R documentation

of 'AmericanPutVarBinomial.Rd'

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`AmericanPutVarBinomial` *Calculates VaR of American vanilla put using binomial tree.*

Description

Calculates VaR of American Put Option using binomial tree to price the option and historical method to compute the VaR.

Usage

```
AmericanPutVarBinomial(amountInvested, stockPrice, strike, r, volatility,
  maturity, numberSteps, cl, hp)
```

Arguments

`amountInvested`	Total amount paid for the Put Option.
`stockPrice`	Stock price of underlying stock.
`strike`	Strike price of the option.
`r`	Risk-free rate of returns.
`volatility`	Volatility of the underlying stock.
`maturity`	Time to maturity of the option in days.
`numberSteps`	The number of time-steps considered for the binomial model.
`cl`	Confidence level for which VaR is computed.
`hp`	Holding period of the option in days.

Value

VaR of the American Put Option

Author(s)

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References

Dowd, Kevin. Measuring Market Risk, Wiley, 2007.

Lyuu, Yuh-Dauh. Financial Engineering & Computation: Principles, Mathematics, Algorithms, Cambridge University Press, 2002.

Examples

```
# Market Risk of American Put with given parameters.
   AmericanPutVarBinomial(0.20, 27.2, 25, .16, .05, 60, 20, .95, 30)
```

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