### Anthony Fontana

### Econ 211C Final Code

data<-read.csv("C:/Users/Aj/Documents/UCSC Coursework/Spring Quarter 2017/Econ 211C - Time Series/Homework/Finaldata.csv")

View(data)

### b

length(data$Year)

#Create a G(theta,W) function

gam<-.7

beta<-.4

theta<-c(gam , beta)

gfunc<-function(theta){

x<-data$Cons

r<-data$SPY

t<-length(x)

eqn1<-t^(-1)\*(1-theta[2]\*((1+r[1])\*(x[1]/x[2])^(-theta[1]))\*1)

eqn2<-t^(-1)\*(1-theta[2]\*((1+r[2])\*(x[1]/x[2])^(-theta[1]))\*x[2])

eqn3<-t^(-1)\*(1-theta[2]\*((1+r[3])\*(x[1]/x[2])^(-theta[1]))\*x[3])

eqn4<-t^(-1)\*(1-theta[2]\*((1+r[4])\*(x[1]/x[2])^(-theta[1]))\*r[2])

eqn5<-t^(-1)\*(1-theta[2]\*((1+r[5])\*(x[1]/x[2])^(-theta[1]))\*r[3])

mat1<-cbind(eqn1,eqn2,eqn3,eqn4,eqn5)

mat2<-t(mat1)

return(mat1%\*%mat2)

}

result <- optim(theta = c(0, 0), gfunc, hessian=TRUE)

## What I want is to minimize the Q function with respect to my parameters

## With this i will be able to run the second portion of the algorithm

## To compute my optimal weight matrix

## But I cannot get the optimization procedure to work

## Maybe my function isnt correct

### c