da420\_assignment4

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par(mfrow = c(2,2)) # four plots on one window/page  
  
# Economic Data from Federal Reserve Bank of St. Louis (FRED system)  
# National Civilian Unemployment Rate (monthly, percentage)  
getSymbols("UNRATENSA", src="FRED", return.class = "xts")

## [1] "UNRATENSA"

ER <- 100 - UNRATENSA # convert to employment rate  
dimnames(ER)[2] <- "ER"  
# chartSeries(ER,theme="white")  
ER.data.frame <- as.data.frame(ER)  
ER.data.frame$date <- ymd(rownames(ER.data.frame))  
ER.time.series <- ts(ER.data.frame$ER,   
 start = c(year(min(ER.data.frame$date)),month(min(ER.data.frame$date))),  
 end = c(year(max(ER.data.frame$date)),month(max(ER.data.frame$date))),  
 frequency=12)

# Manufacturers' New Orders: Durable Goods (millions of dollars)   
getSymbols("DGORDER", src="FRED", return.class = "xts")

## [1] "DGORDER"

DGO <- DGORDER/1000 # convert to billions of dollars  
dimnames(DGO)[2] <- "DGO" # use simple name for index  
# chartSeries(DGO, theme="white")   
DGO.data.frame <- as.data.frame(DGO)  
DGO.data.frame$DGO <- DGO.data.frame$DGO  
DGO.data.frame$date <- ymd(rownames(DGO.data.frame))  
DGO.time.series <- ts(DGO.data.frame$DGO,   
 start = c(year(min(DGO.data.frame$date)),month(min(DGO.data.frame$date))),  
 end = c(year(max(DGO.data.frame$date)),month(max(DGO.data.frame$date))),  
 frequency=12)

# University of Michigan Index of Consumer Sentiment (1Q 1966 = 100)  
getSymbols("UMCSENT", src="FRED", return.class = "xts")

## [1] "UMCSENT"

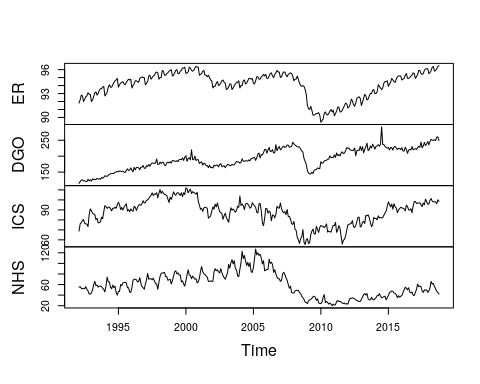
ICS <- UMCSENT # use simple name for xts object  
dimnames(ICS)[2] <- "ICS" # use simple name for index  
# chartSeries(ICS, theme="white")  
ICS.data.frame <- as.data.frame(ICS)  
ICS.data.frame$ICS <- ICS.data.frame$ICS  
ICS.data.frame$date <- ymd(rownames(ICS.data.frame))  
ICS.time.series <- ts(ICS.data.frame$ICS,   
 start = c(year(min(ICS.data.frame$date)), month(min(ICS.data.frame$date))),  
 end = c(year(max(ICS.data.frame$date)),month(max(ICS.data.frame$date))),  
 frequency=12)

# New Homes Sold in the US, not seasonally adjusted (monthly, millions)  
getSymbols("HSN1FNSA",src="FRED",return.class = "xts")

## [1] "HSN1FNSA"

NHS <- HSN1FNSA  
dimnames(NHS)[2] <- "NHS" # use simple name for index  
# chartSeries(NHS, theme="white")  
NHS.data.frame <- as.data.frame(NHS)  
NHS.data.frame$NHS <- NHS.data.frame$NHS  
NHS.data.frame$date <- ymd(rownames(NHS.data.frame))  
NHS.time.series <- ts(NHS.data.frame$NHS,   
 start = c(year(min(NHS.data.frame$date)),month(min(NHS.data.frame$date))),  
 end = c(year(max(NHS.data.frame$date)),month(max(NHS.data.frame$date))),  
 frequency=12)

# define multiple time series object  
economic.mts <- cbind(ER.time.series, DGO.time.series, ICS.time.series,  
 NHS.time.series)   
dimnames(economic.mts)[[2]] <- c("ER","DGO","ICS","NHS") # keep simple names   
modeling.mts <- na.omit(economic.mts) # keep overlapping time intervals only  
  
# plot multiple time series   
#pdf(file="fig\_economic\_analysis\_mts\_R.pdf",width = 8.5,height = 11)   
plot(modeling.mts,main="")



#dev.off()