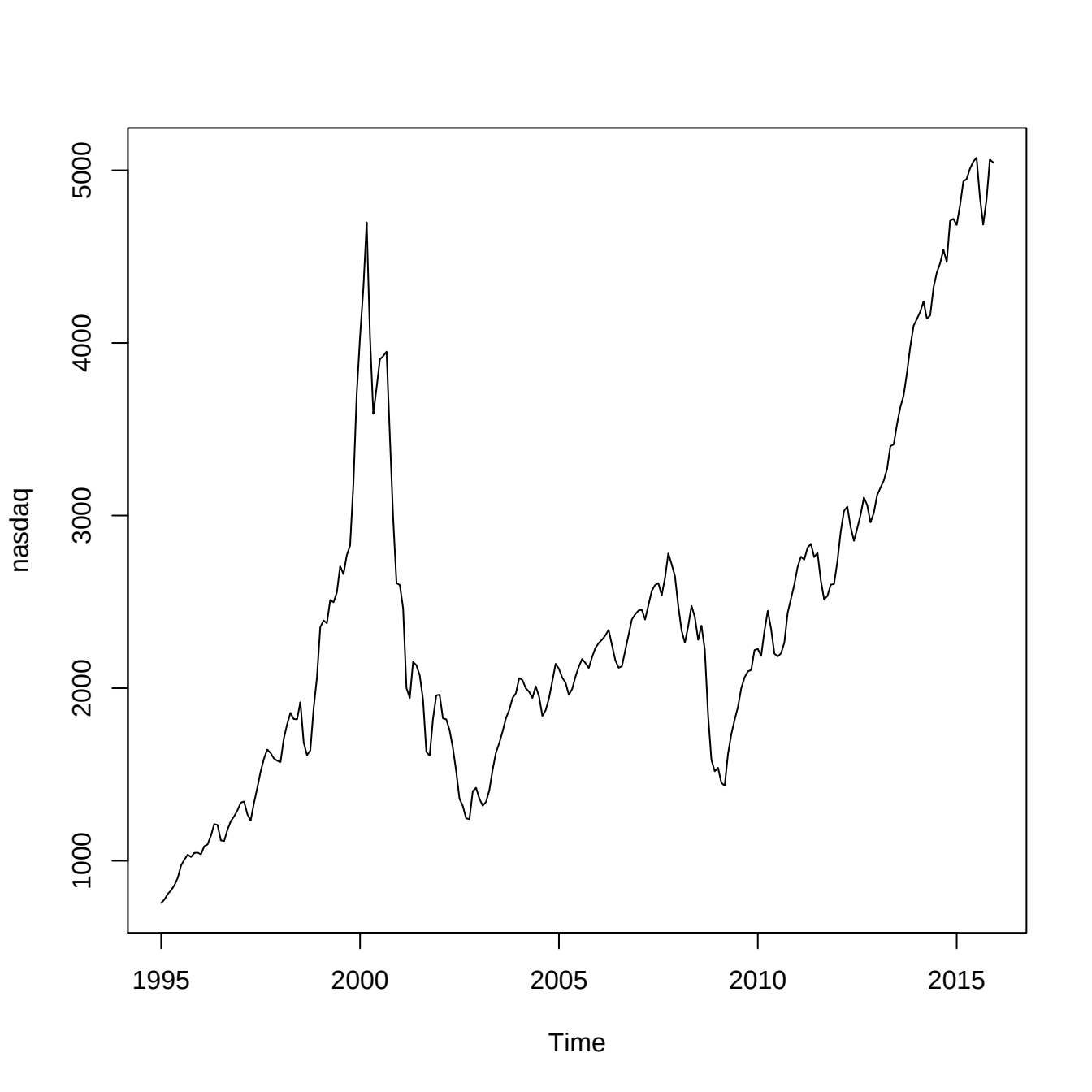

cpi
160
180
200
220
240
1995
2000
2005
2010
2015
Time

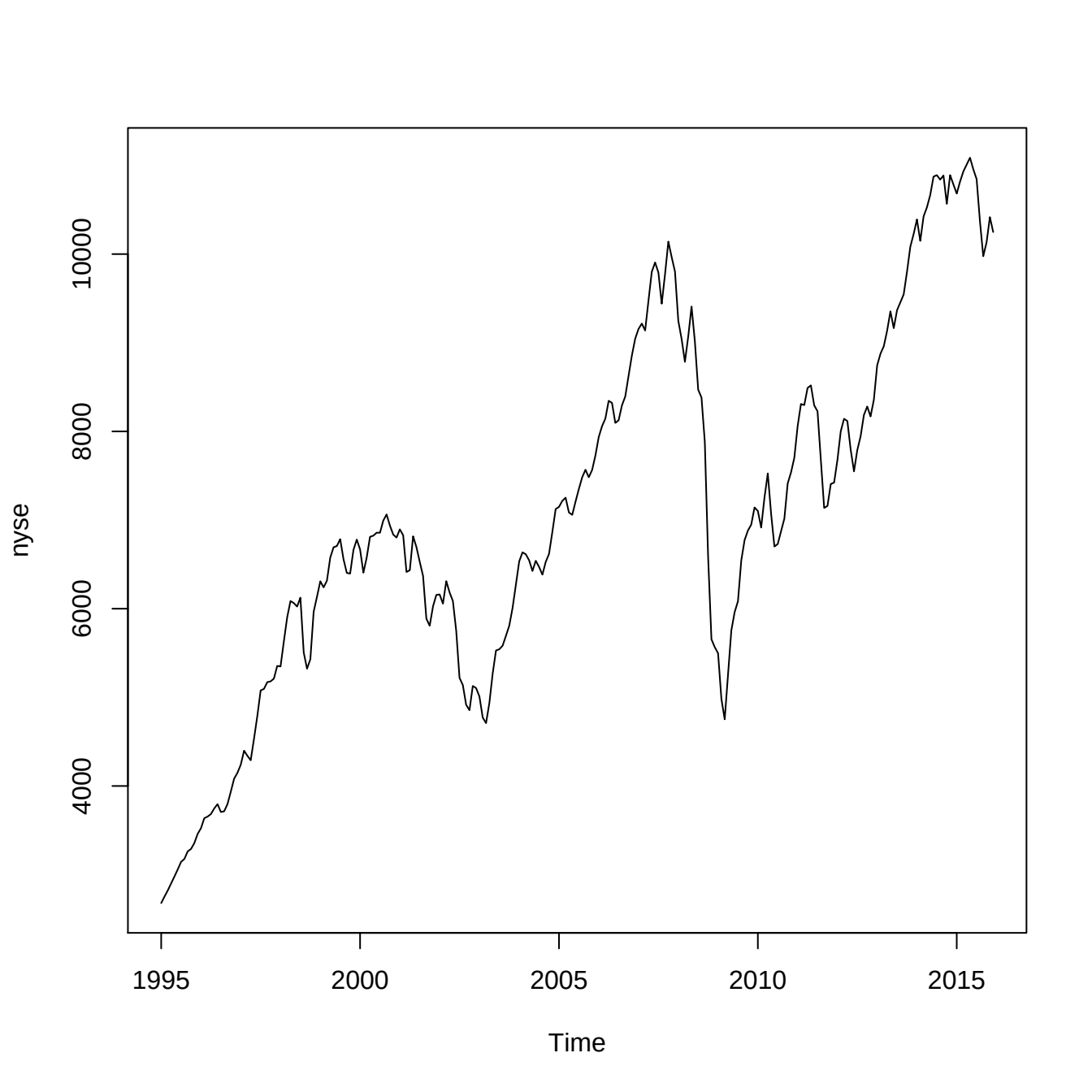

unemploymentRate
0.04
0.05
0.06
0.07
0.08
0.09
0.10
1995
2000
2005
2010
2015
Time

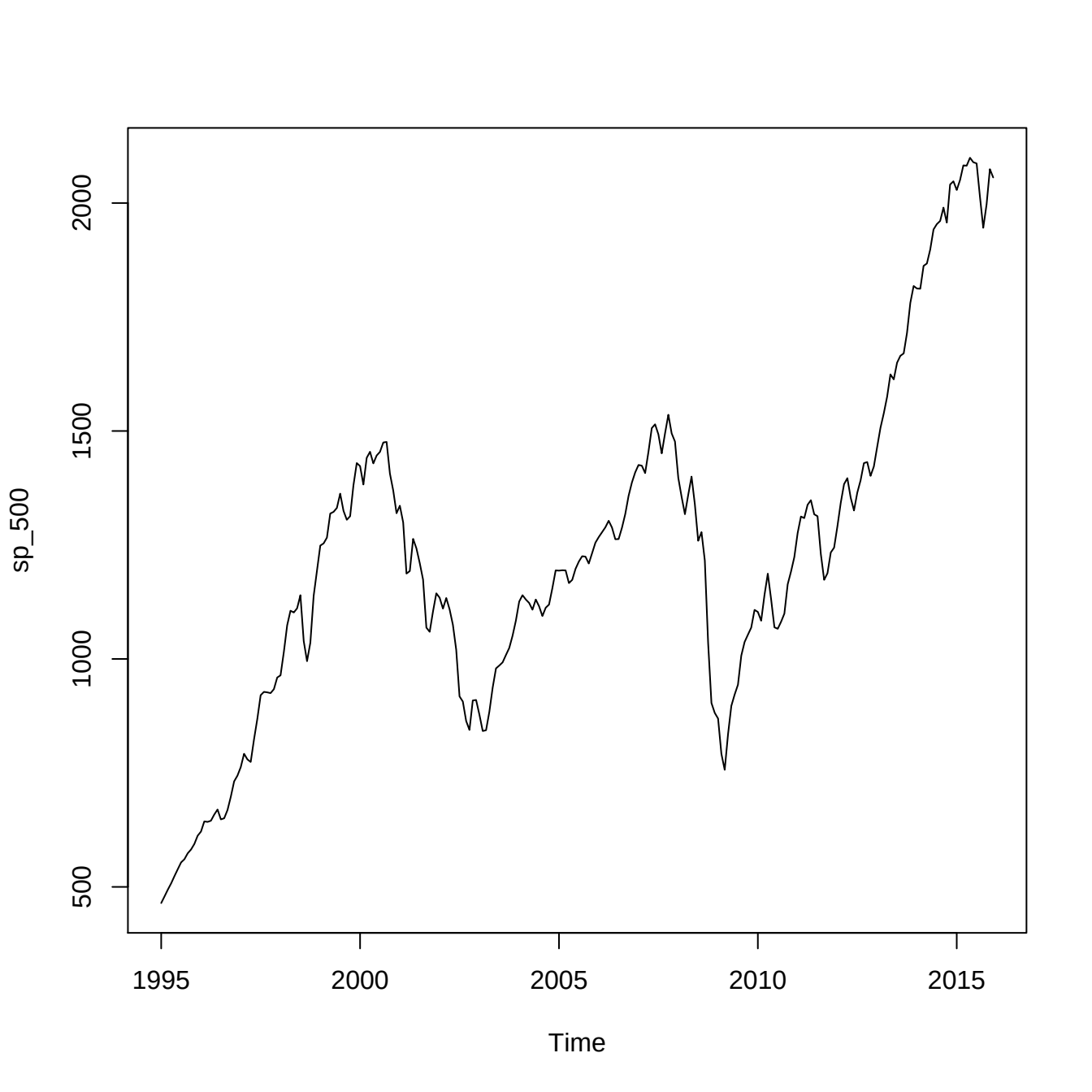

fedFunds
0.00
0.01
0.02
0.03
0.04
0.05
0.06
1995
2000
2005
2010
2015
Time

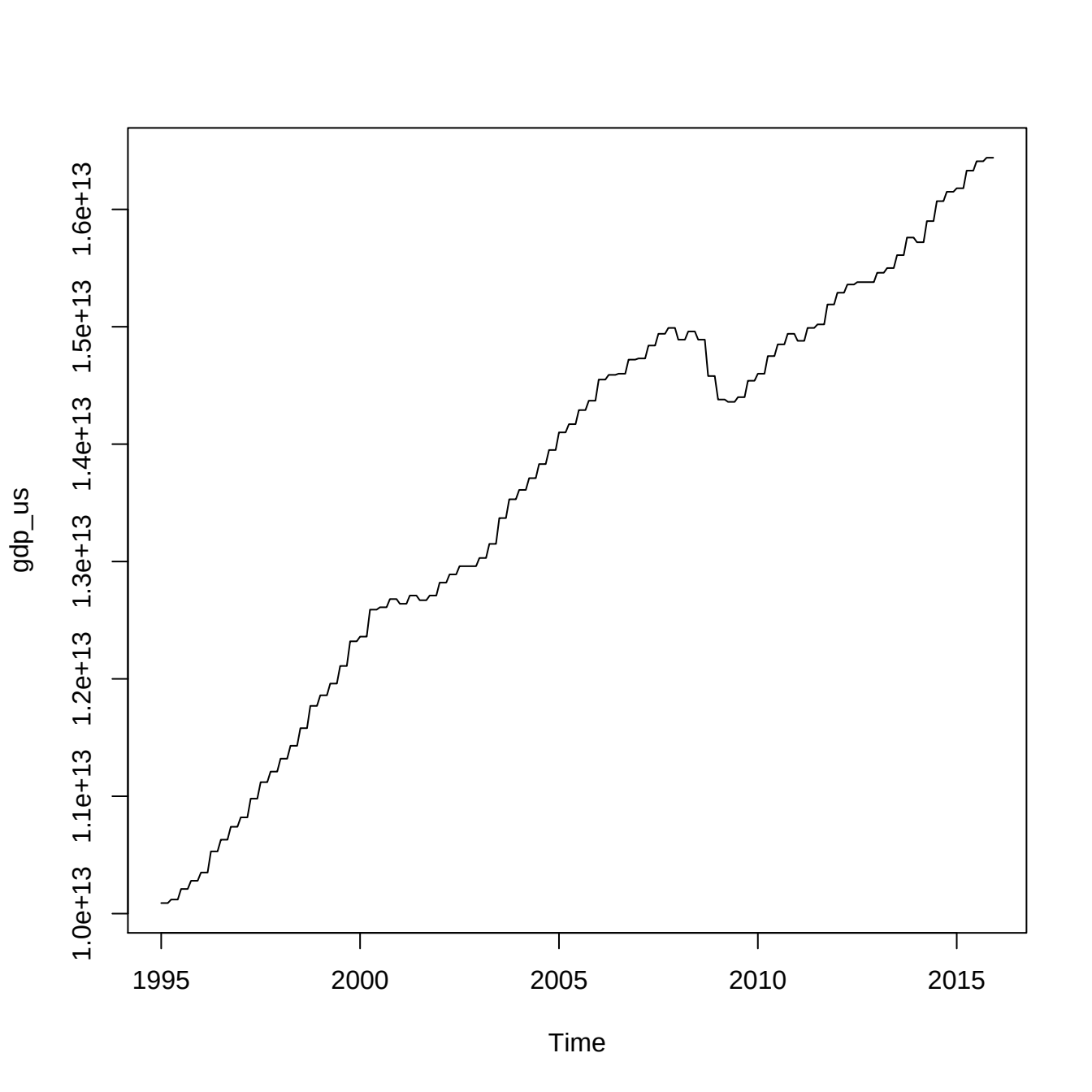
capUtilization
0.85
0.80
0.75
0.70
1995
2000
2005
2010
2015
Time

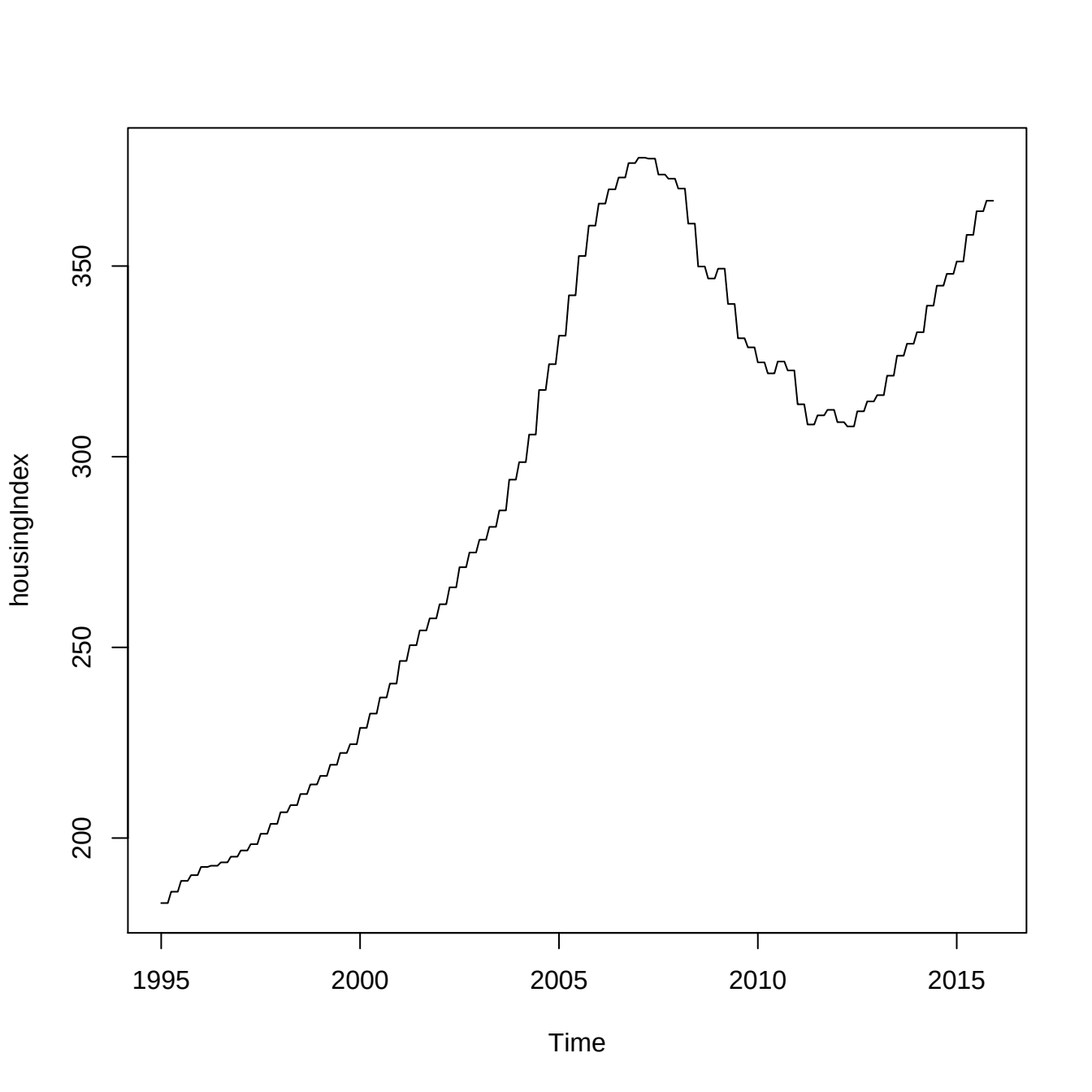

sp_500Dividends
0.015
0.020
0.025
0.030
0.035
1995
2000
2005
2010
2015
Time

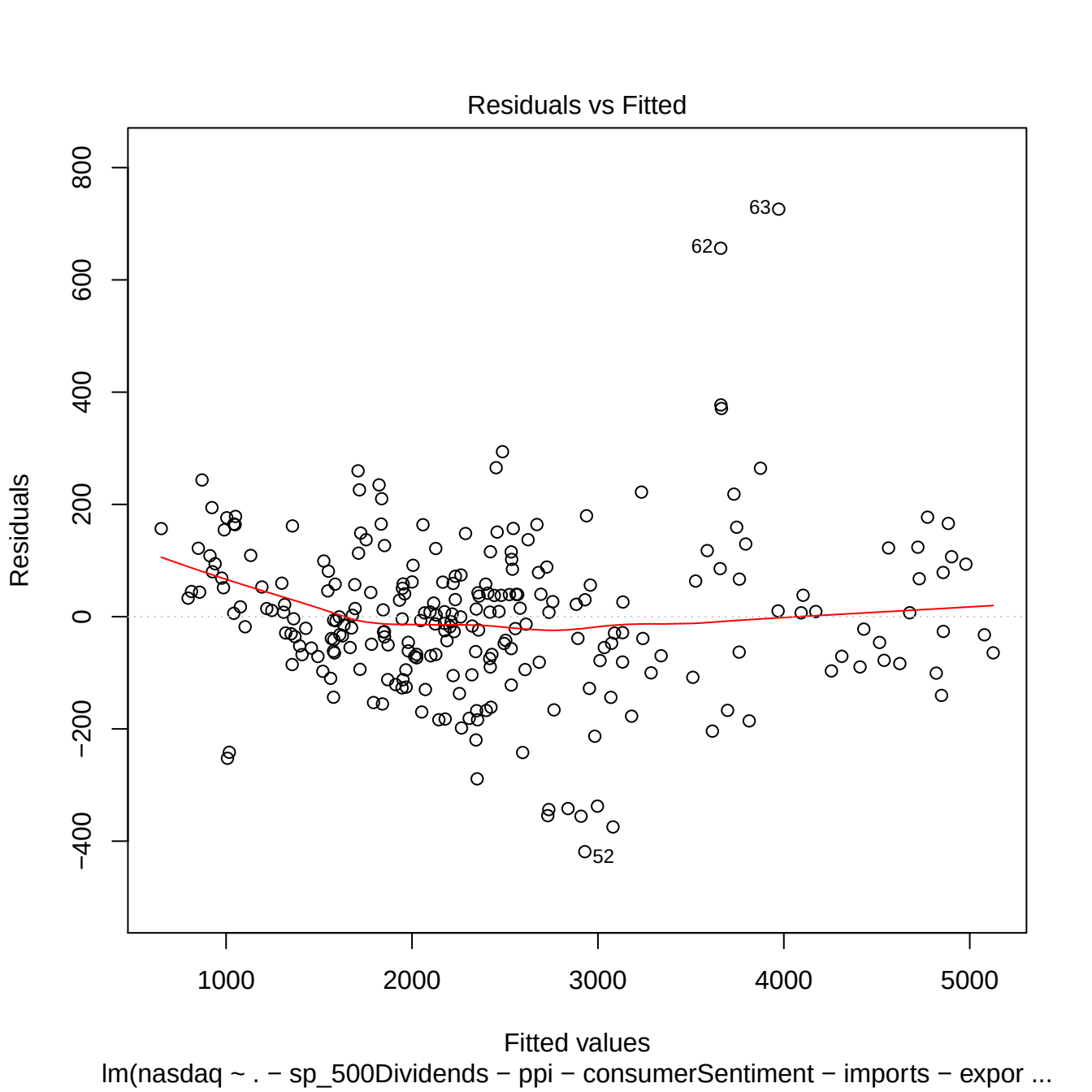

nasdaq
1000
2000
3000
4000
5000
1995
2000
2005
2010
2015
Time

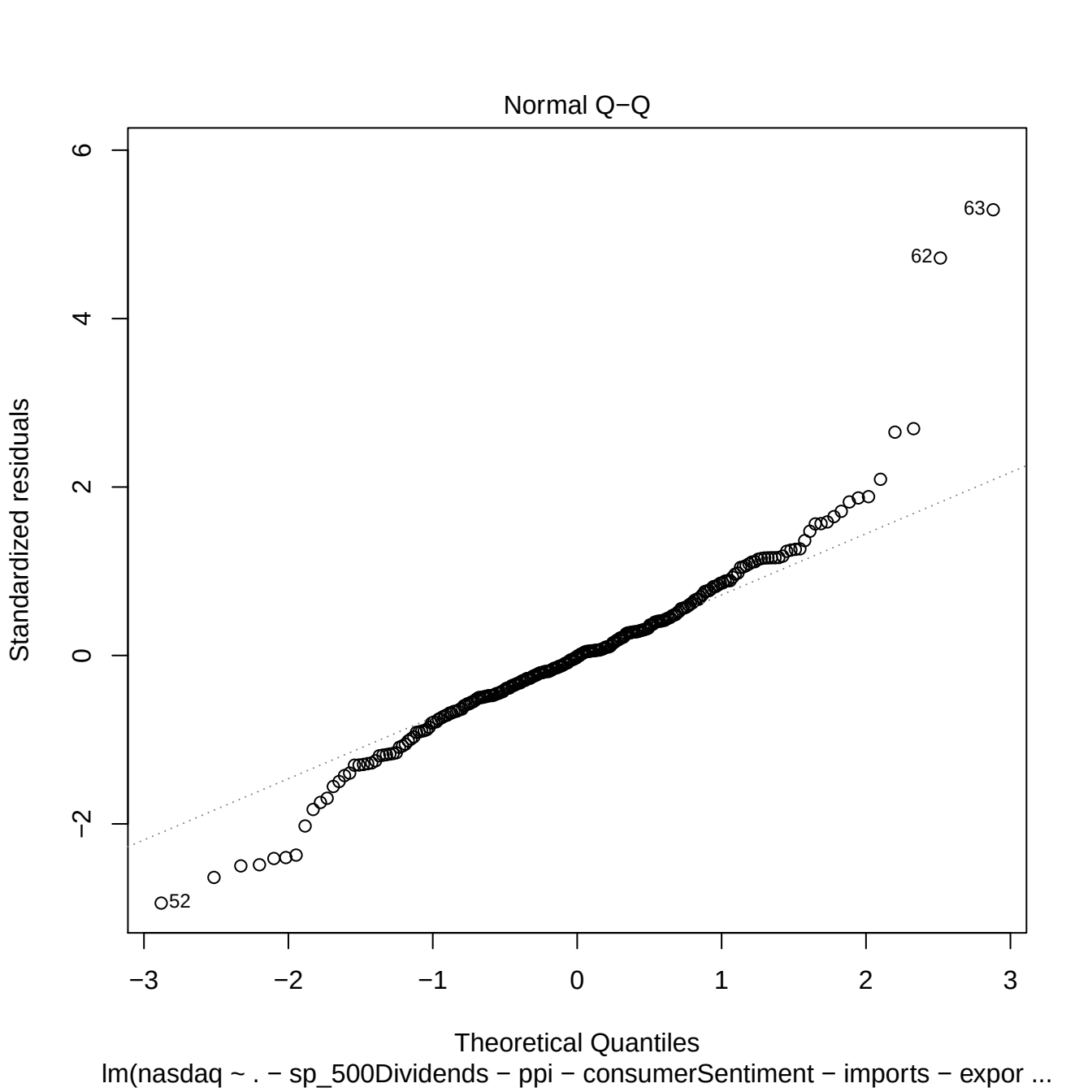

nyse
4000
6000
8000
10000
1995
2000
2005
2010
2015
Time

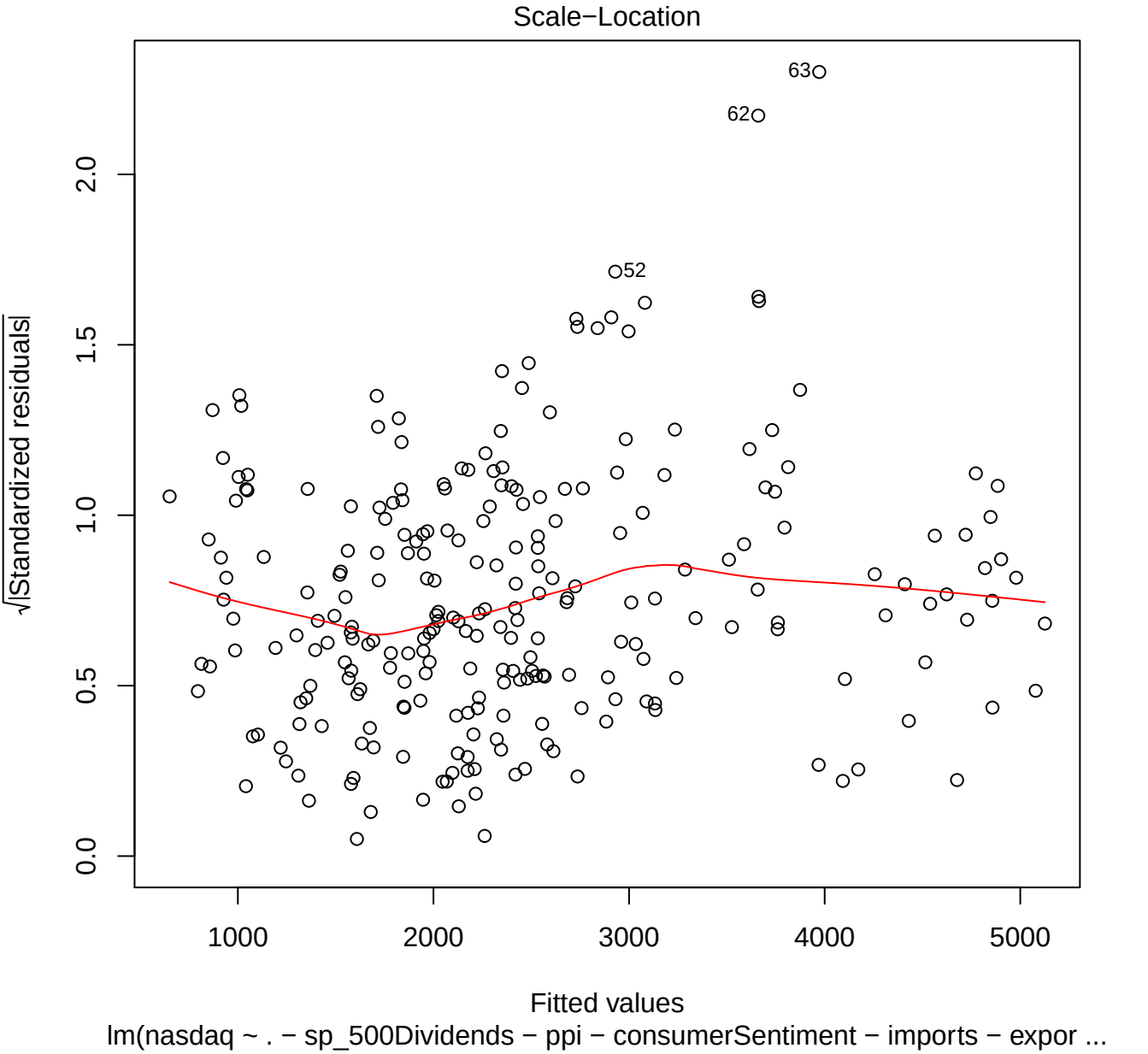

sp_500
500
1000
1500
2000
1995
2000
2005
2010
2015
Time

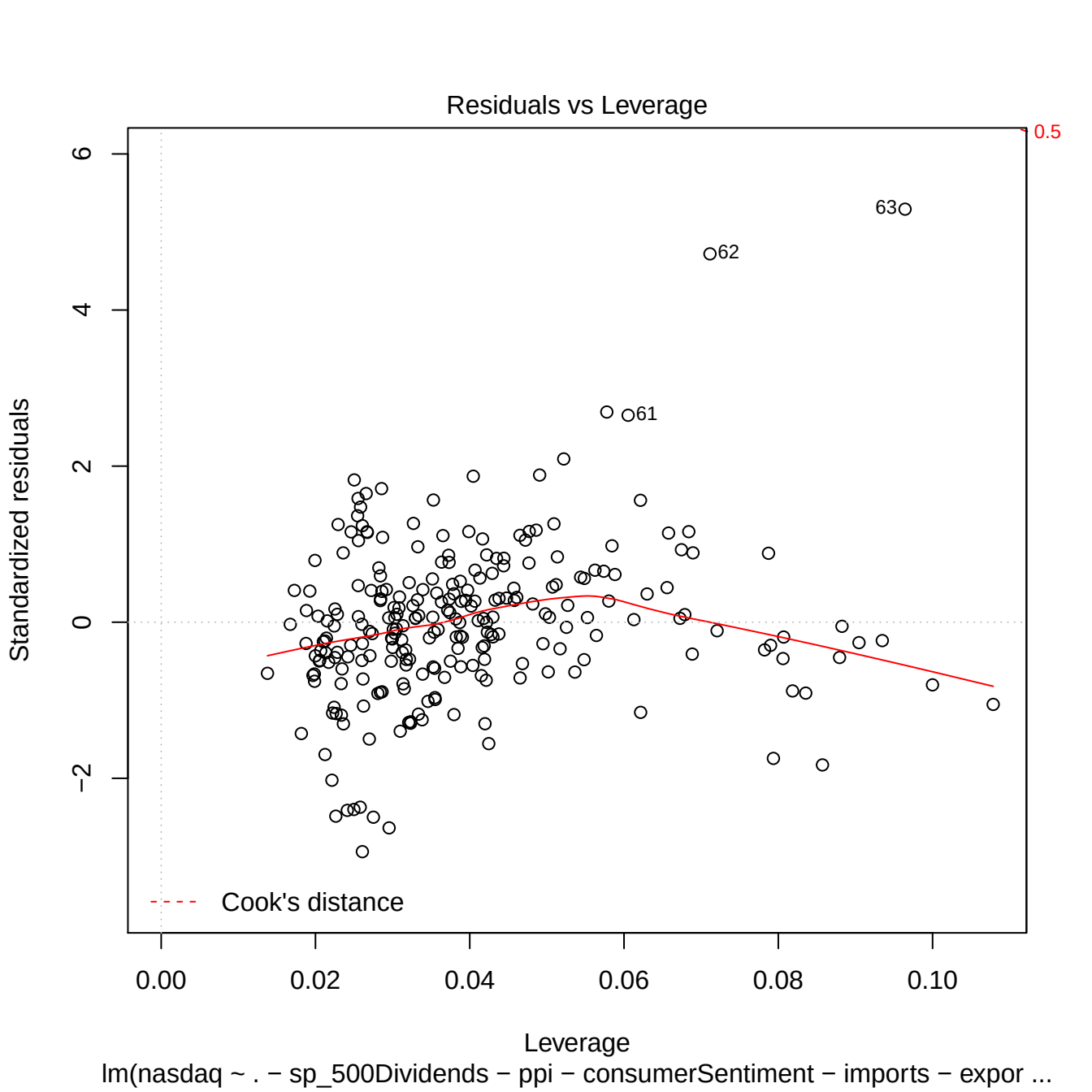

gdp_us
1.0e+13
1.1e+13
1.2e+13
1.3e+13
1.4e+13
1.5e+13
1.6e+13
1995
2000
2005
2010
2015
Time


housingIndex
200
250
300
350
1995
2000
2005
2010
2015
Time

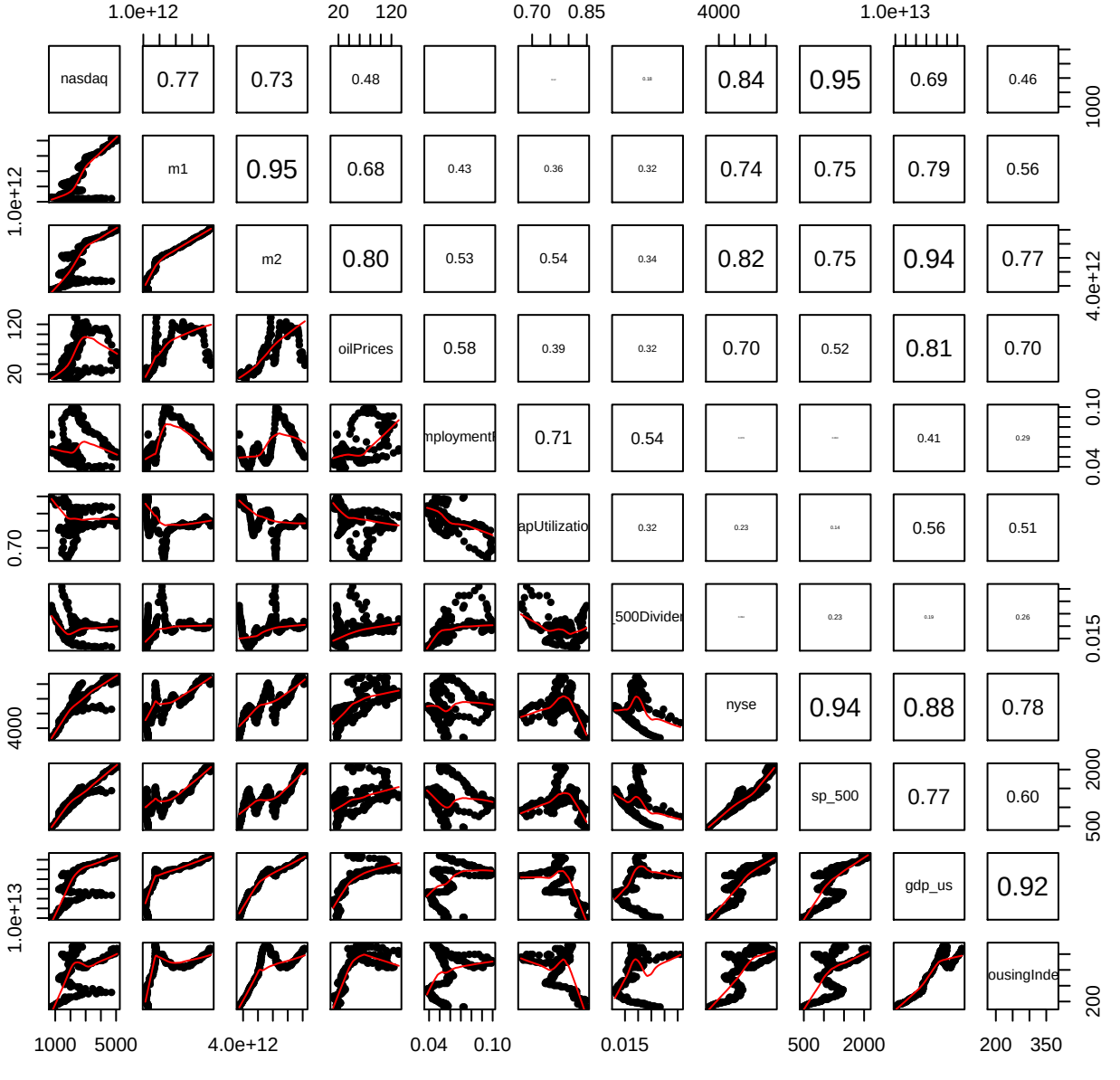

Residuals vs Fitted
Residuals
Fitted values
lm(nasdaq ~ . − sp_500Dividends − ppi − consumerSentiment − imports − expor ...
800
600
400
200
0
−200
−400
1000
2000
3000
4000
5000
63
62
52

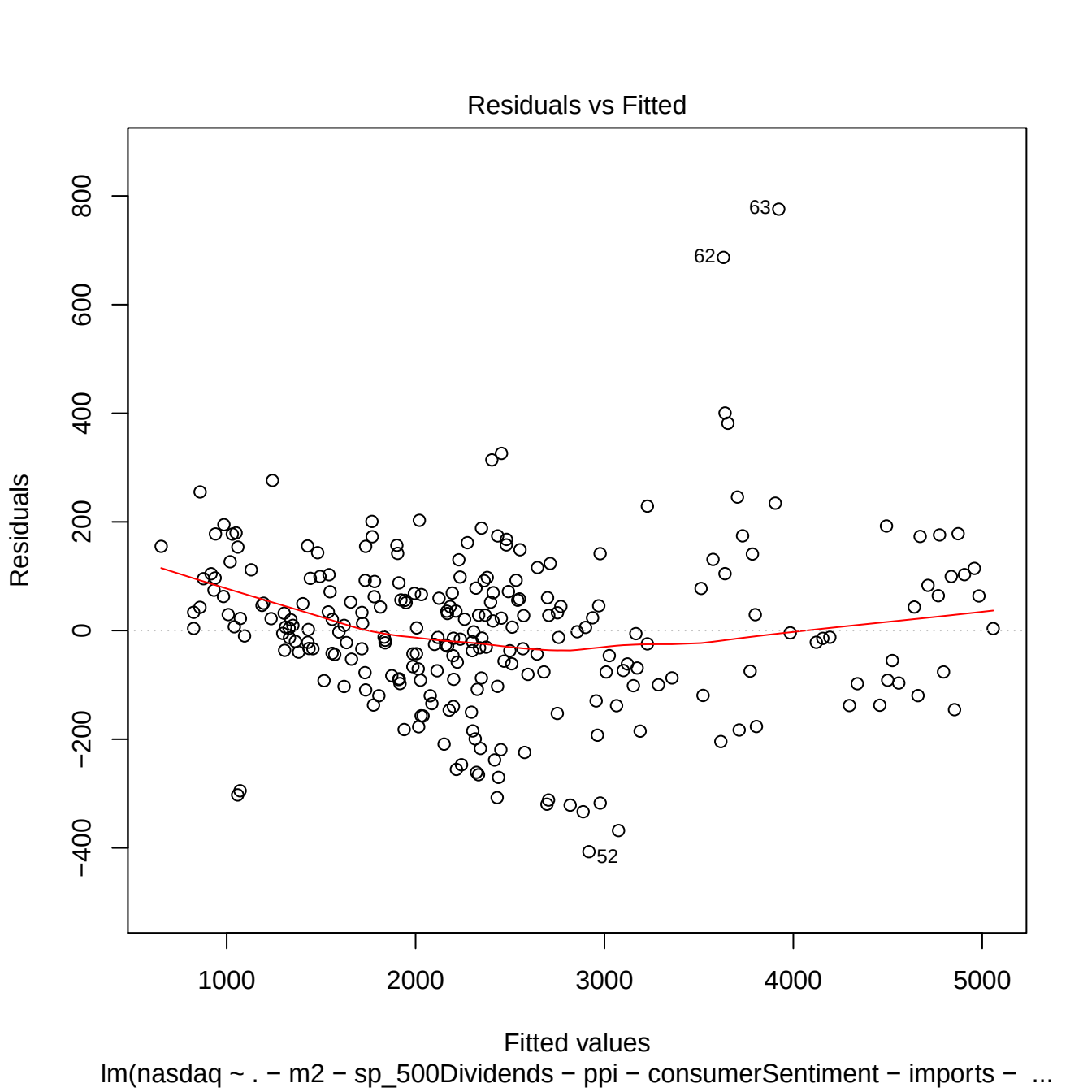

Normal Q−Q
Standardized residuals
Theoretical Quantiles
lm(nasdaq ~ . − sp_500Dividends − ppi − consumerSentiment − imports − expor ...
63
62
52
6
4
2
0
−2
−3
−2
−1
0
1
2
3

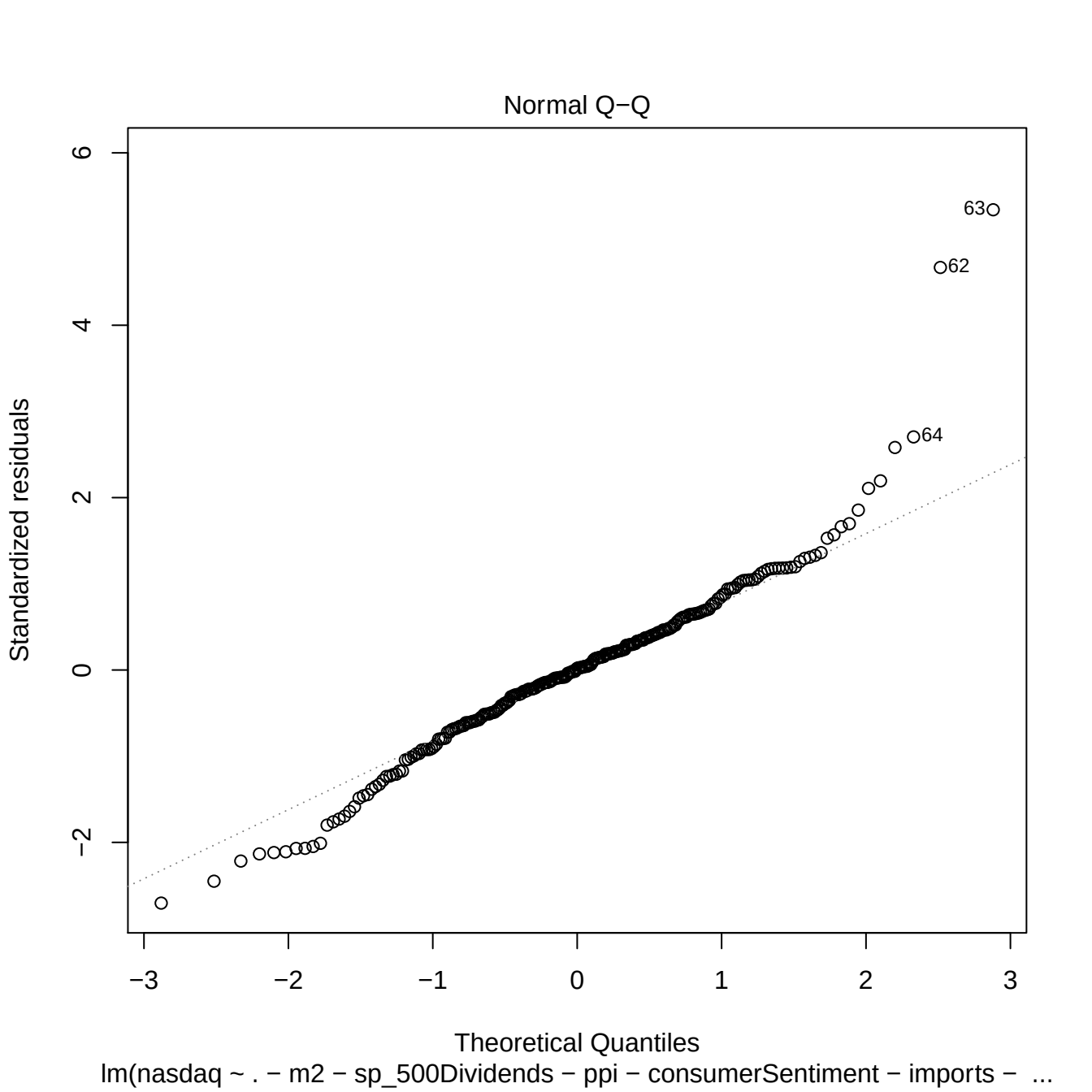

Scale−Location
63
62
52
√|Standardized residuals|
0.0
0.5
1.0
1.5
2.0
1000
2000
3000
4000
5000
Fitted values
lm(nasdaq ~ . − sp_500Dividends − ppi − consumerSentiment − imports − expor ...

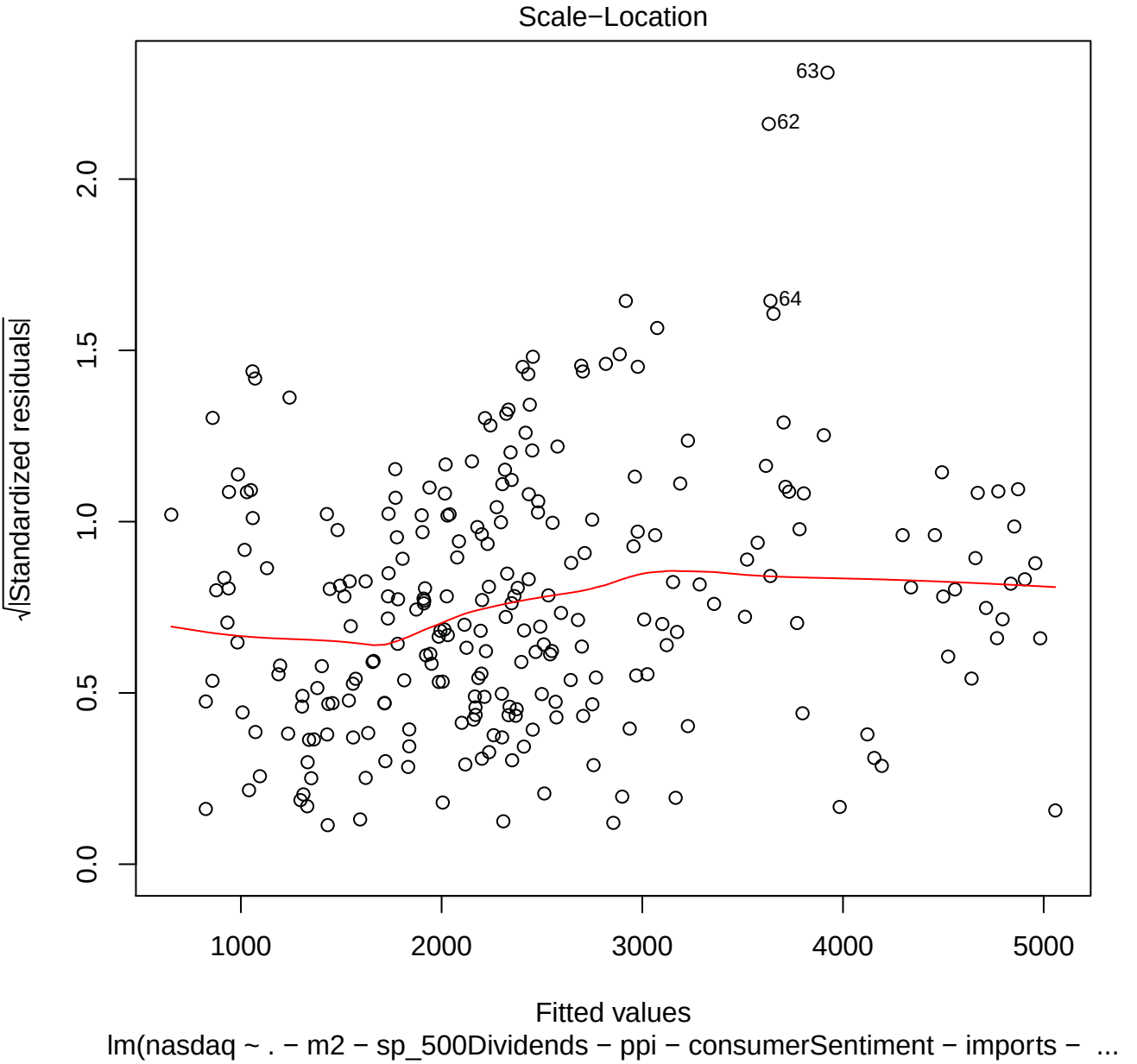

Residuals vs Leverage
0.5
63
62
61
Standardized residuals
6
4
2
0
−2
Cook's distance
0.00
0.02
0.04
0.06
0.08
0.10
Leverage
lm(nasdaq ~ . − sp_500Dividends − ppi − consumerSentiment − imports − expor ...

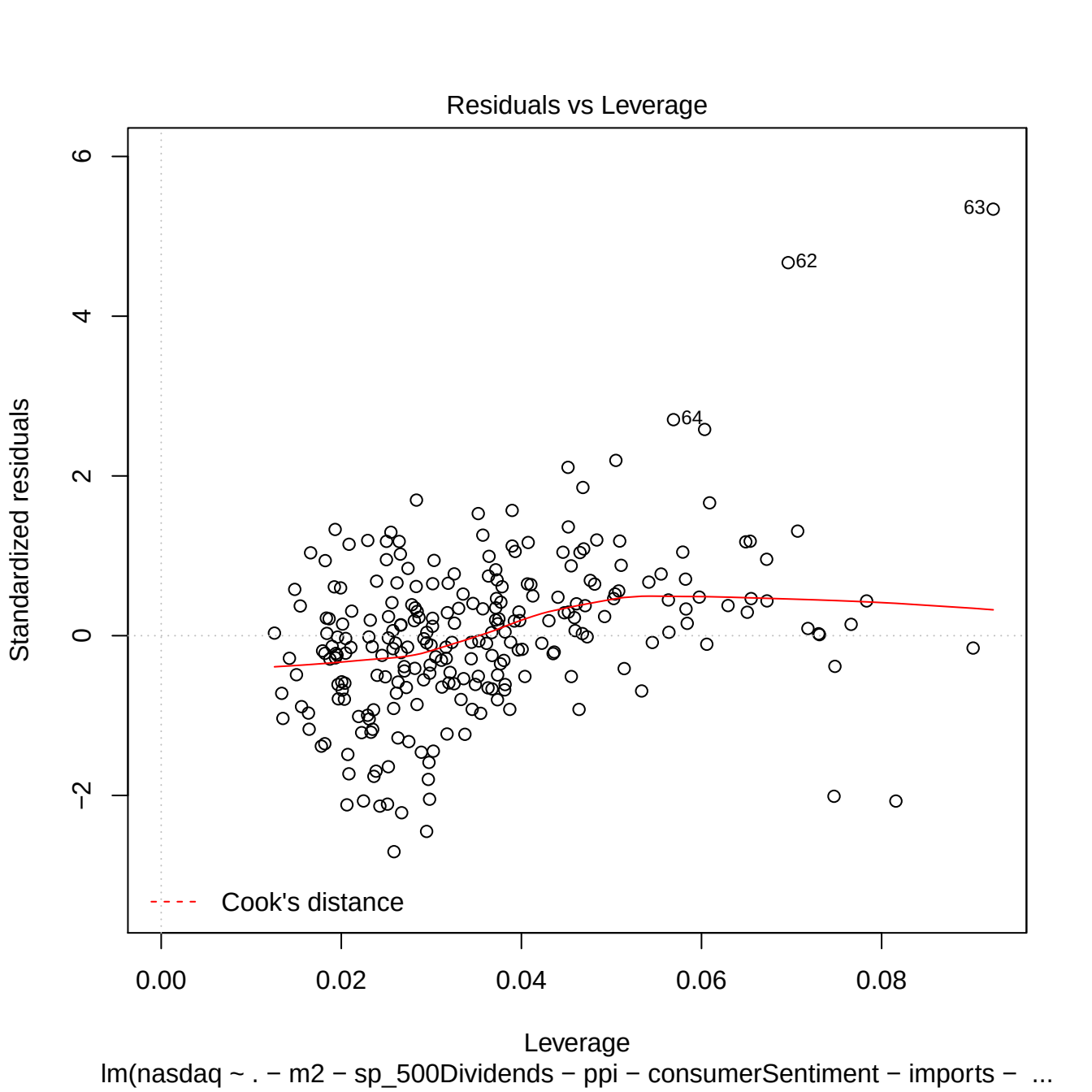
NASDAQ Scatter Plot Matrix for fit_nasdaq_9



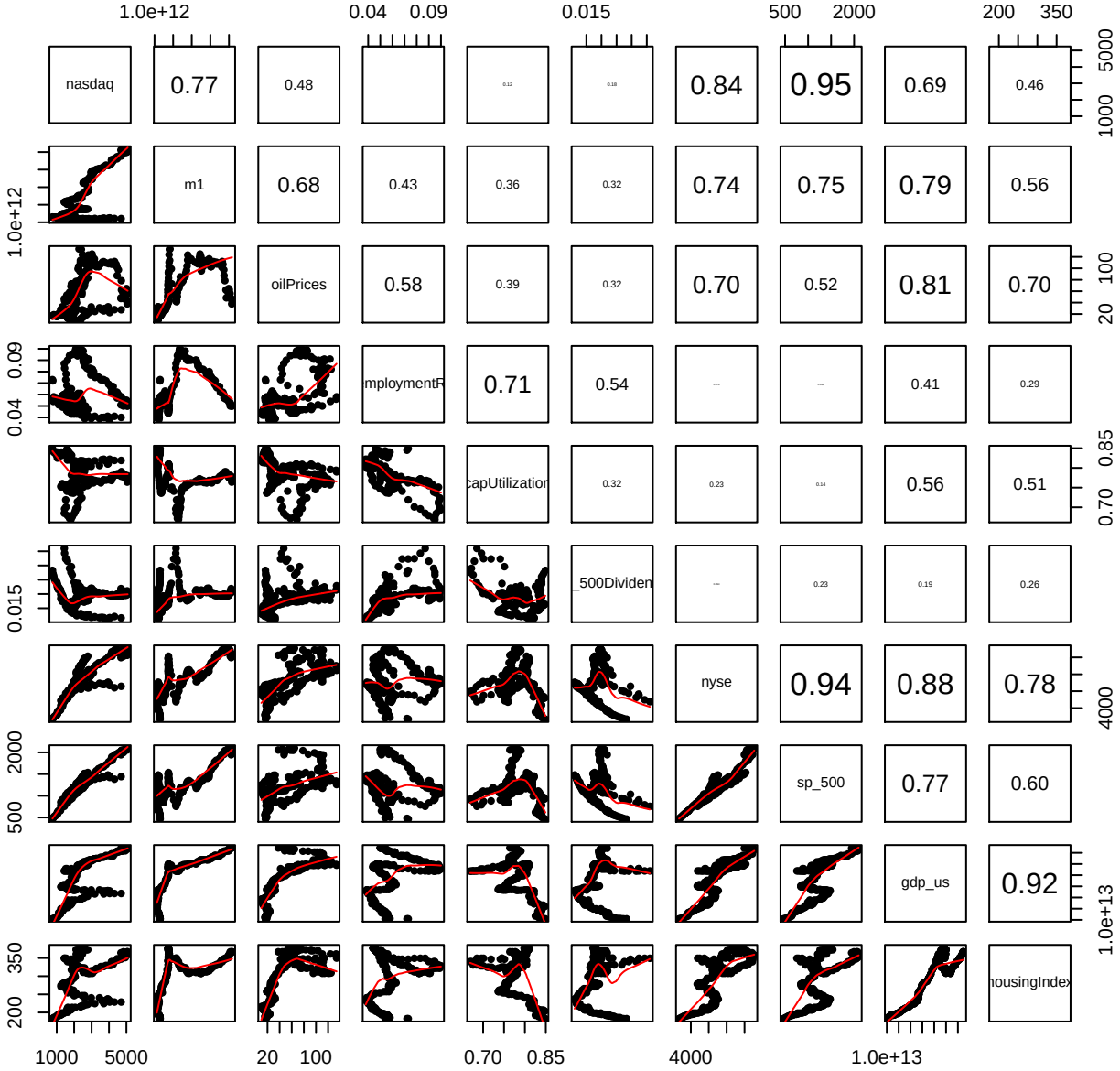

Residuals vs Fitted
Residuals
Fitted values
lm(nasdaq ~ . − m2 − sp_500Dividends − ppi − consumerSentiment − imports − ...
63
62
52
800
600
400
200
0
−200
−400
1000
2000
3000
4000
5000

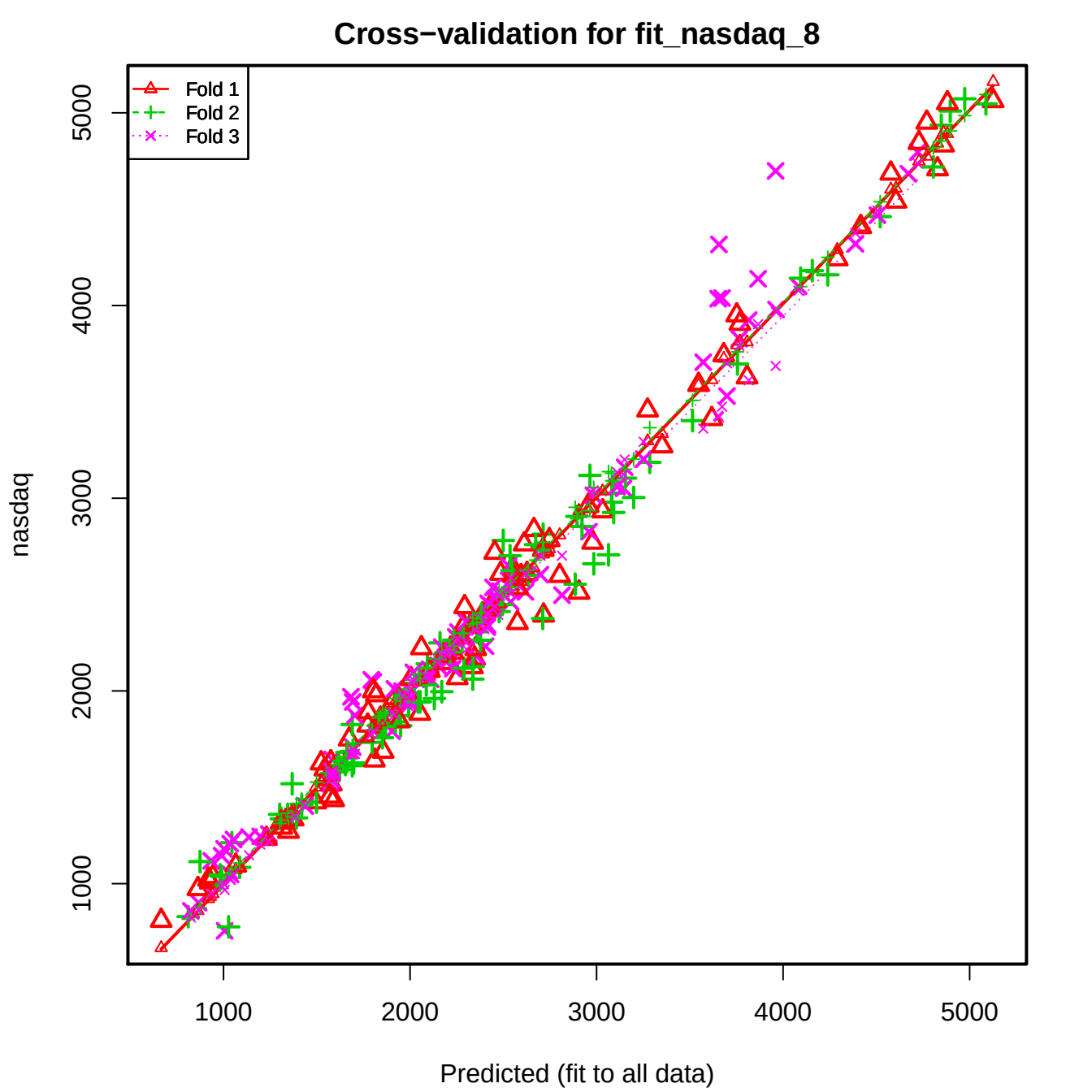

Normal Q−Q
Standardized residuals
Theoretical Quantiles
lm(nasdaq ~ . − m2 − sp_500Dividends − ppi − consumerSentiment − imports − ...
63
62
64
6
4
2
0
−2
−3
−2
−1
0
1
2
3

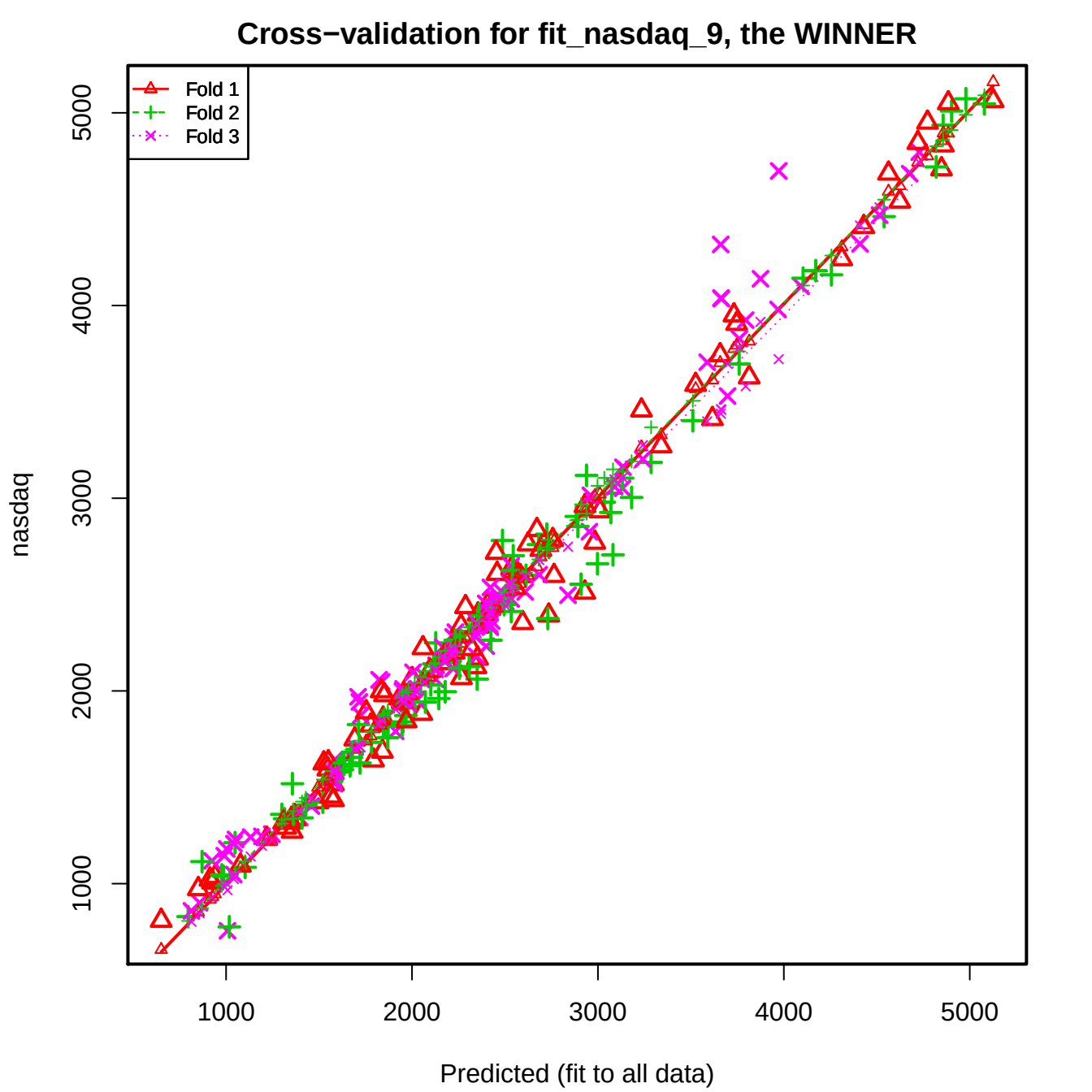

Scale−Location
63
62
64
√|Standardized residuals|
0.0
0.5
1.0
1.5
2.0
1000
2000
3000
4000
5000
Fitted values
lm(nasdaq ~ . − m2 − sp_500Dividends − ppi − consumerSentiment − imports − ...

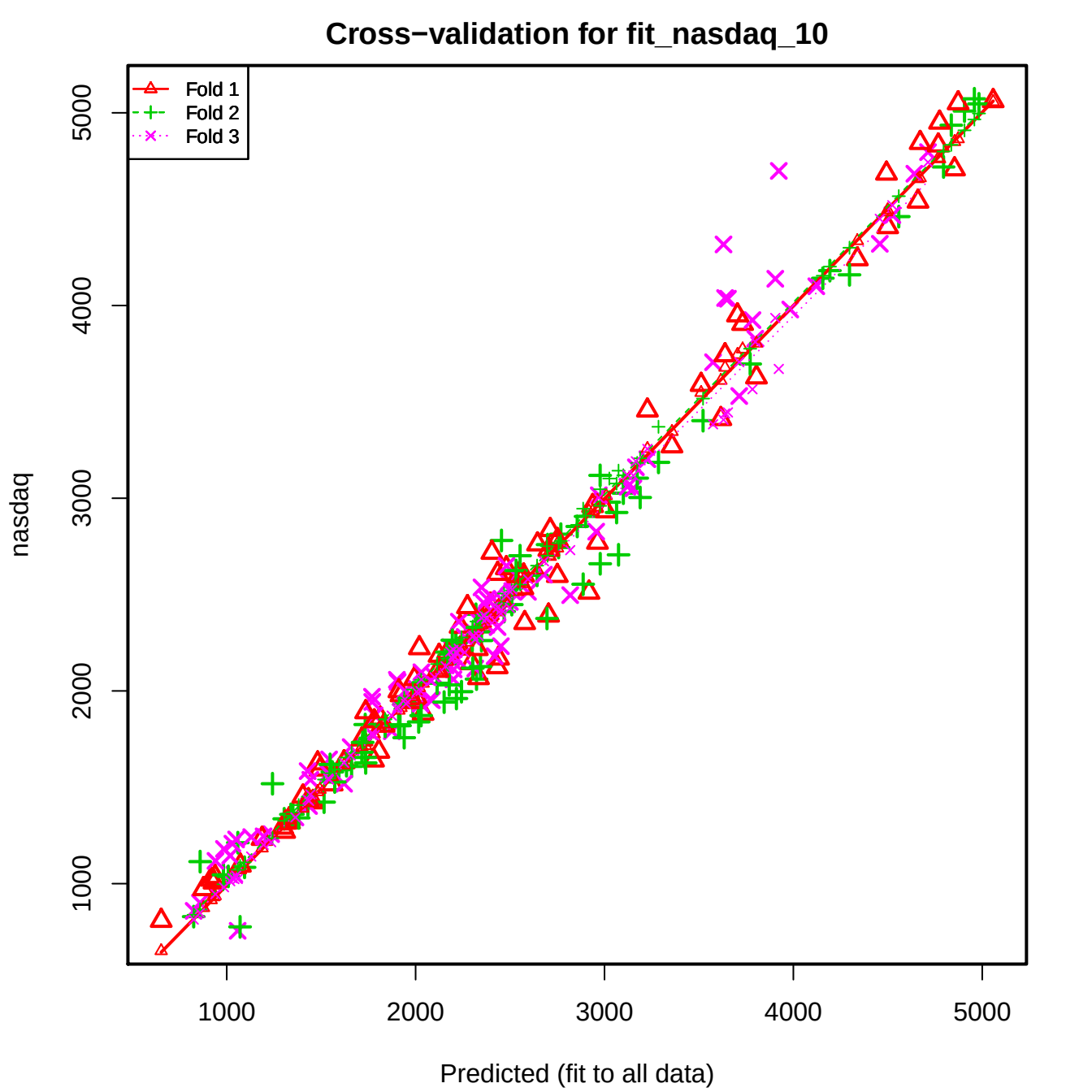

Residuals vs Leverage
Standardized residuals
6
4
2
0
−2
63
62
64
Cook's distance
0.00
0.02
0.04
0.06
0.08
Leverage
lm(nasdaq ~ . − m2 − sp_500Dividends − ppi − consumerSentiment − imports − ...

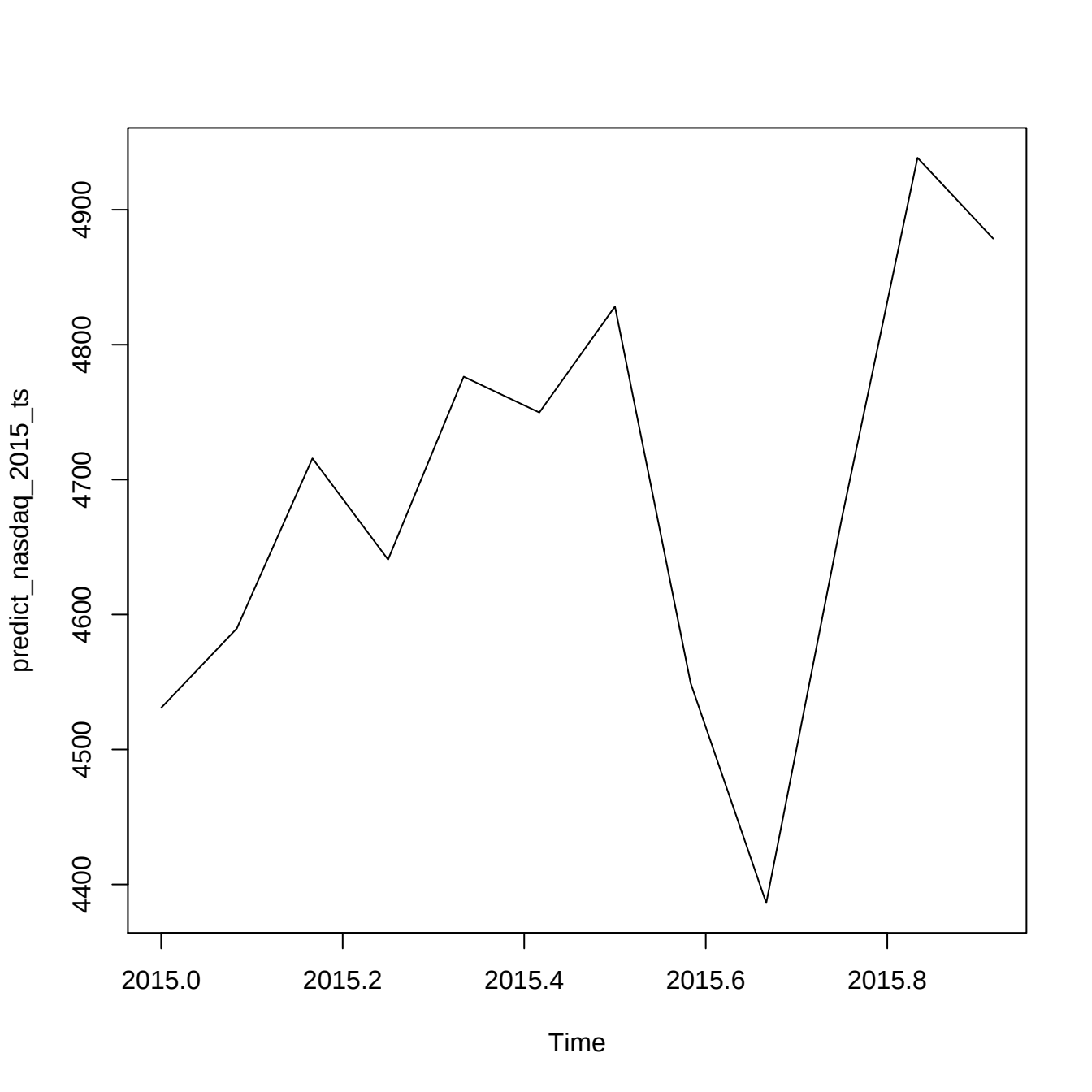
NASDAQ Scatter Plot Matrix for fit_nasdaq_10

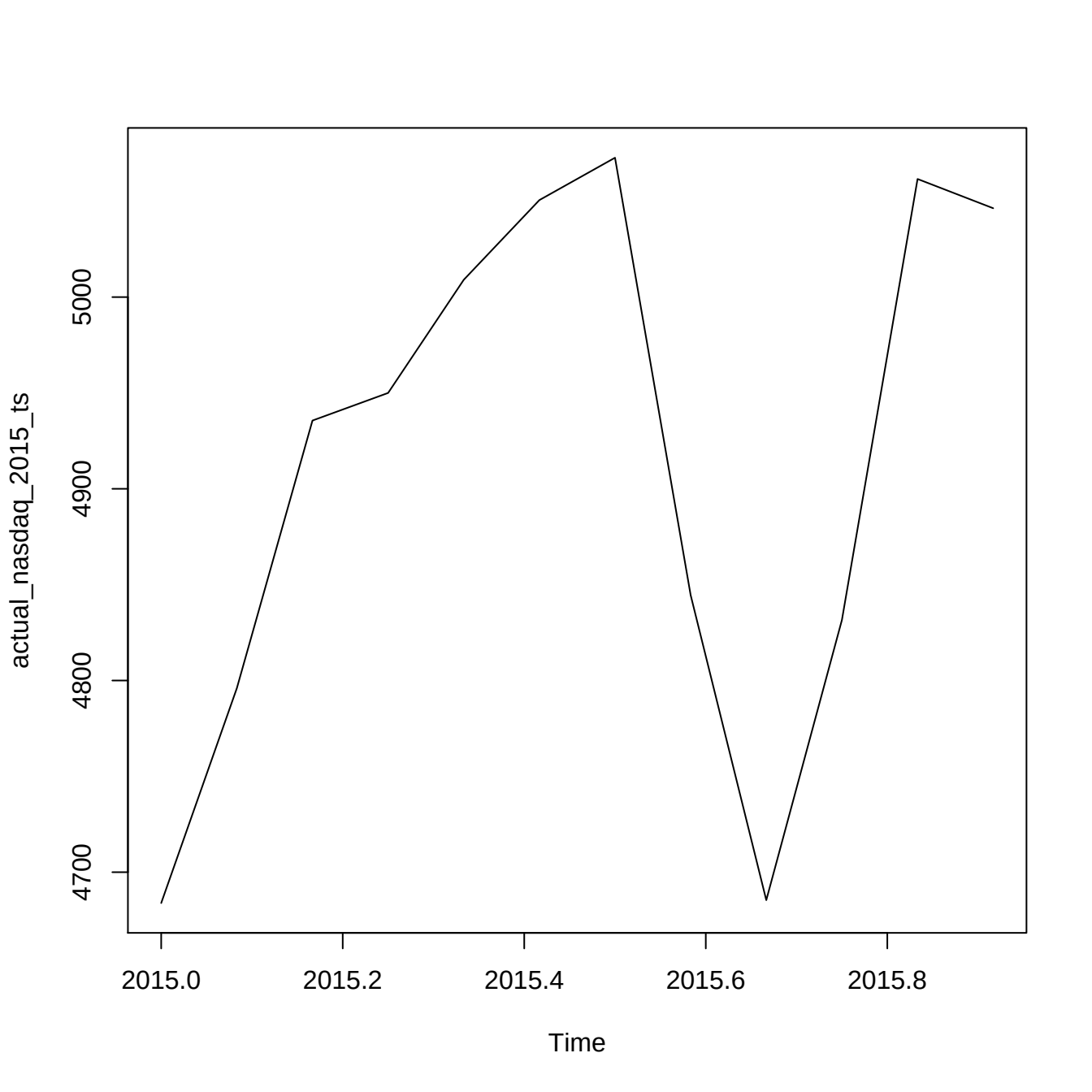


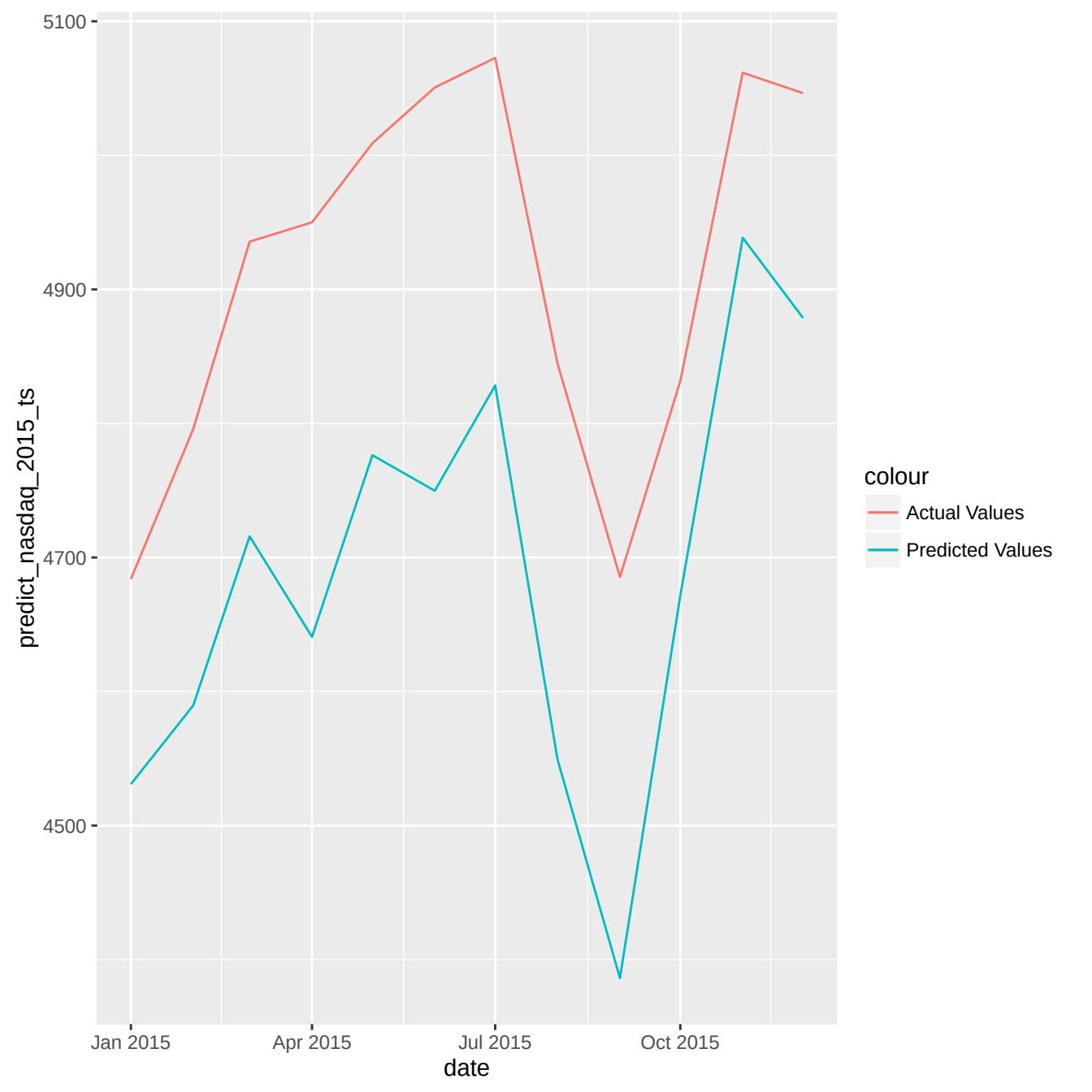

Cross−validation for fit_nasdaq_8
Fold 1
Fold 2
Fold 3
nasdaq
1000
2000
3000
4000
5000
Predicted (fit to all data)


Cross−validation for fit_nasdaq_9, the WINNER
Fold 1
Fold 2
Fold 3
nasdaq
1000
2000
3000
4000
5000
Predicted (fit to all data)


Cross−validation for fit_nasdaq_10
Fold 1
Fold 2
Fold 3
nasdaq
Predicted (fit to all data)
1000
2000
3000
4000
5000


predict_nasdaq_2015_ts
4400
4500
4600
4700
4800
4900
2015.0
2015.2
2015.4
2015.6
2015.8
Time


actual_nasdaq_2015_ts
4700
4800
4900
5000
2015.0
2015.2
2015.4
2015.6
2015.8
Time


5100
4900
4700
4500
predict_nasdaq_2015_ts
Jan 2015
Apr 2015
Jul 2015
Oct 2015
date
colour
Actual Values
Predicted Values