

Delta for the Riskless Hedge Portfolio

Consider the number of written **at-the-money** options required to form a riskless hedge for different times to expiration:

$$r = .06 \quad \sigma = .3 \quad X = S$$

<u>Time to Expiration, t^*</u>	<u>d_1</u>	<u>$N[d_1]$</u>	<u>$N[d_1]^{-1} = \# \text{ of Options}$</u>
5 years	.783	.7832	1.277
1 year	.350	.6368	1.570
6 months	.248	.5977	1.673
3 months	.175	.5695	1.771
1 month	.101	.5044	1.983
