library(greeks)

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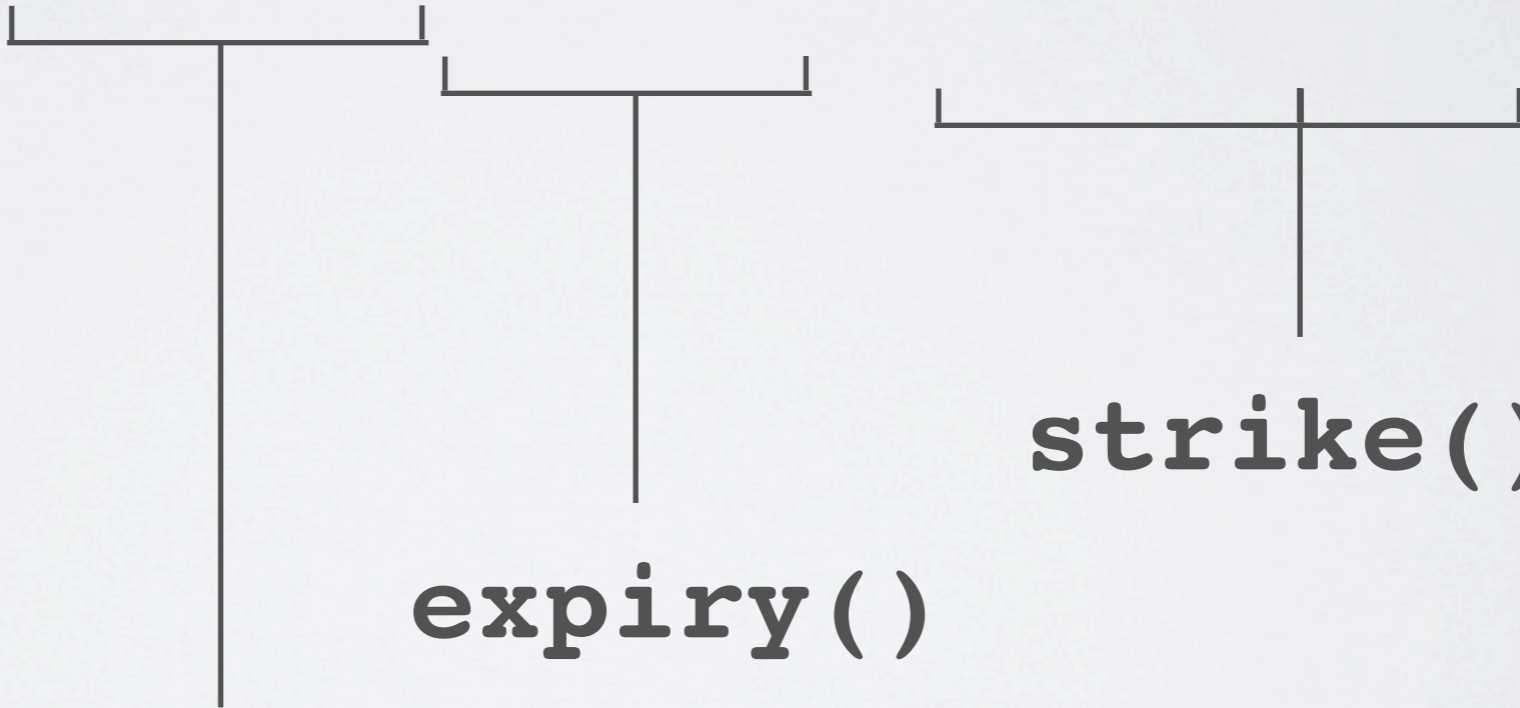May 18, 2013

library(greeks)

right()

as.osi("AAPL 120120C000500000"**)**

strike()

expiry()

underlying()

tte()

library(greeks)

```
nextExp()    # 2013-06-21

nextExp(n=5) # 2013-10-18

nextExp(min.days=180) #  2013-11-15
```

Full OCC Calendar 1990 to 2021

library(**greeks**)

```
greeks(42,40,0.1,0.1,0.5,0.2)

List of 2
 $ call:List of 15                           $ put :List of 15
   ..$ value     : num 4.76                     ..$ value     : num 0.809
   ..$ delta     : num 0.661                    ..$ delta     : num -0.339
   ..$ gamma     : num 0.0586                   ..$ gamma     : num 0.0586
   ..$ vega      : num 10.3                     ..$ vega      : num 10.3
   ..$ theta     : num -4.38                    ..$ theta     : num -0.576
   ..$ rho       : num 11.6                     ..$ rho       : num -7.46
   ..$ vanna     : num -0.477                   ..$ vanna     : num -0.477
   ..$ charm     : num -0.158                   ..$ charm     : num -0.0632
   ..$ zomma     : num -0.26                    ..$ zomma     : num -0.26
   ..$ speed     : num -0.0055                  ..$ speed     : num -0.0055
   ..$ colour    : num -0.0578                  ..$ colour    : num -0.0578
   ..$ DvegaDtime: num -10.5                    ..$ DvegaDtime: num -10.5
   ..$ vomma     : num 5.89                     ..$ vomma     : num 5.89
   ..$ dualdelta : num -0.578                   ..$ dualdelta : num 0.373
   ..$ dualgamma : num 0.0646                   ..$ dualgamma : num 0.0646
```

library(**greeks**)

```
LRtree(N=5)
```

					0.000000
				0.000000	
			0.000000		0.000000
		0.7181944		0.000000	
	2.353224		1.149557		0.000000
4.758367		3.3466961		1.840006	
	6.240426		4.684653		2.945153
		8.0317624		6.422514	
			10.116718		8.557997
				12.437823	
					14.904428

CRRtree   JRtree   *... plus greeks*

library(greeks)

```
greeks(JumpDiffusionBates('p',100, 100, 0.5, 0.05,
                          0.05,0.2,5,-0.05,.1)))
List of 7
 $ Delta     : num -0.387
 $ Elasticity: num -5.07
 $ Gamma     : num 0.0174
 $ GammaP    : num 0.0174
 $ Vega      : num 0.174
 $ VegaP     : num 0.348
 $ Rho       : num -0.0381
```
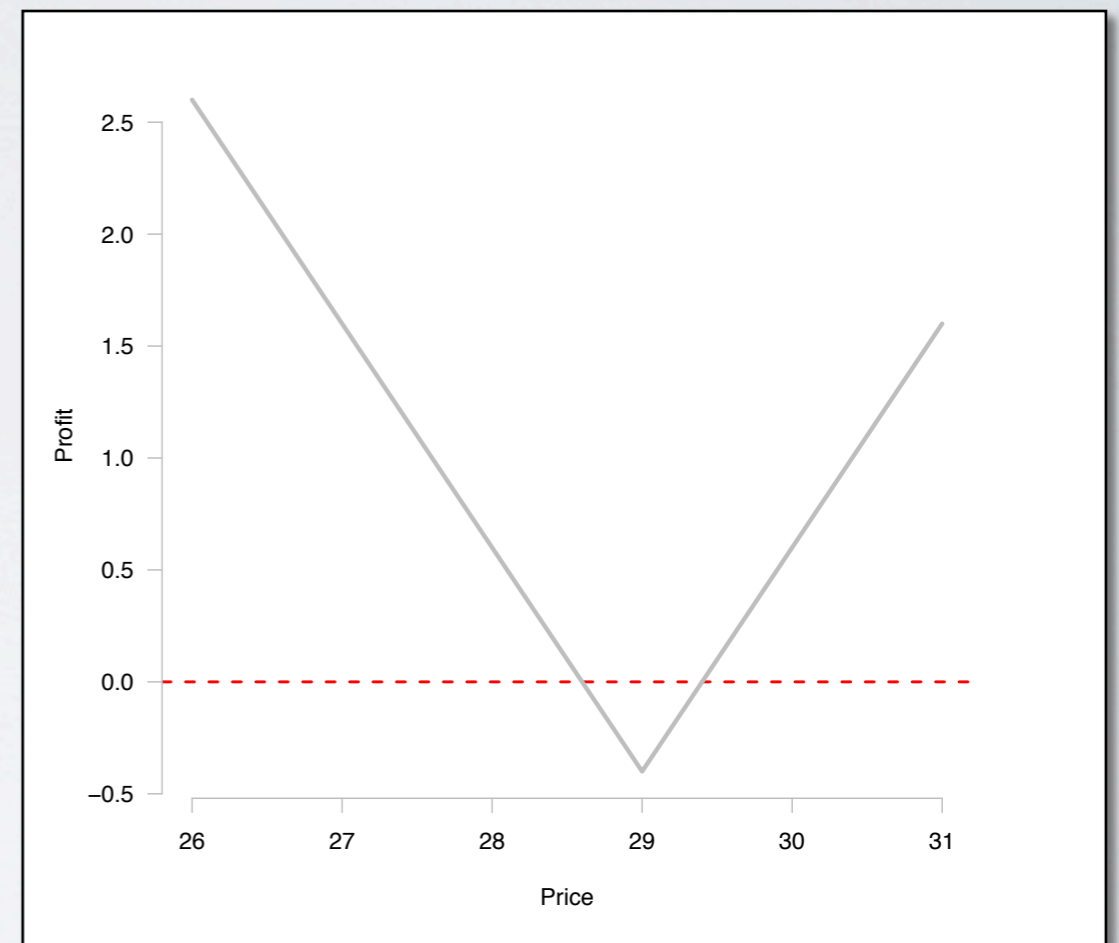
CorradoSuSkewKurtosis   JarrowRuddSkewKurtosis   Black76F
ModifiedCorradoSuSkewKurtosis   JumpDiffusionMerton
BosVandermarkCashDividend   DiscreteDivYield   *... and more*

library(greeks)

```
plot(payoff(
        as.osi("PPL  121020P00029000")+
        as.osi("PPL  121020C00029000"),
        premium=c(0.2,0.2)
        )
    )
```

Thanks!

https://code.google.com/p/rgreeks/