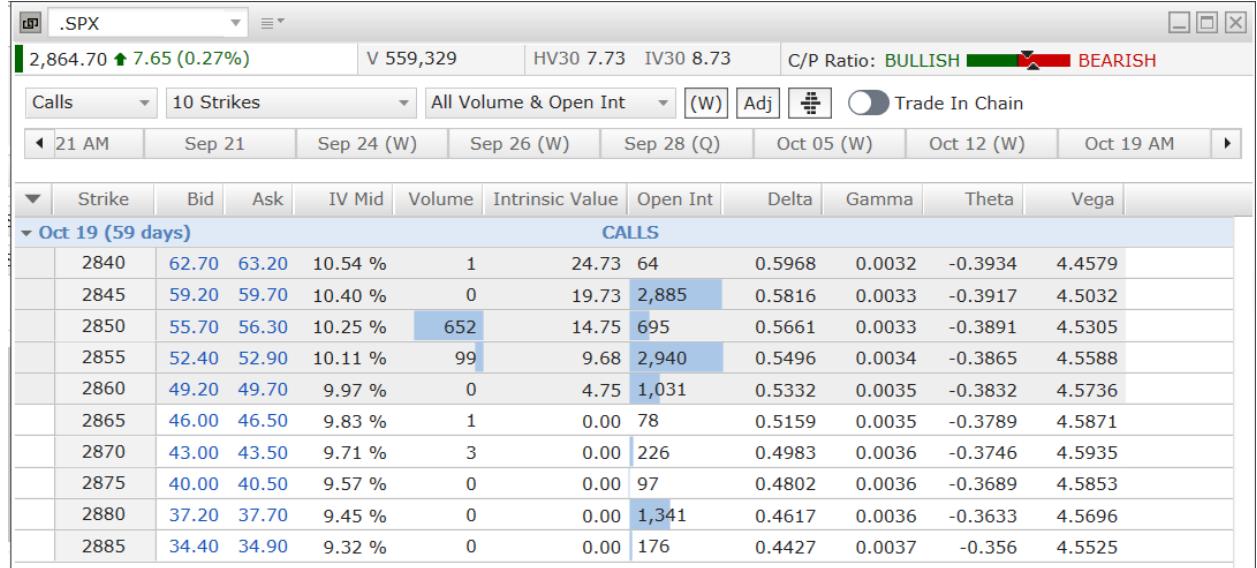


Classroom Session 2: Introduction to Options – Homework

Please complete this homework before the next class in this course. We will review the answers and the project assigned at the beginning of the next class.

1. Below is a screenshot from ATP's Option chain for Calls on the index .SPX. What does the grey shade represent?



Strike	Bid	Ask	IV Mid	Volume	Intrinsic Value	Open Int	Delta	Gamma	Theta	Vega
CALLS										
2840	62.70	63.20	10.54 %	1	24.73	64	0.5968	0.0032	-0.3934	4.4579
2845	59.20	59.70	10.40 %	0	19.73	2,885	0.5816	0.0033	-0.3917	4.5032
2850	55.70	56.30	10.25 %	652	14.75	695	0.5661	0.0033	-0.3891	4.5305
2855	52.40	52.90	10.11 %	99	9.68	2,940	0.5496	0.0034	-0.3865	4.5588
2860	49.20	49.70	9.97 %	0	4.75	1,031	0.5332	0.0035	-0.3832	4.5736
2865	46.00	46.50	9.83 %	1	0.00	78	0.5159	0.0035	-0.3789	4.5871
2870	43.00	43.50	9.71 %	3	0.00	226	0.4983	0.0036	-0.3746	4.5935
2875	40.00	40.50	9.57 %	0	0.00	97	0.4802	0.0036	-0.3689	4.5853
2880	37.20	37.70	9.45 %	0	0.00	1,341	0.4617	0.0036	-0.3633	4.5696
2885	34.40	34.90	9.32 %	0	0.00	176	0.4427	0.0037	-0.356	4.5525

- In the money
- At the money
- Out of the money

2. Below is a screenshot from ATP's option chain for puts on the index .SPX. What does the white unshaded strikes represent?

	Strike	Bid	Ask	IV Mid	Volume	Intrinsic Value	Open Int	Delta	Gamma	Theta	Vega
PUTS											
	2890	32.10	32.50	10.12 %	0	0.00	866	-0.4025	0.0035	-0.4149	4.2206
	2895	33.60	34.10	9.97 %	9	0.00	1,868	-0.419	0.0036	-0.4131	4.2565
	2900	35.20	35.70	9.85 %	46	0.00	2,666	-0.4364	0.0037	-0.411	4.2912
	2905	37.00	37.40	9.71 %	2	0.00	4	-0.4543	0.0037	-0.4077	4.3136
	2910	38.80	39.30	9.59 %	8	0.00	25	-0.4728	0.0038	-0.4042	4.333
	2915	40.80	41.30	9.48 %	10	2.57	7	-0.4918	0.0039	-0.4003	4.3386
	2920	42.90	43.40	9.37 %	10	7.63	11	-0.5114	0.0039	-0.3956	4.3403
	2925	45.10	45.60	9.27 %	0	12.57	11	-0.531	0.0039	-0.3902	4.3267
	2930	47.50	48.00	9.18 %	0	17.57	8	-0.551	0.004	-0.3838	4.3087
	2935	50.00	50.50	9.09 %	0	22.57	3	-0.5712	0.004	-0.3771	4.2801

- a. In the money
- b. At the money
- c. Out of the money

3. .SPX is trading at 2560 and the 2555 calls is trading at \$9.00. How much time value does the option have?

- a. 5.00
- b. 0.00
- c. 9.00
- d. 4.00

4. What field can you add to your option chain to see how much your option is In the money?

- a. Time value
- b. Volume
- c. Intrinsic Value
- d. Open Interest

5. True/False: Time value for calls and puts at each strike is nearly equivalent.

6. What options have the most time value?

- a. In the money
- b. At the money
- c. Out of the money

7. What factors impact the premium of each option?
 - a. Moneyness, time to expiration, and Implied volatility
 - b. Volume, Open Interest, and Alpha
 - c. Time to expiration, Historical Volatility, and Moneyness
 - d. Sharpe ratio, Historical Volatility, Beta
8. When a long call is exercised, what occurs in the account?
 - a. Buy 100 shares at the strike price
 - b. Sell 100 shares at the strike price
 - c. Buy 100 shares at the strike price + premium
 - d. Sell 100 shares at the strike price + premium
9. When a short call is assigned, what occurs in the account?
 - a. Buy 100 shares at the strike price
 - b. Sell 100 shares at the strike price
 - c. Buy 100 shares at the strike price + premium
 - d. Sell 100 shares at the strike price + premium
10. When a long put is exercised, what occurs in the account?
 - a. Buy 100 shares at the strike price + premium
 - b. Buy 100 shares at the strike price
 - c. Sell 100 shares at the strike price + premium
 - d. Sell 100 shares at the strike price
11. When a short put is assigned, what occurs in the account?
 - a. Buy 100 shares at the strike price + premium
 - b. Buy 100 shares at the strike price
 - c. Sell 100 shares at the strike price + premium
 - d. Sell 100 shares at the strike price
12. True/False: When you sell an American style option, you can only be assigned at expiration.

Project: Pull up an option chain on fidelity.com or ATP and look at SPY front month call that is 5 points in the money. Identify how much of the option price is time value and how much is intrinsic value.

Options trading entails significant risk and is not appropriate for all investors. Certain complex options strategies carry additional risk. Before trading options, please read [Characteristics and Risks of Standardized Options](#). Supporting documentation for any claims, if applicable, will be furnished upon request.

Any screenshots, charts, or company trading symbols mentioned are provided for illustrative purposes only and should not be considered an offer to sell, a solicitation of an offer to buy, or a recommendation for the security.

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