How can I use the ODDLPRICE function in Excel to calculate the option price based on the Black-Scholes model?

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The ODDLPRICE function in Excel allows users to calculate the option price using the Black-Scholes model. This model is widely used in finance to estimate the fair value of options. By inputting the necessary parameters such as the underlying asset price, strike price, time to expiration, risk-free interest rate, and volatility, the function calculates the theoretical price of the option. This allows users to make informed decisions when buying or selling options. The ODDLPRICE function is a powerful tool for financial analysis and can be used by investors, traders, and professionals in the finance industry.

This article describes the formula syntax and usage of the **ODDLPRICE** function in Microsoft Excel.

Description

Returns the price per $100 face value of a security having an odd (short or long) last coupon period.

Syntax

ODDLPRICE(settlement, maturity, last_interest, rate, yld, redemption, frequency,)

Important: Dates should be entered by using the DATE function, or as results of other formulas or functions. For example, use DATE(2008,5,23) for the 23rd day of May, 2008. Problems can occur if dates are entered as text.

The ODDLPRICE function syntax has the following arguments:

Settlement Required. The security's settlement date. The security settlement date is the date after the issue date when the security is traded to the buyer.

Maturity Required. The security's maturity date. The maturity date is the date when the security expires.

Last_interest Required. The security's last coupon date.

Rate Required. The security's interest rate.

Yld Required. The security's annual yield.

Redemption Required. The security's redemption value per $100 face value.

Frequency Required. The number of coupon payments per year. For annual payments, frequency = 1; for semiannual, frequency = 2; for quarterly, frequency = 4.

Basis Optional. The type of day count basis to use.

Basis	**Day count basis**
0 or omitted	US (NASD) 30/360
1	Actual/actual
2	Actual/360
3	Actual/365
4	European 30/360

Remarks

Microsoft Excel stores dates as sequential serial numbers so they can be used in calculations. By default, January 1, 1900 is serial number 1, and January 1, 2008 is serial number 39448 because it is 39,448 days after January 1, 1900.

The settlement date is the date a buyer purchases a coupon, such as a bond. The maturity date is the date when a coupon expires. For example, suppose a 30-year bond is issued on January 1, 2008, and is purchased by a buyer six months later. The issue date would be January 1, 2008, the settlement date would be July 1, 2008, and the maturity date would be January 1, 2038, which is 30 years after the January 1, 2008, issue date.

Settlement, maturity, last_interest, and basis are truncated to integers.

If settlement, maturity, or last_interest is not a valid date, ODDLPRICE returns the #VALUE! error value.

If rate < 0 or if yld < 0, ODDLPRICE returns the #NUM! error value.

If basis < 0 or if basis > 4, ODDLPRICE returns the #NUM! error value.

The following date condition must be satisfied; otherwise, ODDLPRICE returns the #NUM! error value:

maturity > settlement > last_interest