akuna capital

OPTIONS THEORY

COMBINATION SPREADS

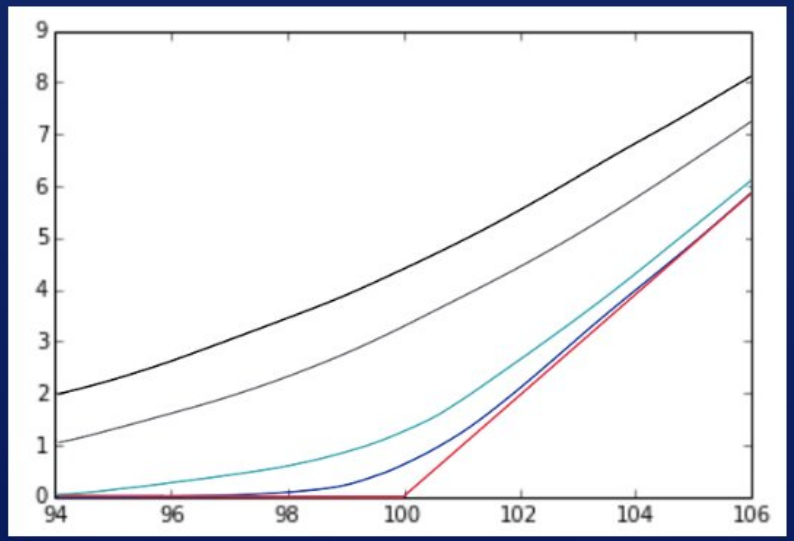
THIS LECTURE

- Review Topics
  - Theo calculations
  - Edge
- Combo Types

THEO CALCULATIONS

- Let's review how we discuss theos
- Important for options b/c <u>we control theos!!</u>
  - Change implied volatility

Option Price



Underlying value

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid Q	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		-14	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		-14	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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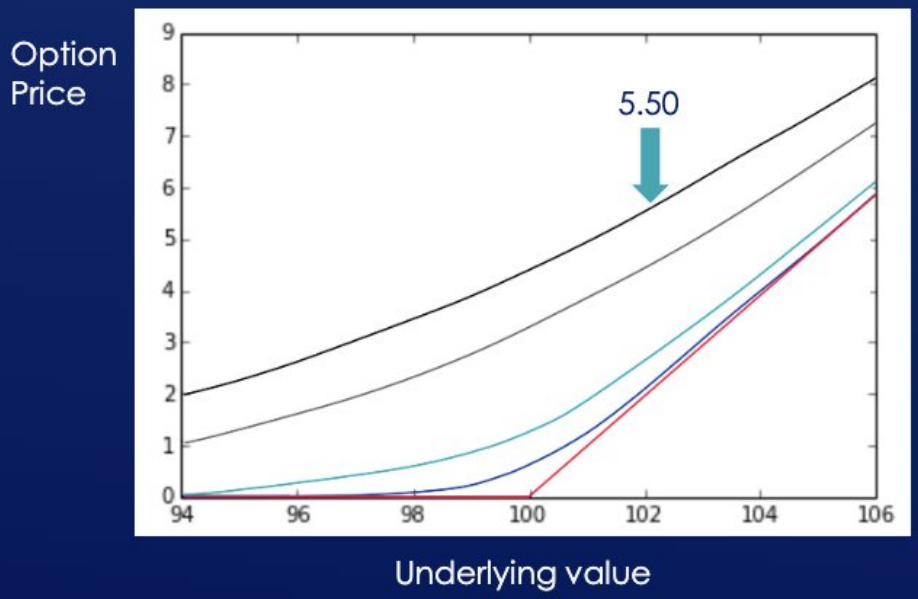

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3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		-14	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		-14	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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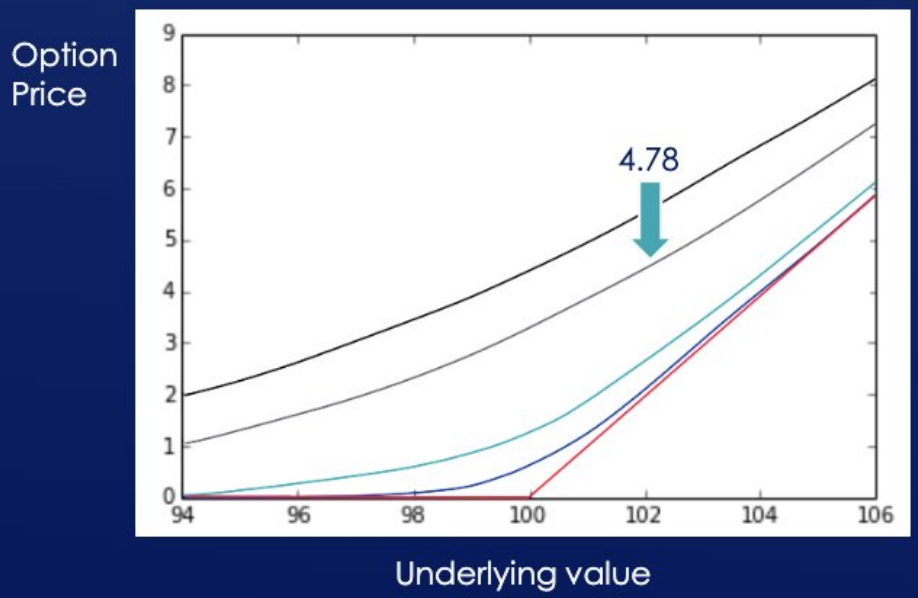

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
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9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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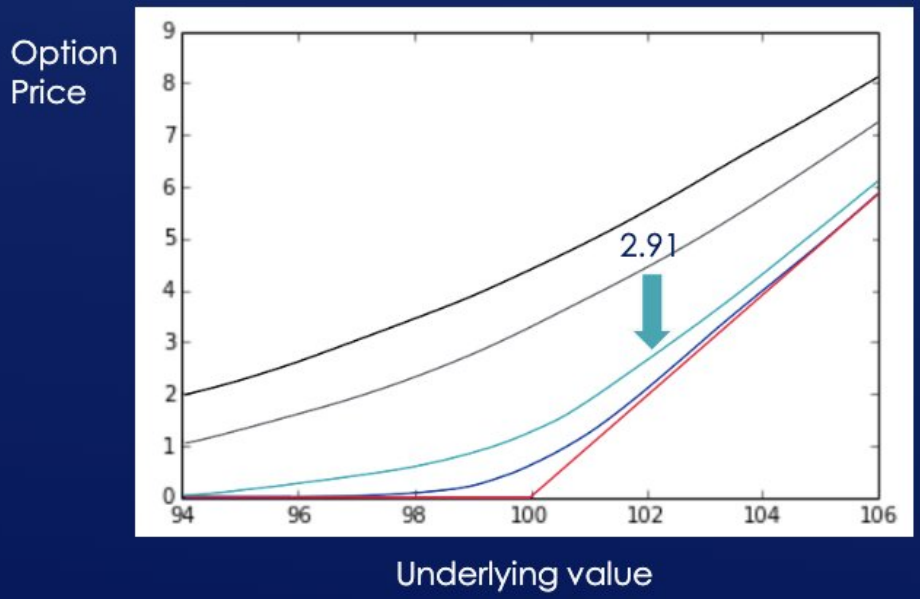

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3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
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329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
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1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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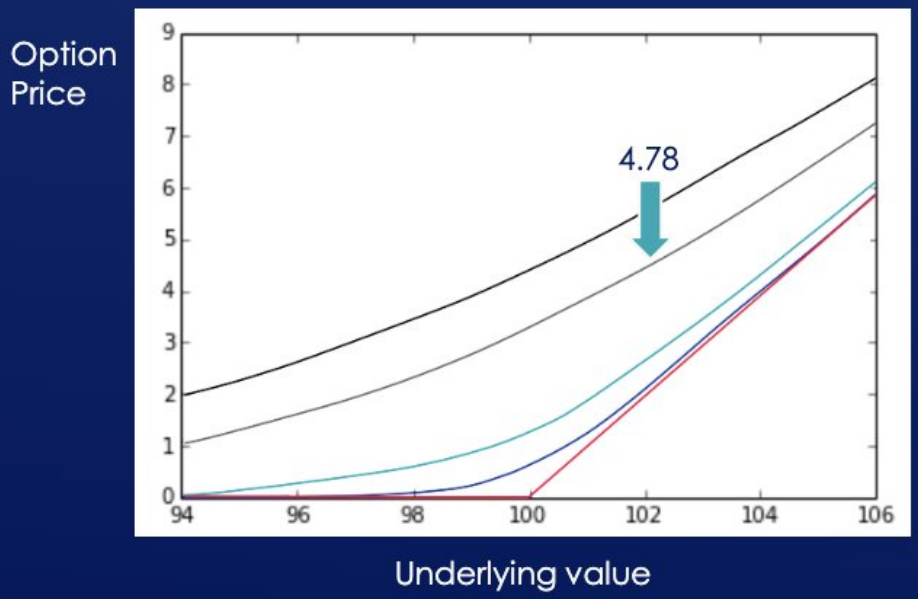

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid Q	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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THEO CALCULATIONS

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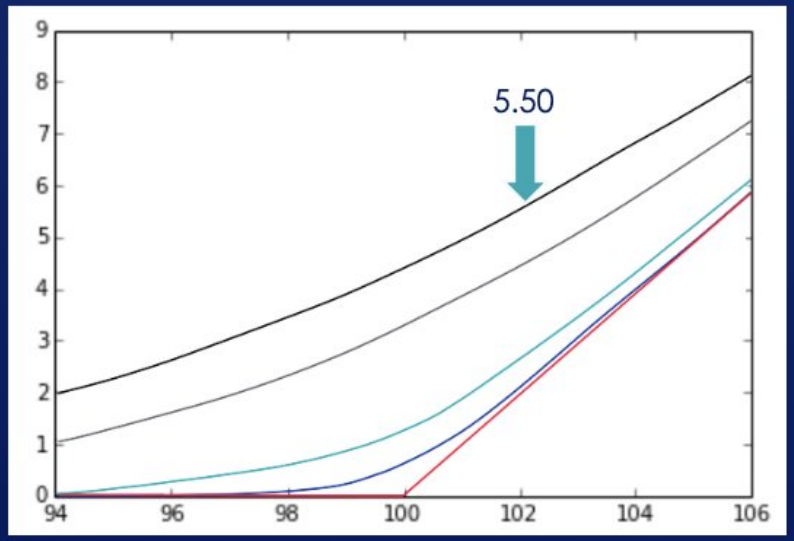
  - Change implied volatility

Option Price



Underlying value

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

THEO CALCULATIONS

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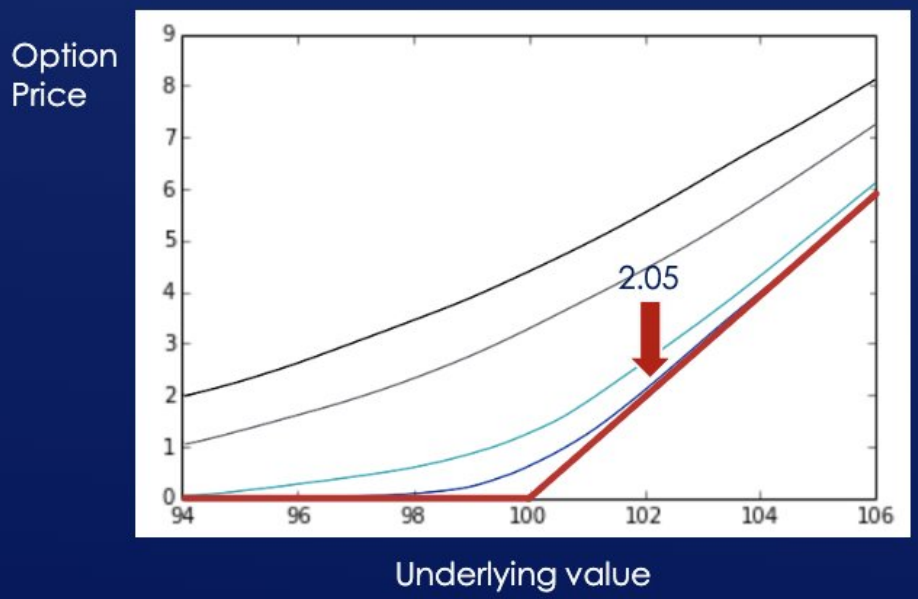

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Pos	PBid Q	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		-14	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		-14	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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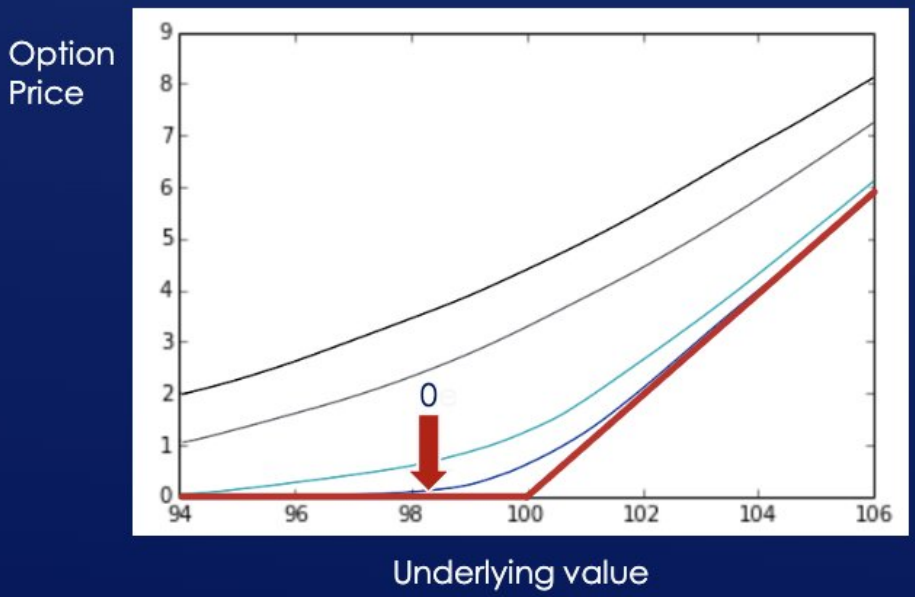

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

THEO CALCULATIONS

- Let's calculate some theos

Question:
If we bought the 69.0 strike call for the current bid price, how much edge would we make?

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

ital

THEO CALCULATIONS

- Let's calculate some theos

Question:
If we bought the 69.0 strike call for the current bid price, how much edge would we make?

Answer:
Theo = 0.169
bid = 0.16
edge = 0.169-0.16 = 0.009

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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THEO CALCULATIONS

- Let's calculate some theos

Question:
This product has 0.01 tick increments. How many ticks of edge did we take in doing this trade?

Answer:
Theo = 0.169
bid = 0.16
edge = 0.169-0.16 = 0.009

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

THEO CALCULATIONS

- Let's calculate some theos

Question:
This product has 0.01 tick increments. How many ticks of edge did we take in doing this trade?

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid Q	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		-14	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		-14	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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THEO CALCULATIONS

- Let's calculate some theos

Question:
This product has 0.01 tick increments. How many ticks of edge did we take in doing this trade?

Answer:
Since it ticks in 0.01 increments and we received 0.009 (0.169-0.16), we collected 0.9 of a tick of edge. (0.009/0.01)
(just under a full tick of edge)

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

THEO CALCULATIONS

- Let's calculate some theos

Question:
We traded 50 of these contracts.
The multiplier on this product is 1000.
How much cash edge did we make?

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

THEO CALCULATIONS

- Let's calculate some theos

Question:
We traded 50 of these contracts.
The multiplier on this product is 1000.
How much cash edge did we make?

Answer:
Cash edge = qty x edge x multiplier
= 50 x 0.009 x 1000
= $450

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid Q	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				196	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				185	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				193	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				116	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

THEO CALCULATIONS

- Usually, we'd adjust our theo value.
  - Buy something → lower it!

So, if we now lower our theo to 0.163, (by lowering implied volatility) how much cash edge did we make?

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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THEO CALCULATIONS

- Usually, we'd adjust our theo value.
  - Buy something → lower it!

So, if we now lower our theo to 0.163, (by lowering implied volatility) how much cash edge did we make?

Answer:
Cash edge = qty x edge x multiplier
= 50 x 0.003 x 1000
= $150

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		-14	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		-14	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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THEO CALCULATIONS

- Usually, we'd adjust our theo value.
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Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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Bid Q	Bid Px	Theo	Ask Px	Ask Q	Spl	DSt	T	DT	Pos	PBid Q	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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      - sell option → buy option
      - buy option → sell option

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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      - sell option → buy option
      - buy option → sell option

Notes:

- you can sell first, then buy back to close.

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

THEO CALCULATIONS

- Usually, we'd adjust our theo value.
  - Buy something → lower it!
- Cash edge (P&L) can change.
  - Only 2 ways to <u>lock in</u> cash:
    - Option expiries (final value)
    - You close out position
      - sell option → buy option
      - buy option → sell option

Notes:

- you can sell first, then buy back to close.
- you can lock in a negative price
  - Buy for 0.16, lower, lower, lower, lower sell at 0.14. This locks in a loss.

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

ital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	7.207	7.23	2	99	59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006
4	6.67	6.710	6.74	3	99	60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006
3	6.18	6.216	6.25	2	99	60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006
3	5.68	5.722	5.75	2	98	61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006
3	5.19	5.231	5.27	3	98	61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006
3	4.70	4.744	4.78	3	97	62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006
3	4.22	4.261	4.29	2	96	62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006
3	3.75	3.785	3.82	3	94	63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006
3	3.28	3.319	3.35	2	91	63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007
3	2.83	2.867	2.90	2	88	64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007
3	2.39	2.434	2.47	3	84	64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008
3	1.98	2.024	2.06	3	78	65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008
3	1.61	1.643	1.68	3	72	65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009
3	1.26	1.295	1.30	5	65	66.0	-2		-10	83	0.59	0.600	0.61	28	0.035	24.70	0.009
108	0.97	0.988	1.00	9	56	66.5	-6		3	213	0.78	0.793	0.81	108	0.037	24.11	0.010
13	0.72	0.729	0.74	13	45	67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010
268	0.51	0.522	0.53	13	35	67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010
411	0.35	0.363	0.37	83	26	68.0	-3		-6	3	1.63	1.667	1.71	2	0.031	23.18	0.010
329	0.24	0.248	0.26	450	18	68.5	-2		2	2	2.02	2.052	2.09	3	0.026	23.22	0.010
153	0.16	0.169	0.17	188	12	69.0			-4	2	2.44	2.472	2.51	3	0.022	23.46	0.010
1365	0.10	0.116	0.12	880	8	69.5	6		14	3	2.88	2.919	2.95	3	0.017	23.93	0.010
1316	0.07	0.082	0.08	161	5	70.0	1		-14	2	3.35	3.385	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4	70.5	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
8	0.04	0.042	0.05	2189	3	71.0	3		-14	3	4.31	4.345	4.38	3	0.008	26.04	0.010
9	0.03	0.030	0.04	2465	2	71.5				2	4.80	4.833	4.87	3	0.007	26.79	0.010
746	0.02	0.022	0.03	2463	1	72.0			6	3	5.29	5.325	5.37	3	0.005	27.58	0.010
2975	0.01	0.017	0.02	267	1	72.5			-1	2	5.79	5.820	5.86	3	0.004	28.46	0.010
1312	0.01	0.013	0.02	2109	1	73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010

a capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	7.207	7.23	2	99	59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006
	4	6.67	6.710	6.74	3	99	60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006
	3	6.18	6.216	6.25	2	99	60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006
	3	5.68	5.722	5.75	2	98	61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006
	3	5.19	5.231	5.27	3	98	61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006
	3	4.70	4.744	4.78	3	97	62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006
	3	4.22	4.261	4.29	2	96	62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006
	3	3.75	3.785	3.82	3	94	63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006
	3	3.28	3.319	3.35	2	91	63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007
	3	2.83	2.867	2.90	2	88	64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007
	3	2.39	2.434	2.47	3	84	64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008
	3	1.98	2.024	2.06	3	78	65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008
	3	1.61	1.643	1.68	3	72	65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009
	3	1.26	1.295	1.30	5	65	66.0	-2		-10	83	0.59	0.600	0.61	28	0.035	24.70	0.009
	108	0.97	0.988	1.00	9	56	66.5	-6		3	213	0.78	0.793	0.81	108	0.037	24.11	0.010
	13	0.72	0.729	0.74	13	45	67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010
	268	0.51	0.522	0.53	13	35	67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010
+1	411	0.35	0.363	0.37	83	26	68.0	-3		-6	3	1.63	1.667	1.71	2	0.031	23.18	0.010
	329	0.24	0.248	0.26	450	18	68.5	-2		2	2	2.02	2.052	2.09	3	0.026	23.22	0.010
	153	0.16	0.169	0.17	188	12	69.0			-4	2	2.44	2.472	2.51	3	0.022	23.46	0.010
	1365	0.10	0.116	0.12	880	8	69.5	6		14	3	2.88	2.919	2.95	3	0.017	23.93	0.010
-1	1310	0.07	0.082	0.08	161	5	70.0	1		-14	2	3.35	3.385	3.42	3	0.014	24.57	0.010
	638	0.05	0.058	0.06	895	4	70.5	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
	8	0.04	0.042	0.05	2189	3	71.0	3		-14	3	4.31	4.345	4.38	3	0.008	26.04	0.010
	9	0.03	0.030	0.04	2465	2	71.5				2	4.80	4.833	4.87	3	0.007	26.79	0.010
	746	0.02	0.022	0.03	2463	1	72.0			6	3	5.29	5.325	5.37	3	0.005	27.58	0.010
	2975	0.01	0.017	0.02	267	1	72.5			-1	2	5.79	5.820	5.86	3	0.004	28.46	0.010
	1312	0.01	0.013	0.02	2109	1	73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010

capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.37-0.07 = 0.30

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
	4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
	3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
	3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
	3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
	3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
	3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
	3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
	3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
	3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
	3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
	3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
	3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
	3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
	108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
	13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
	268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
+1	411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
	329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
	153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
	1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
-1	131	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
	638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
	8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
	9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
	746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
	2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
	1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

a capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
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  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.37-0.07 = 0.30

Sell at 0.35-0.08 = 0.27

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	Spl	DSt	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
	4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
	3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
	3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
	3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
	3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
	3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
	3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
	3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
	3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
	3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
	3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
	3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
	3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
	108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
	13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
	268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
-1	411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
	329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
	153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
	1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
+1	1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
	638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
	8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
	9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
	746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
	2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
	1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.37-0.07 = 0.30

Sell at 0.35-0.08 = 0.27

MM market = 0.27-0.30

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	Spl	DSt	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
	4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
	3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
	3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
	3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
	3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
	3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
	3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
	3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
	3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
	3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
	3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
	3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
	3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
	108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
	13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
	268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
+1	411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
	329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
	153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
	1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
-1	1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
	638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
	8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
	9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
	746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
	2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
	1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO	
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006	
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006	
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006	
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006	
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006	
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006	
3	4.22	**4.261**	4.29	2	96	**62.5**				1161	0.06	**0.067**	0.08	2174	0.010	29.90	0.006	-1
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006	
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007	
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007	+1
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008	
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008	
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009	
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009	
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010	
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010	
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010	
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010	
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010	
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010	
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010	
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		-14	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010	
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010	
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		-14	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010	
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010	
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010	
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010	
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010	

a capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
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  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.18-0.06 = 0.12

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Pos	PBid P	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO	
3	7.17	7.207	7.23	2	99	59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006	
4	6.67	6.710	6.74	3	99	60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006	
3	6.18	6.216	6.25	2	99	60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006	
3	5.68	5.722	5.75	2	98	61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006	
3	5.19	5.231	5.27	3	98	61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006	
3	4.70	4.744	4.78	3	97	62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006	
3	4.22	4.261	4.29	2	96	62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006	-1
3	3.75	3.785	3.82	3	94	63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006	
3	3.28	3.319	3.35	2	91	63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007	
3	2.83	2.867	2.90	2	88	64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007	+1
3	2.39	2.434	2.47	3	84	64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008	
3	1.98	2.024	2.06	3	78	65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008	
3	1.61	1.643	1.68	3	72	65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009	
3	1.26	1.295	1.30	5	65	66.0	-2		-10	83	0.59	0.600	0.61	28	0.035	24.70	0.009	
108	0.97	0.988	1.00	9	56	66.5	-6		3	213	0.78	0.793	0.81	108	0.037	24.11	0.010	
13	0.72	0.729	0.74	13	45	67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010	
268	0.51	0.522	0.53	13	35	67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010	
411	0.35	0.363	0.37	83	26	68.0	-3		-6	3	1.63	1.667	1.71	2	0.031	23.18	0.010	
329	0.24	0.248	0.26	450	18	68.5	-2		2	2	2.02	2.052	2.09	3	0.026	23.22	0.010	
153	0.16	0.169	0.17	188	12	69.0			-4	2	2.44	2.472	2.51	3	0.022	23.46	0.010	
1365	0.10	0.116	0.12	880	8	69.5	6		14	3	2.88	2.919	2.95	3	0.017	23.93	0.010	
1316	0.07	0.082	0.08	161	5	70.0	1		-14	2	3.35	3.385	3.42	3	0.014	24.57	0.010	
638	0.05	0.058	0.06	895	4	70.5	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010	
8	0.04	0.042	0.05	2189	3	71.0	3		-14	3	4.31	4.345	4.38	3	0.008	26.04	0.010	
9	0.03	0.030	0.04	2465	2	71.5				2	4.80	4.833	4.87	3	0.007	26.79	0.010	
746	0.02	0.022	0.03	2463	1	72.0			6	3	5.29	5.325	5.37	3	0.005	27.58	0.010	
2975	0.01	0.017	0.02	267	1	72.5			-1	2	5.79	5.820	5.86	3	0.004	28.46	0.010	
1312	0.01	0.013	0.02	2109	1	73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010	

a capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.18-0.06 = 0.12

Sell at 0.17-0.08 = 0.09

MM market = 0.09-0.12

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO	
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006	
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006	
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006	
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006	
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006	
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006	
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006	+1
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006	
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007	
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007	-1
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008	
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008	
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009	
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009	
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010	
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010	
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010	
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010	
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010	
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010	
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010	
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010	
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010	
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010	
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010	
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010	
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010	
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010	

capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO	
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006	
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006	
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006	
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006	
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006	
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006	
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006	+1
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006	
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007	
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007	-1
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008	
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008	
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009	
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009	
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010	
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010	
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010	
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010	
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010	
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010	
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010	
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010	
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010	
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010	
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010	
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010	
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010	
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010	

capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

-1

+1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

capital

COMBOS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

-1+1=0 -1

+1-1=0 +1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

+1

-1

Box = cs + ps

Since they cancel, very little net greeks.

Delta = -(96-88) - ((-12)-(-4)) = 0

capital

COMBOS – CF & PF

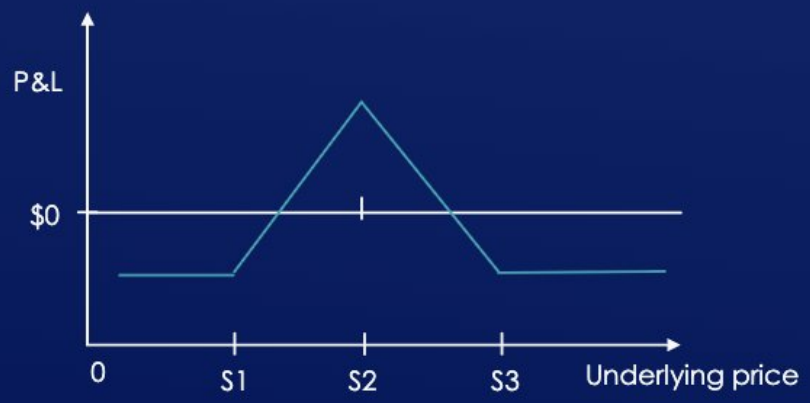
- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	7.207	7.23	2	99	59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006
	4	6.67	6.710	6.74	3	99	60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006
	3	6.18	6.216	6.25	2	99	60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006
	3	5.68	5.722	5.75	2	98	61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006
	3	5.19	5.231	5.27	3	98	61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006
	3	4.70	4.744	4.78	3	97	62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006
	3	4.22	4.261	4.29	2	96	62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006
	3	3.75	3.785	3.82	3	94	63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006
	3	3.28	3.319	3.35	2	91	63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007
	3	2.83	2.867	2.90	2	88	64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007
	3	2.39	2.434	2.47	3	84	64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008
	3	1.98	2.024	2.06	3	78	65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008
	3	1.61	1.643	1.68	3	72	65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009
	3	1.26	1.295	1.30	5	65	66.0	-2		-10	83	0.59	0.600	0.61	28	0.035	24.70	0.009
	108	0.97	0.988	1.00	9	56	66.5	-6		3	213	0.78	0.793	0.81	108	0.037	24.11	0.010
	13	0.72	0.729	0.74	13	45	67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010
	268	0.51	0.522	0.53	13	35	67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010
+1	411	0.35	0.363	0.37	83	26	68.0	-3		-6	3	1.63	1.667	1.71	2	0.031	23.18	0.010
	329	0.24	0.248	0.26	450	18	68.5	-2		2	2	2.02	2.052	2.09	3	0.026	23.22	0.010
	153	0.16	0.169	0.17	188	12	69.0			-4	2	2.44	2.472	2.51	3	0.022	23.46	0.010
	1365	0.10	0.116	0.12	880	8	69.5	6		14	3	2.88	2.919	2.95	3	0.017	23.93	0.010
-2	1316	0.07	0.082	0.08	161	5	70.0	1		-14	2	3.35	3.385	3.42	3	0.014	24.57	0.010
	638	0.05	0.058	0.06	895	4	70.5	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
	8	0.04	0.042	0.05	2189	3	71.0	3		-14	3	4.31	4.345	4.38	3	0.008	26.04	0.010
	9	0.03	0.030	0.04	2465	2	71.5				2	4.80	4.833	4.87	3	0.007	26.79	0.010
+1	746	0.02	0.022	0.03	2463	1	72.0			6	3	5.29	5.325	5.37	3	0.005	27.58	0.010
	2975	0.01	0.017	0.02	267	1	72.5			-1	2	5.79	5.820	5.86	3	0.004	28.46	0.010
	1312	0.01	0.013	0.02	2109	1	73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010

capital

COMBOS – CF & PF

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)



Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

+1

-2

+1

a capital

COMBOS – CF & PF

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.37-(2)0.07+0.03 = 0.26

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
	4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
	3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
	3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
	3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
	3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
	3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
	3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
	3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
	3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
	3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
	3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
	3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
	3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
	108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
	13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
	268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
+1	411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
	329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
	153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
	1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
-2	1310	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
	638	0.05	0.058	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
	8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
	9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
+1	746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
	2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
	1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

capital

COMBOS – CF & PF

- Now let's look at some combos
  - call spread (cs)
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  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.37-(2)0.07+0.03 = 0.26

Sell at 0.35-(2)0.08+0.02 = 0.21 →

MM market = 0.21- 0.26

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St ^	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
	4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
	3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
	3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
	3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
	3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
	3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
	3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
	3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
	3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
	3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
	3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
	3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
	3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
	108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
	13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
	268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
-1	411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
	329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
	153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
	1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
+2	1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
	638	0.05	0.058	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
	8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
	9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
-1	746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
	2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
	1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

capital

COMBOS – CF & PF

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.37-(2)0.07+0.03 = 0.26

Sell at 0.35-(2)0.08+0.02 = 0.21 ⟶

MM market = 0.21- 0.26

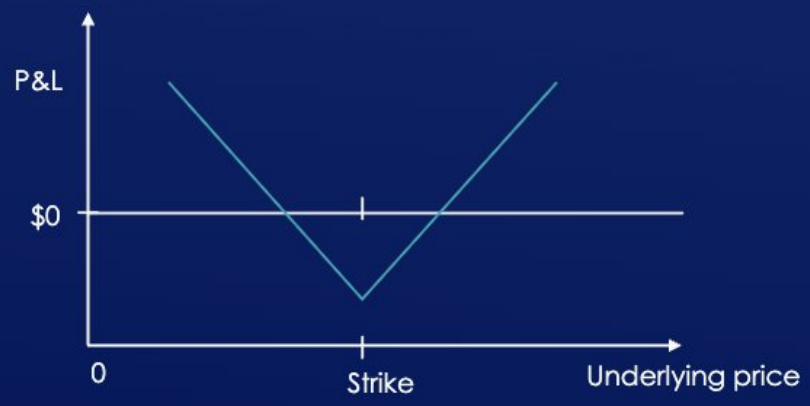
Put fly is similar, just with puts. Questions?

	Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
	3	7.17	7.207	7.23	2	99	59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006
	4	6.67	6.710	6.74	3	99	60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006
	3	6.18	6.216	6.25	2	99	60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006
	3	5.68	5.722	5.75	2	98	61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006
	3	5.19	5.231	5.27	3	98	61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006
	3	4.70	4.744	4.78	3	97	62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006
	3	4.22	4.261	4.29	2	96	62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006
	3	3.75	3.785	3.82	3	94	63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006
	3	3.28	3.319	3.35	2	91	63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007
	3	2.83	2.867	2.90	2	88	64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007
	3	2.39	2.434	2.47	3	84	64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008
	3	1.98	2.024	2.06	3	78	65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008
	3	1.61	1.643	1.68	3	72	65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009
	3	1.26	1.295	1.30	5	65	66.0	-2		-10	83	0.59	0.600	0.61	28	0.035	24.70	0.009
	108	0.97	0.988	1.00	9	56	66.5	-6		3	213	0.78	0.793	0.81	108	0.037	24.11	0.010
	13	0.72	0.729	0.74	13	45	67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010
	268	0.51	0.522	0.53	13	35	67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010
-1	411	0.35	0.363	0.37	83	26	68.0	-3		-6	3	1.63	1.667	1.71	2	0.031	23.18	0.010
	329	0.24	0.248	0.26	450	18	68.5	-2		2	2	2.02	2.052	2.09	3	0.026	23.22	0.010
	153	0.16	0.169	0.17	188	12	69.0			-4	2	2.44	2.472	2.51	3	0.022	23.46	0.010
	1365	0.10	0.116	0.12	880	8	69.5	6		14	3	2.88	2.919	2.95	3	0.017	23.93	0.010
+2	1316	0.07	0.082	0.08	161	5	70.0	1		-14	2	3.35	3.385	3.42	3	0.014	24.57	0.010
	638	0.05	0.058	0.06	895	4	70.5	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
	8	0.04	0.042	0.05	2189	3	71.0	3		-14	3	4.31	4.345	4.38	3	0.008	26.04	0.010
	9	0.03	0.030	0.04	2465	2	71.5				2	4.80	4.833	4.87	3	0.007	26.79	0.010
-1	746	0.02	0.022	0.03	2463	1	72.0			6	3	5.29	5.325	5.37	3	0.005	27.58	0.010
	2975	0.01	0.017	0.02	267	1	72.5			-1	2	5.79	5.820	5.86	3	0.004	28.46	0.010
	1312	0.01	0.013	0.02	2109	1	73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010

a capital

COMBOS – STRADDLES

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)



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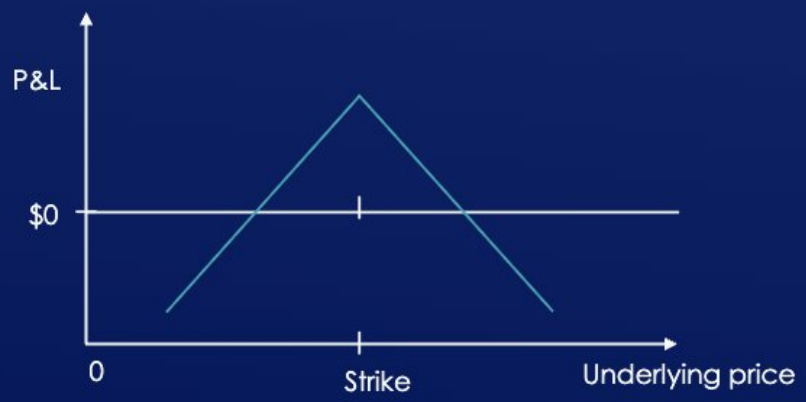
Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	21	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4	**70.5**	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

+1

capital

COMBOS – STRADDLES

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)



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Bid Q	Bid Px	Theo	Ask Px	Ask Q	Spl	DSt	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	21	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

+1

a capital

COMBOS – STRADDLES

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

+1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid Q	PBid Px	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	21[illegible]	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

+1

Buy for 1.00 + 0.81 = 1.81

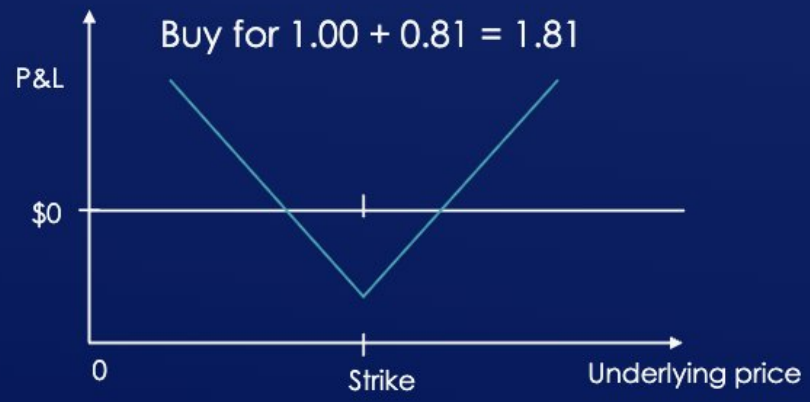
Sell at 0.97 + 0.78 = 1.75

MM market = 1.75 – 1.81

capital

COMBOS – STRADDLES

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)



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Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Pos	PBid Q	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	7.207	7.23	2	99	59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006
4	6.67	6.710	6.74	3	99	60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006
3	6.18	6.216	6.25	2	99	60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006
3	5.68	5.722	5.75	2	98	61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006
3	5.19	5.231	5.27	3	98	61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006
3	4.70	4.744	4.78	3	97	62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006
3	4.22	4.261	4.29	2	96	62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006
3	3.75	3.785	3.82	3	94	63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006
3	3.28	3.319	3.35	2	91	63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007
3	2.83	2.867	2.90	2	88	64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007
3	2.39	2.434	2.47	3	84	64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008
3	1.98	2.024	2.06	3	78	65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008
3	1.61	1.643	1.68	3	72	65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009
3	1.26	1.295	1.30	5	65	66.0	-2		-10	83	0.59	0.600	0.61	28	0.035	24.70	0.009
108	0.97	0.988	1.00	9	56	66.5	-6		3	21[illegible]	0.78	0.793	0.81	108	0.037	24.11	0.010
13	0.72	0.729	0.74	13	45	67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010
268	0.51	0.522	0.53	13	35	67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010
411	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	68.0	[illegible]		[illegible]	[illegible]	[illegible]	1.667	1.71	[illegible]	[illegible]	[illegible]	[illegible]
329	[illegible]																[illegible]
153	[illegible]																[illegible]
1365	[illegible]																[illegible]
1316	[illegible]																[illegible]
638	[illegible]																[illegible]
8	[illegible]																[illegible]
9	[illegible]																[illegible]
746	[illegible]																[illegible]
2975	[illegible]																[illegible]
1312	0.01	0.013	0.02	2109	1	73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010

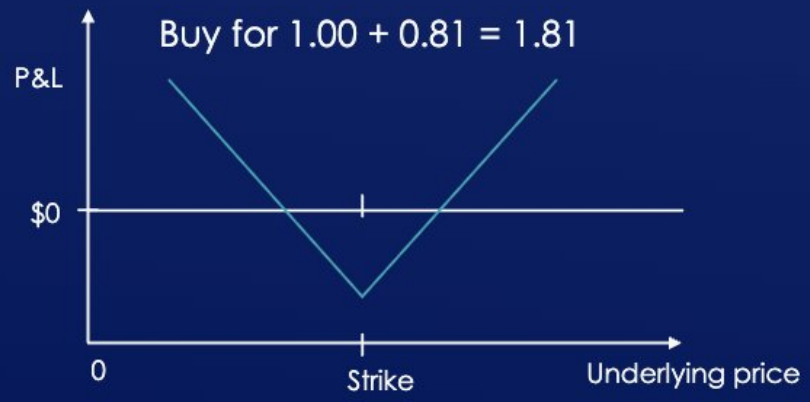
+1

Question:
If you pay 1.81 for the straddle, what's your maximum loss?

a capital

COMBOS – STRADDLES

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)



+1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	21	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
329	[illegible]																[illegible]
153	[illegible]																[illegible]
1365	[illegible]																[illegible]
1316	[illegible]																[illegible]
638	[illegible]																[illegible]
8	[illegible]																[illegible]
9	[illegible]																[illegible]
746	[illegible]																[illegible]
2975	[illegible]																[illegible]
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

+1

Question:
If you pay 1.81 for the straddle, what's your maximum loss?

Answer: 1.81, max loss is Y premium.

a capital

COMBOS – STRANGLE

- Now let's look at some combos
  - call spread (cs)
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  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

  - Buying or selling both:
    - A lower strike put
    - A higher strike call

+1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	7.207	7.23	2	99	59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006
4	6.67	6.710	6.74	3	99	60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006
3	6.18	6.216	6.25	2	99	60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006
3	5.68	5.722	5.75	2	98	61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006
3	5.19	5.231	5.27	3	98	61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006
3	4.70	4.744	4.78	3	97	62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006
3	4.22	4.261	4.29	2	96	62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006
3	3.75	3.785	3.82	3	94	63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006
3	3.28	3.319	3.35	2	91	63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007
3	2.83	2.867	2.90	2	88	64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007
3	2.39	2.434	2.47	3	84	64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008
3	1.98	2.024	2.06	3	78	65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008
3	1.61	1.643	1.68	3	72	65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009
3	1.26	1.295	1.30	5	65	66.0	-2		-10	8	0.59	0.600	0.61	28	0.035	24.70	0.009
108	0.97	0.988	1.00	9	56	66.5	-6		3	213	0.78	0.793	0.81	108	0.037	24.11	0.010
13	0.72	0.729	0.74	13	45	67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010
268	0.51	0.522	0.53	13	35	67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010
411	0.35	0.363	0.37	83	26	68.0	-3		-6	3	1.63	1.667	1.71	2	0.031	23.18	0.010
329	0.24	0.248	0.26	450	18	68.5	-2		2	2	2.02	2.052	2.09	3	0.026	23.22	0.010
153	0.16	0.169	0.17	188	12	69.0			-4	2	2.44	2.472	2.51	3	0.022	23.46	0.010
1365	0.10	0.116	0.12	880	8	69.5	6		14	3	2.88	2.919	2.95	3	0.017	23.93	0.010
1316	0.07	0.082	0.08	161	5	70.0	1		-14	2	3.35	3.385	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4	70.5	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
8	0.04	0.042	0.05	2189	3	71.0	3		-14	3	4.31	4.345	4.38	3	0.008	26.04	0.010
9	0.03	0.030	0.04	2465	2	71.5				2	4.80	4.833	4.87	3	0.007	26.79	0.010
746	0.02	0.022	0.03	2463	1	72.0			6	3	5.29	5.325	5.37	3	0.005	27.58	0.010
2975	0.01	0.017	0.02	267	1	72.5			-1	2	5.79	5.820	5.86	3	0.004	28.46	0.010
1312	0.01	0.013	0.02	2109	1	73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010

+1

capital

COMBOS – STRANGLE

- Now let's look at some combos
  - call spread (cs)
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  - strangle (k)
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+1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SpID	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	8	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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capital

COMBOS – STRANGLE

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  - call spread (cs)
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+1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				196	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				185	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				193	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				116	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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a capital

COMBOS – STRANGLE

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

- Buying or selling both:
  - A lower strike put
  - A higher strike call
- Usually, but not always, OTM

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Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

a capital

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- Now let's look at some combos
  - call spread (cs)
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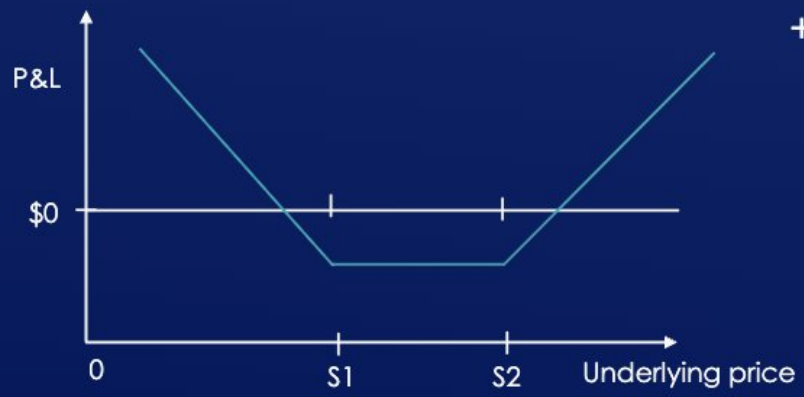

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Bid Q	Bid Px	Theo	Ask Px	Ask Q	Sp	ID	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	7.207	7.23	2	99		59.5				956	0.01	0.013	0.02	3016	0.003	36.51	0.006
4	6.67	6.710	6.74	3	99		60.0				1960	0.01	0.017	0.02	22	0.003	35.39	0.006
3	6.18	6.216	6.25	2	99		60.5				98	0.02	0.022	0.03	3035	0.004	34.26	0.006
3	5.68	5.722	5.75	2	98		61.0	1		3	5	0.03	0.029	0.04	3127	0.005	33.13	0.006
3	5.19	5.231	5.27	3	98		61.5				1858	0.03	0.038	0.04	47	0.007	32.02	0.006
3	4.70	4.744	4.78	3	97		62.0				1936	0.04	0.050	0.06	2613	0.008	30.94	0.006
3	4.22	4.261	4.29	2	96		62.5				1163	0.06	0.067	0.08	2174	0.010	29.90	0.006
3	3.75	3.785	3.82	3	94		63.0			-4	5	0.09	0.091	0.10	1136	0.013	28.94	0.006
3	3.28	3.319	3.35	2	91		63.5				442	0.12	0.125	0.13	160	0.016	28.06	0.007
3	2.83	2.867	2.90	2	88		64.0				25	0.17	0.172	0.18	326	0.020	27.28	0.007
3	2.39	2.434	2.47	3	84		64.5	6		6	633	0.23	0.239	0.25	742	0.024	26.60	0.008
3	1.98	2.024	2.06	3	78		65.0			-7	208	0.32	0.329	0.34	375	0.028	25.96	0.008
3	1.61	1.643	1.68	3	72		65.5	4		8	55	0.44	0.448	0.46	342	0.032	25.34	0.009
3	1.26	1.295	1.30	5	65		66.0	-2		-10	83	0.59	0.600	0.61	28	0.035	24.70	0.009
108	0.97	0.988	1.00	9	56		66.5	-6		3	213	0.78	0.793	0.81	108	0.037	24.11	0.010
13	0.72	0.729	0.74	13	45		67.0			4	35	1.00	1.034	1.07	10	0.037	23.63	0.010
268	0.51	0.522	0.53	13	35		67.5			3	12	1.29	1.326	1.36	2	0.035	23.32	0.010
411	0.35	0.363	0.37	83	26		68.0	-3		-6	3	1.63	1.667	1.71	2	0.031	23.18	0.010
329	0.24	0.248	0.26	450	18		68.5	-2		2	2	2.02	2.052	2.09	3	0.026	23.22	0.010
153	0.16	0.169	0.17	188	12		69.0			-4	2	2.44	2.472	2.51	3	0.022	23.46	0.010
1365	0.10	0.116	0.12	880	8		69.5	6		14	3	2.88	2.919	2.95	3	0.017	23.93	0.010
1316	0.07	0.082	0.08	161	5		70.0	1		-14	2	3.35	3.385	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4		70.5	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
8	0.04	0.042	0.05	2189	3		71.0	3		-14	3	4.31	4.345	4.38	3	0.008	26.04	0.010
9	0.03	0.030	0.04	2465	2		71.5				2	4.80	4.833	4.87	3	0.007	26.79	0.010
746	0.02	0.022	0.03	2463	1		72.0			6	3	5.29	5.325	5.37	3	0.005	27.58	0.010
2975	0.01	0.017	0.02	267	1		72.5			-1	2	5.79	5.820	5.86	3	0.004	28.46	0.010
1312	0.01	0.013	0.02	2109	1		73.0			25	3	6.28	6.316	6.36	3	0.003	29.42	0.010

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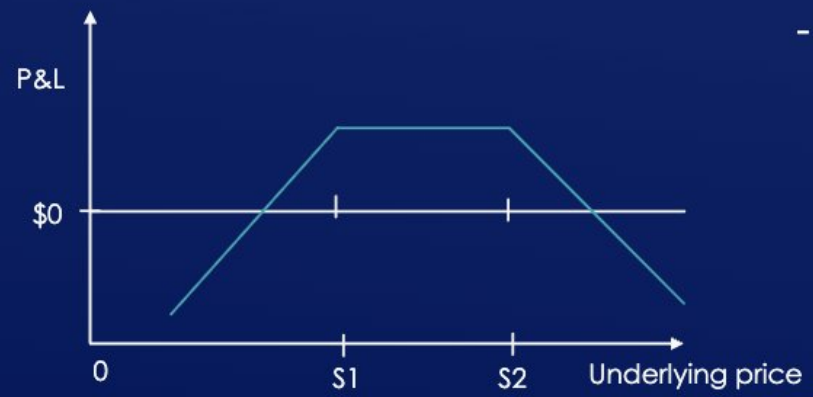

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Bid Q	Bid Px	Theo	Ask Px	Ask Q	Spl	D	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99		**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99		**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99		**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98		**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98		**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97		**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96		**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94		**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91		**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88		**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84		**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78		**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72		**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65		**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56		**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45		**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35		**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26		**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18		**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12		**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8		**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5		**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4		**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3		**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2		**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1		**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1		**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1		**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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capital

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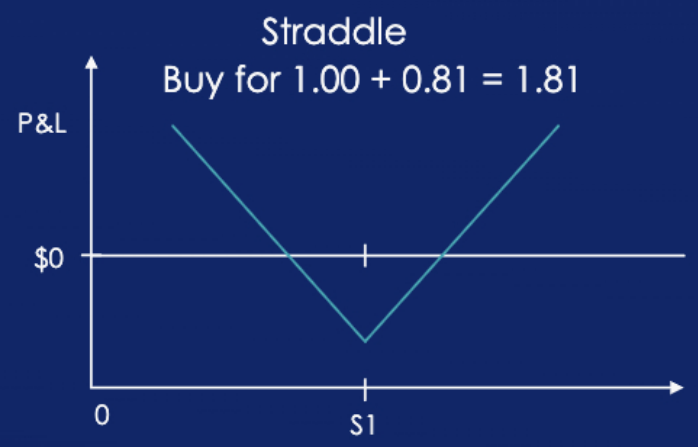
- Usually, but not always, OTM
- Same directional/vol bet as straddle, less premium.



akuna capital

COMBOS – RATIO SPREADS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buy for 0.37-0.07(2) = 0.23

vs

cs would be 0.37-0.07(2) = 0.30

Cheaper but with decreased upside (can lose)

+1

-2

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		3	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			-4	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		6	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			-7	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		8	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		-10	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		3	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			4	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			3	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		-6	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		2	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			-4	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		14	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		-14	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		4	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		-14	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			6	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			-1	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			25	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

a capital

COMBOS – RISK REVERSALS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buying lower strike put vs selling higher strike call (or vice versa).

Usually done to protect an underlying position.

Discussed in depth in manual

-1

+1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

a capital

COMBOS – REVCONS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buying the call and selling the put and selling the underlying (all 3 legs) =
Reversing out of underlying

-1F

+1

-1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	**0.058**	0.06	895	4	**70.5**	1		**4**	2	3.83	**3.861**	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

capital

COMBOS – REVCONS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

Buying the call and selling the put and selling the underlying (all 3 legs) =
Reversing out of underlying

selling the call and buying the put and buying the underlying (all 3 legs) =
converting to underlying

-1F

+1

+1F

-1

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Po	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4	**70.5**	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

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+1

COMBOS – REVCONS

- Now let's look at some combos
  - call spread (cs)
  - put spread (ps)
  - Box (bx)
  - call fly (cf)
  - put fly (pf)
  - straddle (y)
  - strangle (k)
  - ratio 1x2s (1x2 cs or 1x2 ps)
  - risk reversal (rr)
  - reversal/conversion (rr)

-1F

+1

Buying the call and selling the put and selling the underlying (all 3 legs) =
Reversing out of underlying

+1F

-1

selling the call and buying the put and buying the underlying (all 3 legs) =
converting to underlying

We'll discuss these in-depth in later lectures

Bid Q	Bid Px	Theo	Ask Px	Ask Q	SplD	St	T	DT	Pos	PBid	PBid P	PTheo	PAsk P	PAsk Q	Vega	Vol	PAskO
3	7.17	**7.207**	7.23	2	99	**59.5**				956	0.01	**0.013**	0.02	3016	0.003	36.51	0.006
4	6.67	**6.710**	6.74	3	99	**60.0**				1960	0.01	**0.017**	0.02	22	0.003	35.39	0.006
3	6.18	**6.216**	6.25	2	99	**60.5**				98	0.02	**0.022**	0.03	3035	0.004	34.26	0.006
3	5.68	**5.722**	5.75	2	98	**61.0**	1		**3**	5	0.03	**0.029**	0.04	3127	0.005	33.13	0.006
3	5.19	**5.231**	5.27	3	98	**61.5**				1858	0.03	**0.038**	0.04	47	0.007	32.02	0.006
3	4.70	**4.744**	4.78	3	97	**62.0**				1936	0.04	**0.050**	0.06	2613	0.008	30.94	0.006
3	4.22	**4.261**	4.29	2	96	**62.5**				1163	0.06	**0.067**	0.08	2174	0.010	29.90	0.006
3	3.75	**3.785**	3.82	3	94	**63.0**			**-4**	5	0.09	**0.091**	0.10	1136	0.013	28.94	0.006
3	3.28	**3.319**	3.35	2	91	**63.5**				442	0.12	**0.125**	0.13	160	0.016	28.06	0.007
3	2.83	**2.867**	2.90	2	88	**64.0**				25	0.17	**0.172**	0.18	326	0.020	27.28	0.007
3	2.39	**2.434**	2.47	3	84	**64.5**	6		**6**	633	0.23	**0.239**	0.25	742	0.024	26.60	0.008
3	1.98	**2.024**	2.06	3	78	**65.0**			**-7**	208	0.32	**0.329**	0.34	375	0.028	25.96	0.008
3	1.61	**1.643**	1.68	3	72	**65.5**	4		**8**	55	0.44	**0.448**	0.46	342	0.032	25.34	0.009
3	1.26	**1.295**	1.30	5	65	**66.0**	-2		**-10**	83	0.59	**0.600**	0.61	28	0.035	24.70	0.009
108	0.97	**0.988**	1.00	9	56	**66.5**	-6		**3**	213	0.78	**0.793**	0.81	108	0.037	24.11	0.010
13	0.72	**0.729**	0.74	13	45	**67.0**			**4**	35	1.00	**1.034**	1.07	10	0.037	23.63	0.010
268	0.51	**0.522**	0.53	13	35	**67.5**			**3**	12	1.29	**1.326**	1.36	2	0.035	23.32	0.010
411	0.35	**0.363**	0.37	83	26	**68.0**	-3		**-6**	3	1.63	**1.667**	1.71	2	0.031	23.18	0.010
329	0.24	**0.248**	0.26	450	18	**68.5**	-2		**2**	2	2.02	**2.052**	2.09	3	0.026	23.22	0.010
153	0.16	**0.169**	0.17	188	12	**69.0**			**-4**	2	2.44	**2.472**	2.51	3	0.022	23.46	0.010
1365	0.10	**0.116**	0.12	880	8	**69.5**	6		**14**	3	2.88	**2.919**	2.95	3	0.017	23.93	0.010
1316	0.07	**0.082**	0.08	161	5	**70.0**	1		**-14**	2	3.35	**3.385**	3.42	3	0.014	24.57	0.010
638	0.05	0.058	0.06	895	4	**70.5**	1		4	2	3.83	3.861	3.90	3	0.011	25.30	0.010
8	0.04	**0.042**	0.05	2189	3	**71.0**	3		**-14**	3	4.31	**4.345**	4.38	3	0.008	26.04	0.010
9	0.03	**0.030**	0.04	2465	2	**71.5**				2	4.80	**4.833**	4.87	3	0.007	26.79	0.010
746	0.02	**0.022**	0.03	2463	1	**72.0**			**6**	3	5.29	**5.325**	5.37	3	0.005	27.58	0.010
2975	0.01	**0.017**	0.02	267	1	**72.5**			**-1**	2	5.79	**5.820**	5.86	3	0.004	28.46	0.010
1312	0.01	**0.013**	0.02	2109	1	**73.0**			**25**	3	6.28	**6.316**	6.36	3	0.003	29.42	0.010

-1

+1

capital