

REPORT 2, Dividend Estimation using Box Spread and Call-Put parity Strategy

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A dividend is the distribution of company profits to the shareholders. In this report we try to estimate the implicit dividend of a specific underlying using box spread and call put parity method. Yahoo Finance website is used as our data source.



First, we should choose a dividend-paying underlying. We choose Oracle Corporation (ORCL).

Oracle Corporation (ORCL)

NYSE - Nasdaq Real Time Price. Currency in USD

83.37 -0.92 (-1.09%)

As of 03:59PM EDT. Market open.

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Summary Chart Conversations Statistics Historical Data Profile Financials Analysis Options Holders Sustainability

Previous Close	84.29	Market Cap	222.582B
Open	83.96	Beta (5Y Monthly)	0.81
Bid	83.34 x 800	PE Ratio (TTM)	31.29
Ask	83.36 x 900	EPS (TTM)	2.66
Day's Range	83.12 - 84.33	Earnings Date	Jun 13, 2022 - Jun 17, 2022
52 Week Range	69.91 - 106.34	Forward Dividend & Yield	1.28 (1.52%)
Volume	4,577,667	Ex-Dividend Date	Apr 07, 2022
Avg. Volume	9,510,555	1y Target Est	92.55



Choosing a fixed maturity, 1,3,6, or 12 months, we look through the call and put contracts of the underlying. Two strike prices, k_1 and k_2 should be specified subject to $k_2 > k_1$; otherwise, the model would not lead to proper results. The list of strike prices for each maturity date, and the prices of call or put options corresponding to each strike price is listed below:

T (months)	K1	K2	S
1	70	84	83.35
3	70	90	83.35
6	70	90	83.35
12	70	100	83.35

Now we can calculate the corresponding discount factor for each maturity data using box spread method:

T (months)	CK1	CK2	PK1	PK2	Discount Fac.
1	11.33	1.7	0.13	2.57	86%
3	14.2	1.56	0.91	7.55	96%
6	15.31	3.4	2	9.75	98%
12	20.34	6.85	7.07	22.44	96%

Finally we are able compute the dividend for different maturity times

T (months)	K (ATM)	Call	Put	Dividend	Dividend Rate
1	82.5	2.28	2.2	14.08492129	17%
3	82.5	5.25	14.15	13.19502075	16%
6	82.5	7	5.85	1.121566633	1%
12	82.5	14	16.5	6.741164241	8%