

report20

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trim = 0.5, order = 2	2

data

```
vote <- read.csv("./codes/vote_data.csv")
str(vote)

## 'data.frame': 19775 obs. of 10 variables:
## $ from_requirement_threshold: num 0.4789 0.3838 0.0979 0.4568 0.4089 ...
## $ major.requirement : int 1 1 1 1 1 1 1 1 1 ...
## $ ISS.against.recommendation: int 0 0 1 0 0 0 0 1 0 0 ...
## $ shares.outstanding.base : int 0 1 0 0 0 0 0 1 0 0 ...
## $ special.meeting : int 0 0 0 0 0 0 0 0 0 0 ...
## $ analyst.coverage : num 0.693 0.693 1.386 1.792 1.946 ...
## $ institutional.ownership : num 0.563 0.563 1 1 0.968 ...
## $ past.stock.return : num 0.506 0.506 0.38 0.388 -0.149 ...
## $ q : num 5.68 5.68 1.18 1.46 1.11 ...
## $ firm.size : num 5.37 5.37 6.6 6.89 7.31 ...
```

```
vote <- subset(vote, abs(from_requirement_threshold) < 0.5)
bunch <- FALSE
pos.est <- TRUE
N_para <- 6
p <- 6
```

```
get.trim.data <- function(trim){
  vote <- subset(vote, abs(from_requirement_threshold) < trim/2)
  preds <- model.matrix(~ #major.requirement
                        + ISS.against.recommendation
                        #+ shares.outstanding.base
                        #+ special.meeting
```

```

+ analyst.coverage
#+ institutional.ownership
+ past.stock.return
+ q
+ firm.size,
  data = vote) [, -1]
preds.all <- scale(preds)
x <- cbind(1, preds.all)
dimnames(x)[[2]][1] <- "Intercept"
x.names <- dimnames(x)[[2]]
y <- 2*vote[, "from_requirement_threshold"]
return(list(x=x, y=y))
}

```

adapt alpha, all no PG

trim = 0.5, order = 2

burn=0, nsamp=5000

```

set.seed(123)
order <- 2
b_init <- replicate(N_para, matrix(rnorm(n = order*p, sd=1), order, p))
a_init <- replicate(N_para, rnorm(n = p, sd = 1.5))

data_trim05 <- get.trim.data(0.5)

```

```

multi_adapt_poly_trim05_o2_allnoPG <- foreach(i = 1:N_para) %dorng%
  bdregjump_adapt_poly_trim_noPG(y=data_trim05$y, x=data_trim05$x, b=b_init[,i],
    burn=0, nsamp=5000, thin=1, trim = 0.5, order = 2,
    jump=list(a=a_init[,i], prec = 1, positive=pos.est,
      persistence=0.8, update.jbw=FALSE))

```

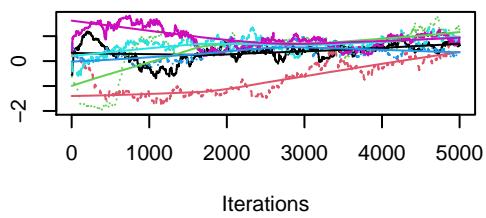
```

load("./report/report20/multi_adapt_poly_trim05_o2_allnoPG.RData")

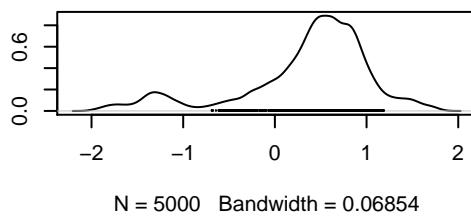
multi_adapt_poly_trim05_o2_allnoPG_coda <- multi_chain_coda(multi_adapt_poly_trim05_o2_allnoPG,
  burn = 0, N_para, p, order = 2)
plot(multi_adapt_poly_trim05_o2_allnoPG_coda)

```

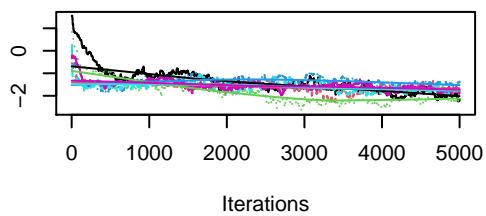
Trace of b_{11}



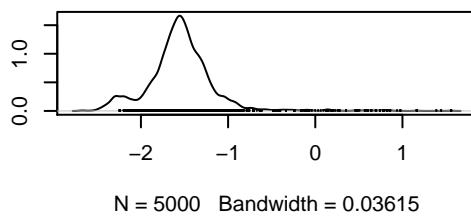
Density of b_{11}



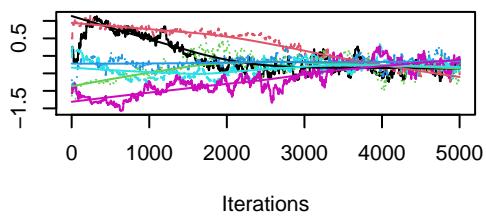
Trace of b_{12}



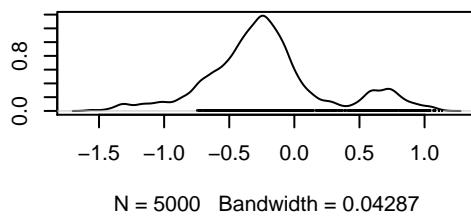
Density of b_{12}



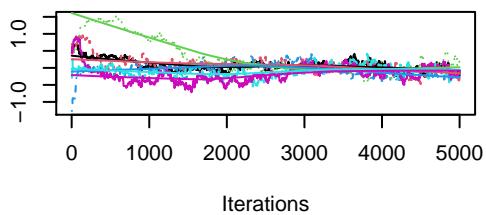
Trace of b_{13}



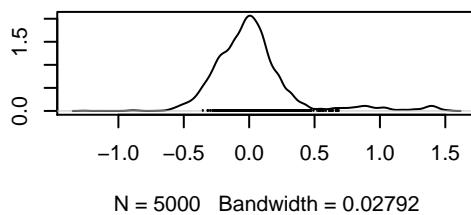
Density of b_{13}



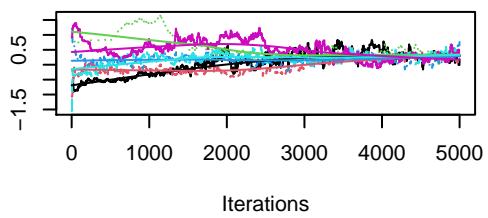
Trace of b_{14}



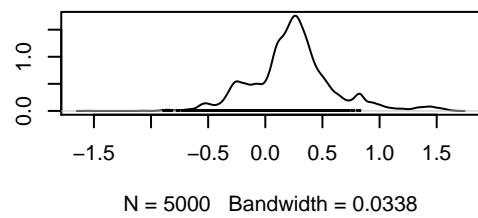
Density of b_{14}



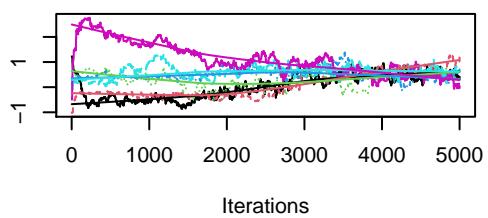
Trace of b15



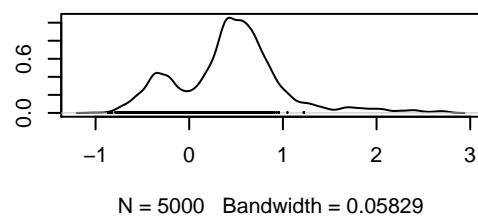
Density of b15



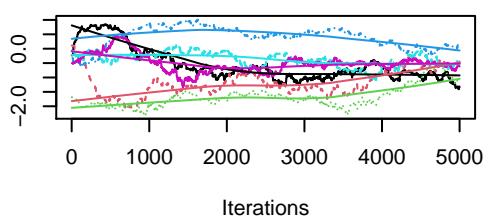
Trace of b16



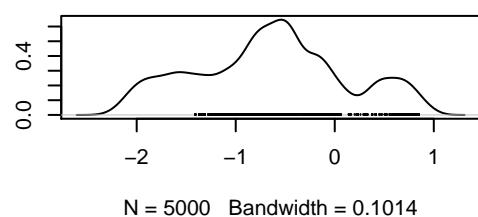
Density of b16



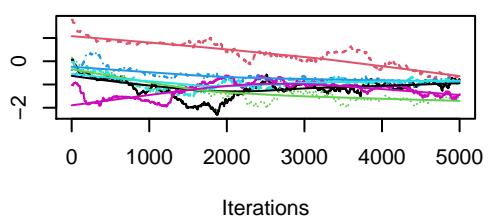
Trace of b21



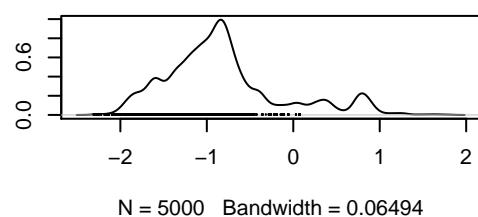
Density of b21



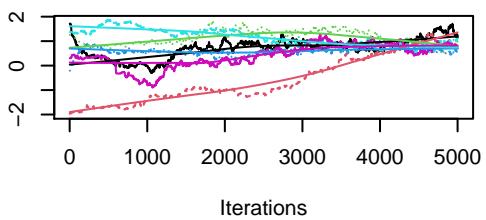
Trace of b22



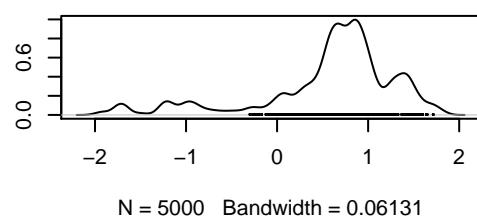
Density of b22



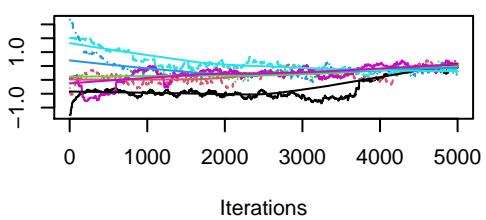
Trace of b23



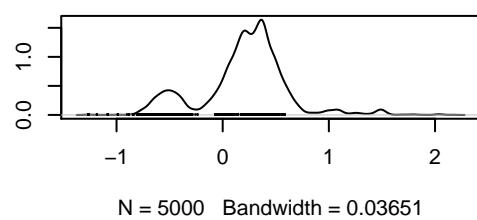
Density of b23



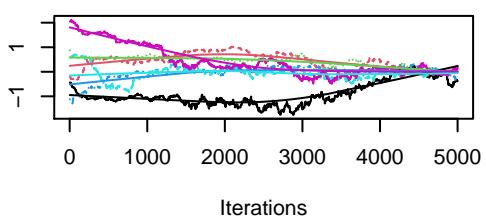
Trace of b24



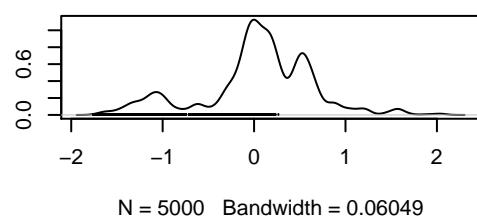
Density of b24



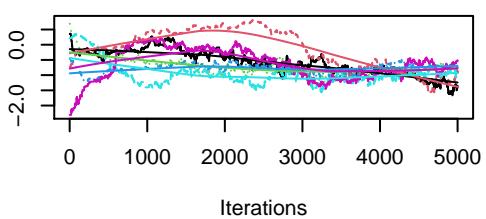
Trace of b25



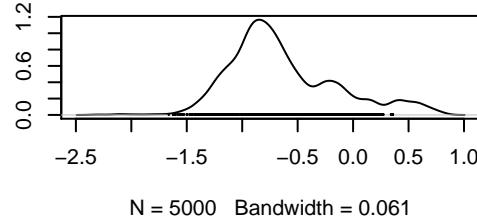
Density of b25



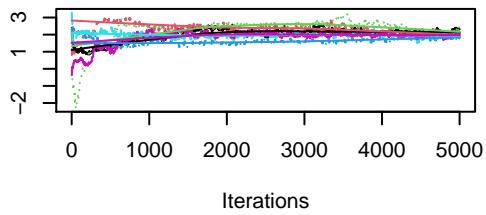
Trace of b26



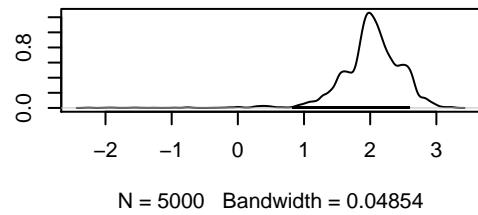
Density of b26



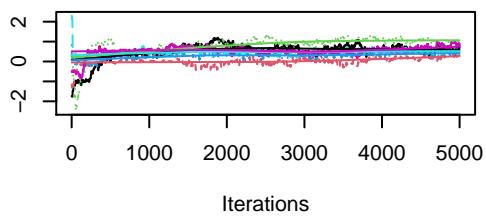
Trace of a1



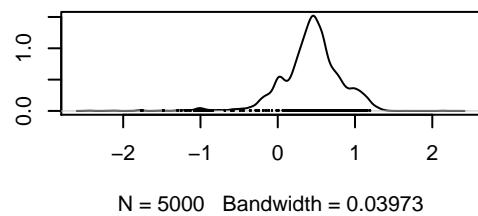
Density of a1



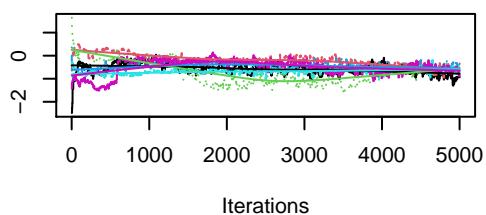
Trace of a2



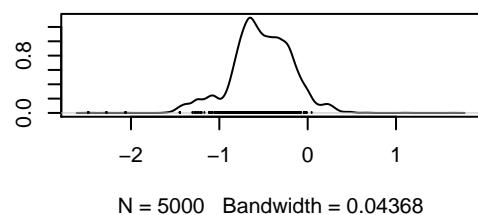
Density of a2



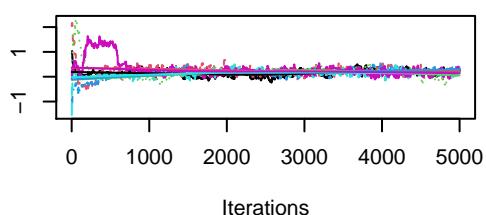
Trace of a3



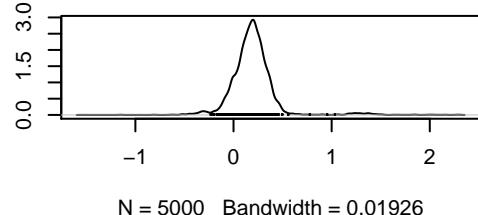
Density of a3

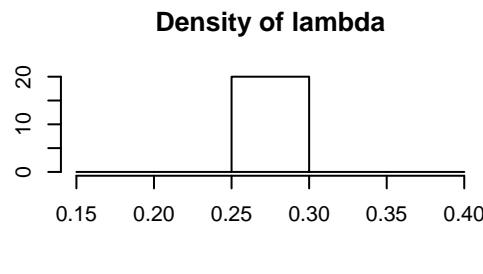
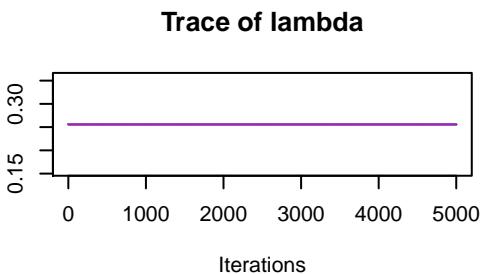
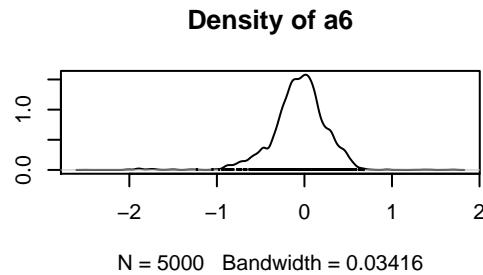
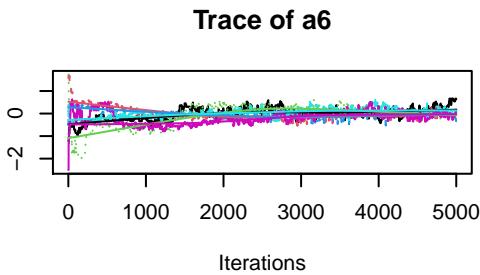
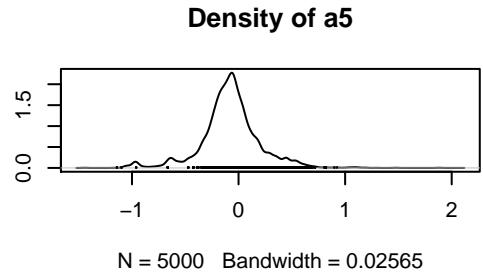
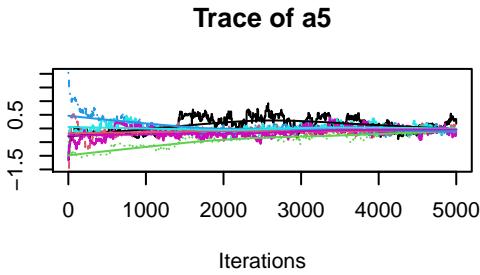


Trace of a4



Density of a4



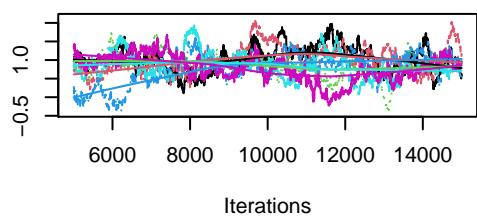


burn=5000, nsamp=10000

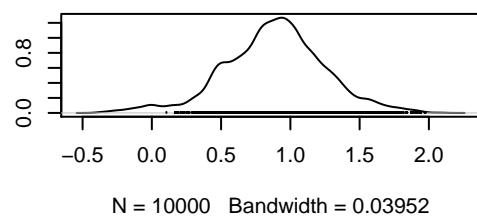
```
multi_adapt_poly_trim05_o2_allnoPG2 <- foreach(i = 1:N_para) %dorng%
  bdregjump_adapt_poly_trim_noPG(y=data_trim05$y, x=data_trim05$x, b=b_init[, , i],
  burn=5000, nsamp=10000, thin=1, trim = 0.5, order = 2,
  jump=list(a=a_init[, i], prec = 1, positive=pos.est,
  persistence=0.8, update.jbw=FALSE))
```

```
load("./report/report20/multi_adapt_poly_trim05_o2_allnoPG2.RData")
multi_adapt_poly_trim05_o2_allnoPG_coda2 <- multi_chain_coda(multi_adapt_poly_trim05_o2_allnoPG2,
  burn = 5000, N_para, p, order = 2)
plot(multi_adapt_poly_trim05_o2_allnoPG_coda2)
```

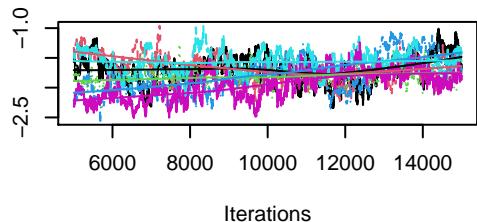
Trace of b_{11}



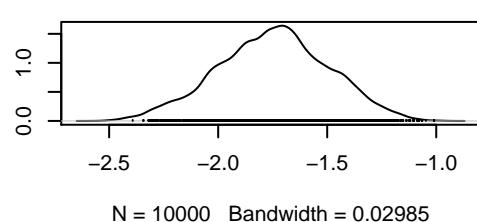
Density of b_{11}



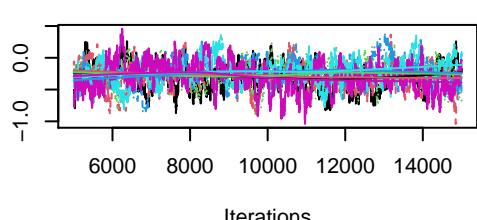
Trace of b_{12}



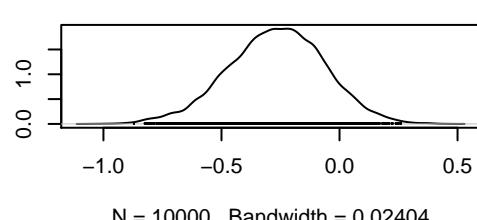
Density of b_{12}



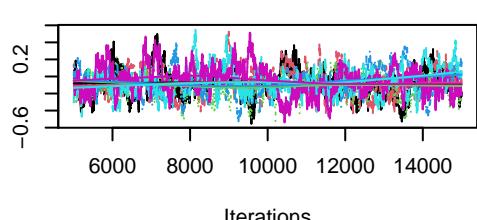
Trace of b_{13}



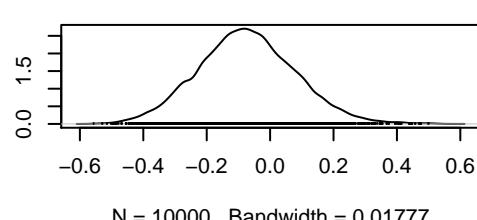
Density of b_{13}

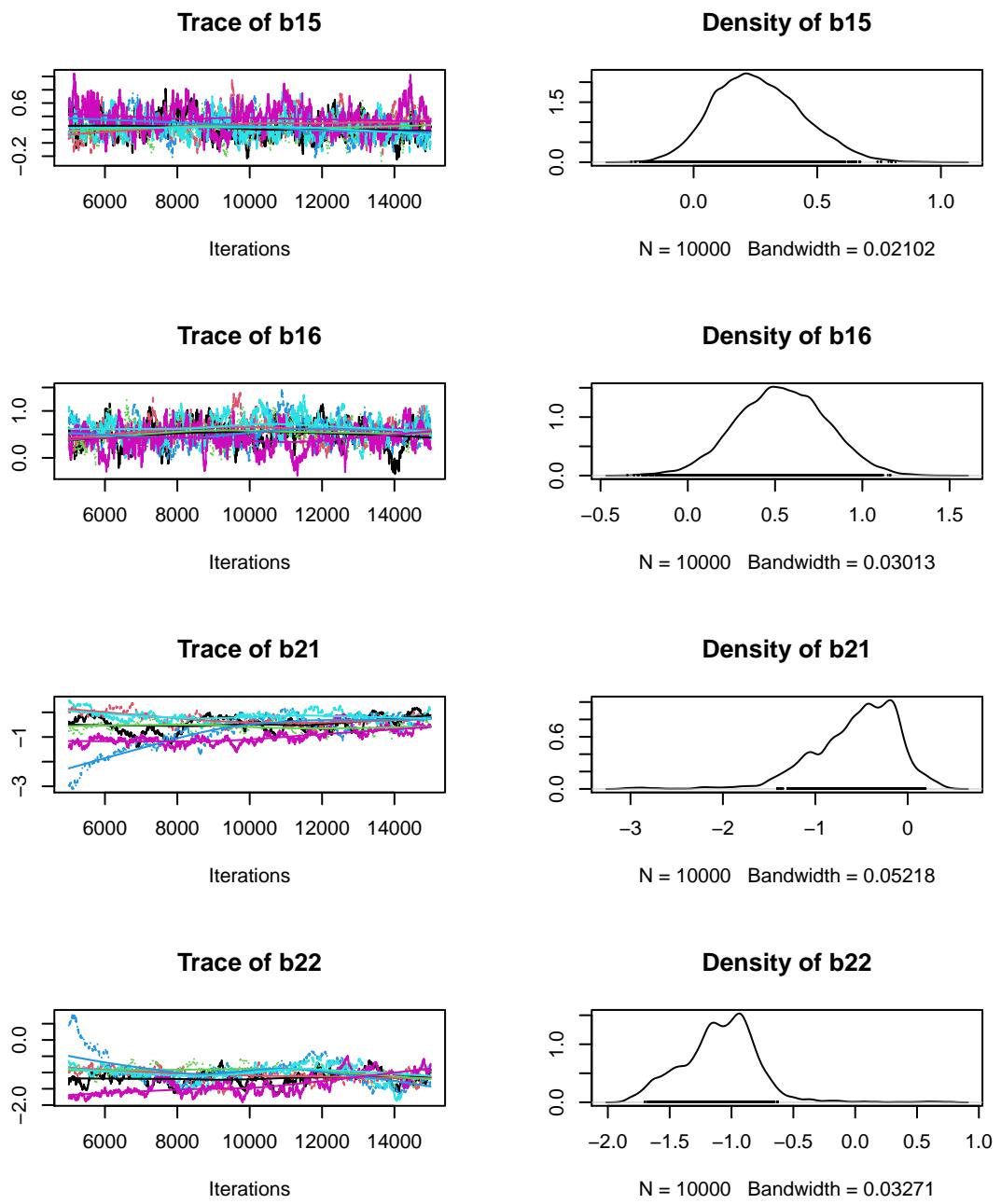


Trace of b_{14}

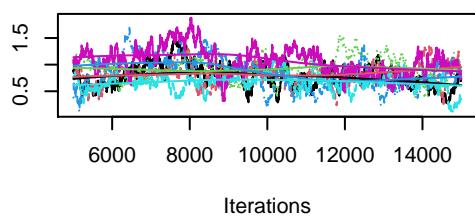


Density of b_{14}

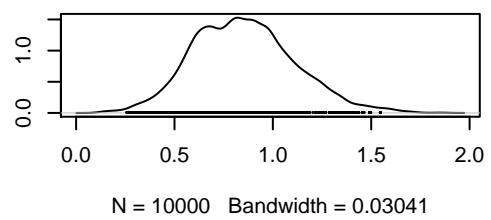




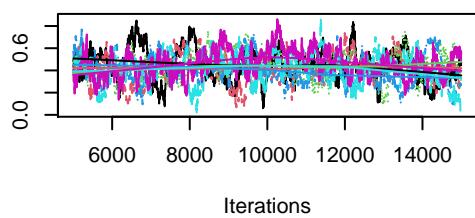
Trace of b23



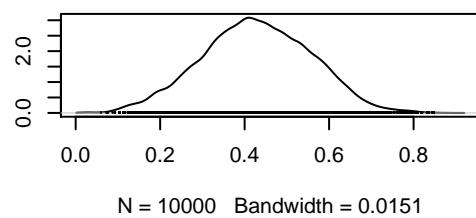
Density of b23



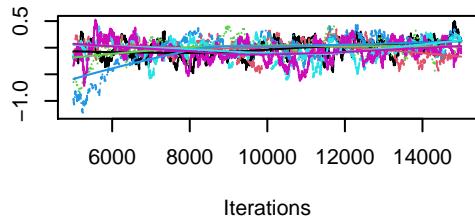
Trace of b24



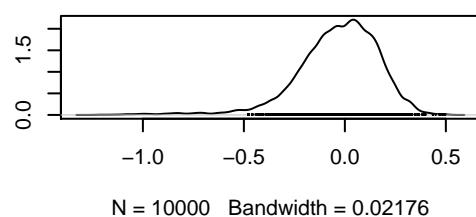
Density of b24



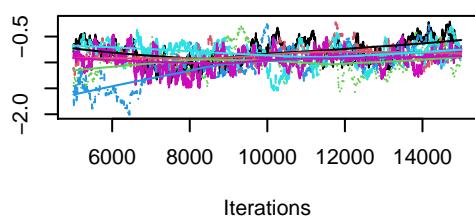
Trace of b25



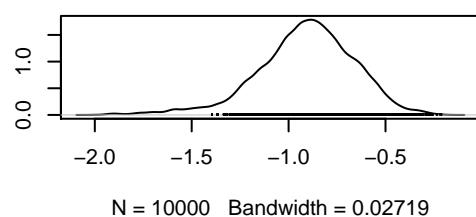
Density of b25



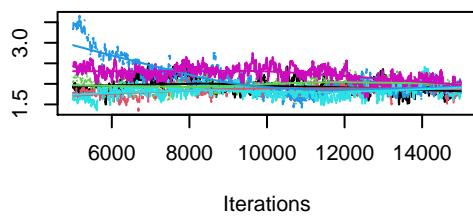
Trace of b26



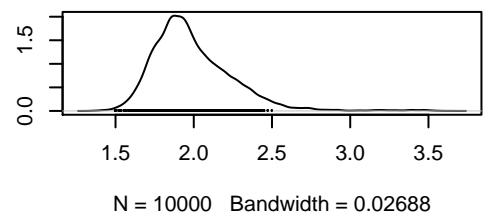
Density of b26



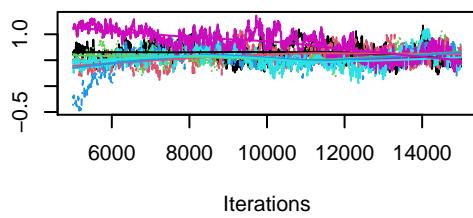
Trace of a1



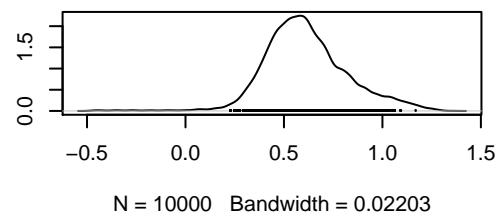
Density of a1



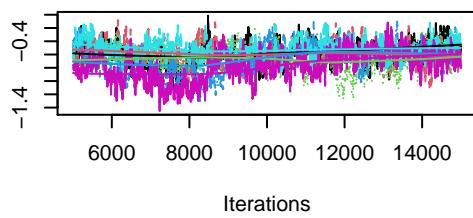
Trace of a2



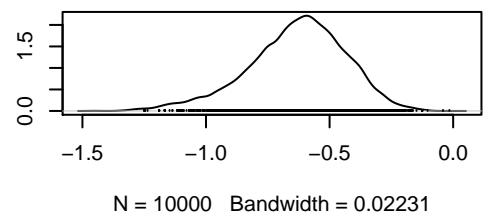
Density of a2



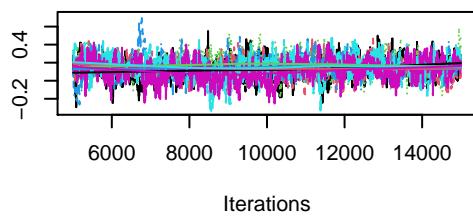
Trace of a3



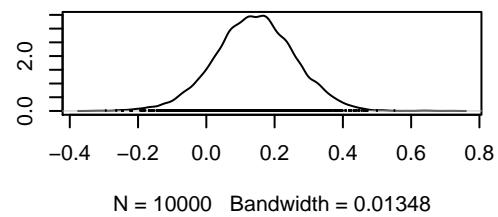
Density of a3

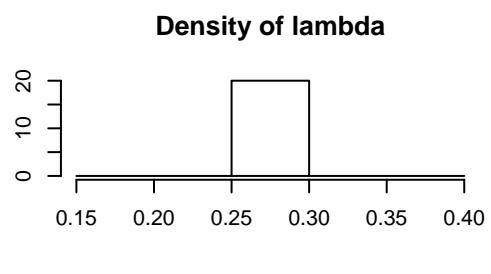
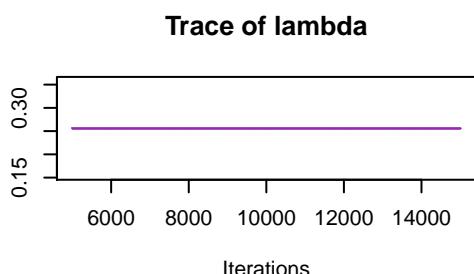
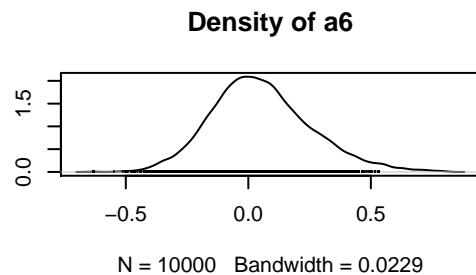
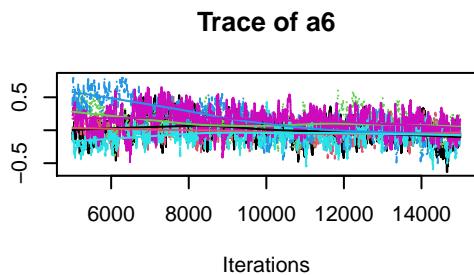
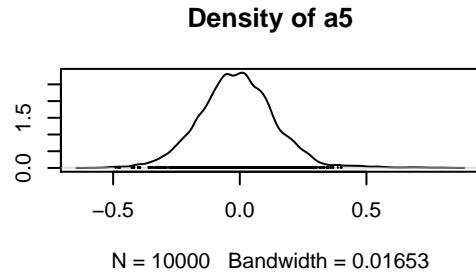
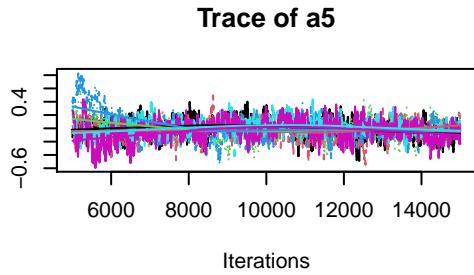


Trace of a4



Density of a4





```
sapply(1:6, function(x) multi_adapt_poly_trim05_o2_allnoPG2[[x]]$acpt)
```

```
##      [,1]     [,2]     [,3]     [,4]     [,5]     [,6]
## a    0.2093333 0.2266000 0.2157333 0.2227333 0.2150667 0.2166667
## b1   0.2154667 0.2227333 0.2351333 0.2192000 0.2184667 0.2248000
## b2   0.2131333 0.2135333 0.2276667 0.2120000 0.2154000 0.2256000
## store 0.5798667 0.5623333 0.4844667 0.5259333 0.5876000 0.5578667
```

```
load("./report/report19/multi_adapt_poly_trim05_o2.RData")
load("./report/report19/multi_adapt_poly_trim05_o2_alphaPG2.RData")
```

```
sapply(1:6, function(x) multi_adapt_poly_trim05_o2[[x]]$runtime)
```

```
##      [,1]     [,2]     [,3]     [,4]     [,5]     [,6]
## user.self 803.312 661.358 826.517 704.100 732.376 737.666
## sys.self  220.413 168.816 231.399 182.530 194.292 195.431
## elapsed   1031.389 837.209 1065.663 893.999 934.085 940.642
## user.child 0.000  0.000  0.000  0.000  0.000  0.000
## sys.child  0.000  0.000  0.000  0.000  0.000  0.000
```

```
sapply(1:6, function(x) multi_adapt_poly_trim05_o2_alphaPG2[[x]]$runtime)
```

```
##          [,1]     [,2]     [,3]     [,4]     [,5]     [,6]
## user.self 536.775 510.584 574.681 602.375 562.543 697.340
## sys.self   136.563 126.254 149.463 161.039 145.898 198.920
## elapsed    674.632 638.088 725.450 764.716 709.739 897.615
## user.child  0.000  0.000  0.000  0.000  0.000  0.000
## sys.child   0.000  0.000  0.000  0.000  0.000  0.000
```

```
sapply(1:6, function(x) multi_adapt_poly_trim05_o2_allnoPG2[[x]]$runtime)
```

```
##          [,1]     [,2]     [,3]     [,4]     [,5]     [,6]
## user.self 541.106 598.395 506.951 834.638 635.040 478.634
## sys.self   142.744 170.326 127.704 290.858 183.011 112.525
## elapsed    685.156 770.062 635.947 1127.039 819.393 592.381
## user.child  0.000  0.000  0.000  0.000  0.000  0.000
## sys.child   0.000  0.000  0.000  0.000  0.000  0.000
```