5.1-Valuation-Option-Boundaries-Test.R

frm

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# 5.1 Valuation Option Boundaries Test.R  
# rmarkdown::render("5.1 Valuation Option Boundaries Test.R",   
# "word\_document")  
rm(list = ls()) # Take out the Environment "trash"  
cat("\014") # Clear Console, making error checking easier.

while (!is.null(dev.list())) dev.off() # Clear old plots  
#par(family = 'Times New Roman') # Globally set fonts for graphs  
# Libraries  
Packages <- c("data.table", "date", "stats", "tis", "gtools", "openxlsx")   
if(length(setdiff(Packages, rownames(installed.packages()))) > 0) {  
 install.packages(setdiff(Packages, rownames(installed.packages())))  
} # Make sure libraries are installed on this computer  
lapply(Packages, library, character.only=TRUE) # Load and attach libraries

## [[1]]  
## [1] "openxlsx" "gtools" "tis" "date" "data.table"  
## [6] "stats" "graphics" "grDevices" "utils" "datasets"   
## [11] "methods" "base"   
##   
## [[2]]  
## [1] "openxlsx" "gtools" "tis" "date" "data.table"  
## [6] "stats" "graphics" "grDevices" "utils" "datasets"   
## [11] "methods" "base"   
##   
## [[3]]  
## [1] "openxlsx" "gtools" "tis" "date" "data.table"  
## [6] "stats" "graphics" "grDevices" "utils" "datasets"   
## [11] "methods" "base"   
##   
## [[4]]  
## [1] "openxlsx" "gtools" "tis" "date" "data.table"  
## [6] "stats" "graphics" "grDevices" "utils" "datasets"   
## [11] "methods" "base"   
##   
## [[5]]  
## [1] "openxlsx" "gtools" "tis" "date" "data.table"  
## [6] "stats" "graphics" "grDevices" "utils" "datasets"   
## [11] "methods" "base"   
##   
## [[6]]  
## [1] "openxlsx" "gtools" "tis" "date" "data.table"  
## [6] "stats" "graphics" "grDevices" "utils" "datasets"   
## [11] "methods" "base"

rm(Packages)  
# Fix call axis for lower bounds and time values  
FixXRangeCLB <- TRUE  
FixYRangeCLB <- TRUE  
MinXRangeCLB <- 75  
MaxXRangeCLB <- 125  
MinYRangeCLB <- 0  
MaxYRangeCLB <- 30  
FixXRangeCTV <- TRUE  
FixYRangeCTV <- TRUE  
MinXRangeCTV <- 75  
MaxXRangeCTV <- 125  
MinYRangeCTV <- 0  
MaxYRangeCTV <- 15  
# Fix put axis for lower bounds and time values  
FixXRangePLB <- TRUE  
FixYRangePLB <- TRUE  
MinXRangePLB <- 75  
MaxXRangePLB <- 125  
MinYRangePLB <- 0  
MaxYRangePLB <- 30  
FixXRangePTV <- TRUE  
FixYRangePTV <- TRUE  
MinXRangePTV <- 75  
MaxXRangePTV <- 125  
MinYRangePTV <- 0  
MaxYRangePTV <- 15  
# Put-call parity range  
FixXRangePCP <- TRUE  
FixYRangePCP <- TRUE  
MinXRangePCP <- 75  
MaxXRangePCP <- 125  
MinYRangePCP <- 0  
MaxYRangePCP <- 30  
#  
# Analysis of half year options  
#  
# Analysis of call lower bound  
FileName = "SPYHalf20051215.xlsx"  
source('Call Lower Bound.R')  
FileName = "SPYHalf20081215.xlsx"  
source('Call Lower Bound.R')  
FileName = "SPYHalf20111215.xlsx"  
source('Call Lower Bound.R')  
# Analysis of put lower bound  
FileName = "SPYHalf20051215.xlsx"  
source('Put Lower Bound.R')  
FileName = "SPYHalf20081215.xlsx"  
source('Put Lower Bound.R')  
FileName = "SPYHalf20111215.xlsx"  
source('Put Lower Bound.R')  
# Analysis of put call parity bounds  
FileName = "SPYHalf20051215.xlsx"  
source('Put Call Parity.R')  
FileName = "SPYHalf20081215.xlsx"  
source('Put Call Parity.R')  
FileName = "SPYHalf20111215.xlsx"  
source('Put Call Parity.R')  
#  
# Analysis of quarter year options  
#  
# Analysis of call lower bound  
FileName = "SPYQuarter20051215.xlsx"  
source('Call Lower Bound.R')  
FileName = "SPYQuarter20081215.xlsx"  
source('Call Lower Bound.R')  
FileName = "SPYQuarter20111215.xlsx"  
source('Call Lower Bound.R')  
# Analysis of put lower bound  
FileName = "SPYQuarter20051215.xlsx"  
source('Put Lower Bound.R')  
FileName = "SPYQuarter20081215.xlsx"  
source('Put Lower Bound.R')  
FileName = "SPYQuarter20111215.xlsx"  
source('Put Lower Bound.R')  
# Analysis of put call parity bounds  
FileName = "SPYQuarter20051215.xlsx"  
source('Put Call Parity.R')  
FileName = "SPYQuarter20081215.xlsx"  
source('Put Call Parity.R')  
FileName = "SPYQuarter20111215.xlsx"  
source('Put Call Parity.R')  
#  
# Analysis of monthly options  
#  
# Analysis of call lower bound  
FileName = "SPYMonth20051215.xlsx"  
source('Call Lower Bound.R')  
FileName = "SPYMonth20081215.xlsx"  
source('Call Lower Bound.R')  
FileName = "SPYMonth20111215.xlsx"  
source('Call Lower Bound.R')  
# Analysis of put lower bound  
FileName = "SPYMonth20051215.xlsx"  
source('Put Lower Bound.R')  
FileName = "SPYMonth20081215.xlsx"  
source('Put Lower Bound.R')  
FileName = "SPYMonth20111215.xlsx"  
source('Put Lower Bound.R')  
# Analysis of put call parity bounds  
FileName = "SPYMonth20051215.xlsx"  
source('Put Call Parity.R')  
FileName = "SPYMonth20081215.xlsx"  
source('Put Call Parity.R')  
FileName = "SPYMonth20111215.xlsx"  
source('Put Call Parity.R')