Statistics C183/C283   **Instructor: Nicolas Christou**

Trading strategies using options

	BUY	SELL	
S_T	S(40)	C(5,E=50)	TOTAL
70	30	-15	15
65	25	-10	15
60	20	-5	15
55	15	0	15
50	10	5	15
45	5	5	10
40	0	5	5
35	-5	5	0
30	-10	5	-5
25	-15	5	-10
20	-20	5	-15
15	-25	5	-20
10	-30	5	-25
5	-35	5	-30
0	-40	5	-35

Buy stock - sell call
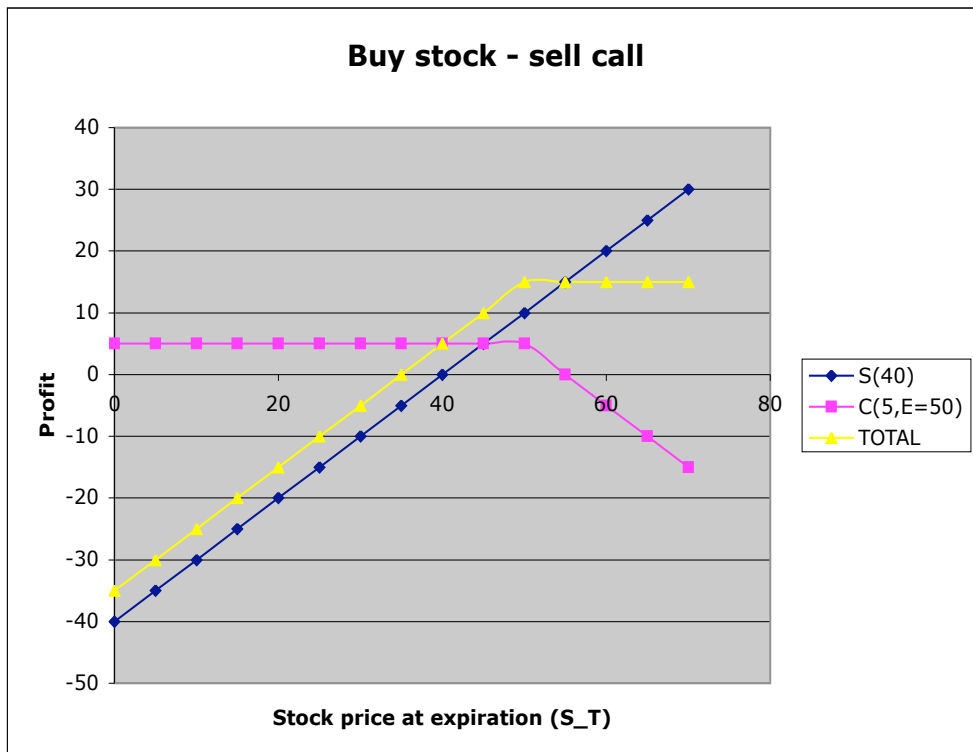
S_T	SELL S(40)	BUY C(5,E=50)	TOTAL
70	-30	15	-15
65	-25	10	-15
60	-20	5	-15
55	-15	0	-15
50	-10	-5	-15
45	-5	-5	-10
40	0	-5	-5
35	5	-5	0
30	10	-5	5
25	15	-5	10
20	20	-5	15
15	25	-5	20
10	30	-5	25
5	35	-5	30
0	40	-5	35

Sell stock - buy call

S_T	SELL S(40)	SELL P(5,E=43)	TOTAL
70	-30	5	-25
65	-25	5	-20
60	-20	5	-15
55	-15	5	-10
50	-10	5	-5
45	-5	5	0
40	0	2	2
35	5	-3	2
30	10	-8	2
25	15	-13	2
20	20	-18	2
15	25	-23	2
10	30	-28	2
5	35	-33	2
0	40	-38	2

Sell put - sell stock
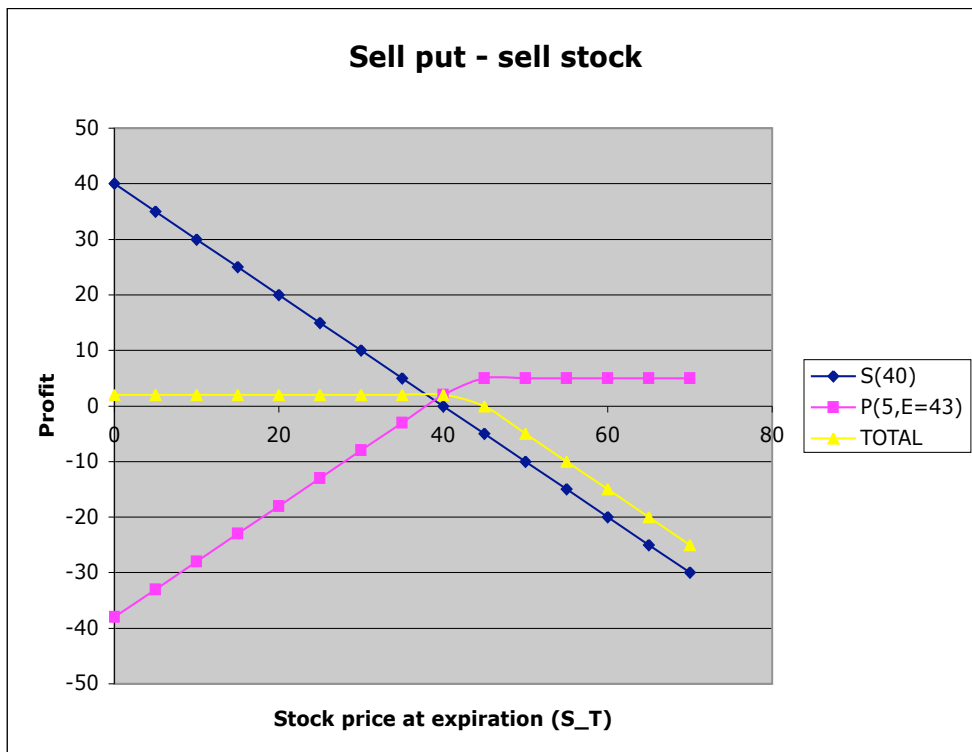
	BUY	BUY	
S_T	S(40)	P(5,E=50)	TOTAL
70	30	-5	25
65	25	-5	20
60	20	-5	15
55	15	-5	10
50	10	-5	5
45	5	0	5
40	0	5	5
35	-5	10	5
30	-10	15	5
25	-15	20	5
20	-20	25	5
15	-25	30	5
10	-30	35	5
5	-35	40	5
0	-40	45	5

Buy put - buy stock
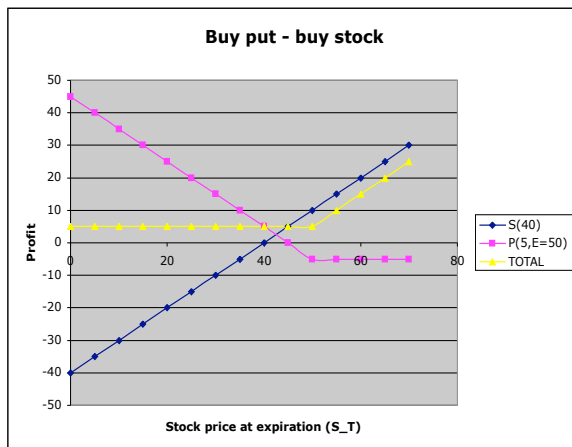
	BUY	BUY	
S_T	S(40)	P(15,E=50)	TOTAL
70	30	-15	15
65	25	-15	10
60	20	-15	5
55	15	-15	0
50	10	-15	-5
45	5	-10	-5
40	0	-5	-5
35	-5	0	-5
30	-10	5	-5
25	-15	10	-5
20	-20	15	-5
15	-25	20	-5
10	-30	25	-5
5	-35	30	-5
0	-40	35	-5

Buy put - buy stock
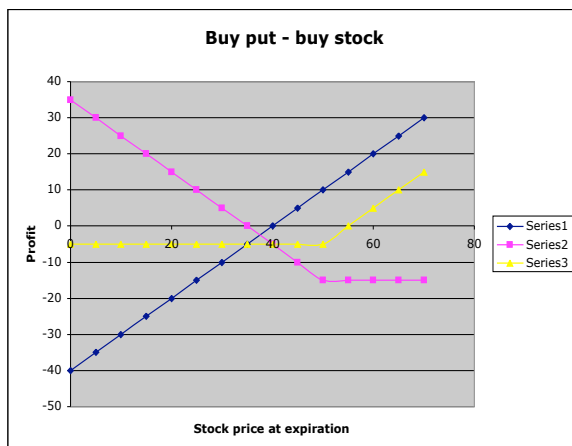
		BUY	SELL	
S_T		C(10,50)	C(7,70)	TOTAL
100		40	-23	17
95		35	-18	17
90		30	-13	17
85		25	-8	17
80		20	-3	17
75		15	2	17
70		10	7	17
65		5	7	12
60		0	7	7
55		-5	7	2
50		-10	7	-3
45		-10	7	-3
40		-10	7	-3
35		-10	7	-3
30		-10	7	-3
25		-10	7	-3
20		-10	7	-3
15		-10	7	-3
10		-10	7	-3
5		-10	7	-3
0		-10	7	-3

Bull spread using call options
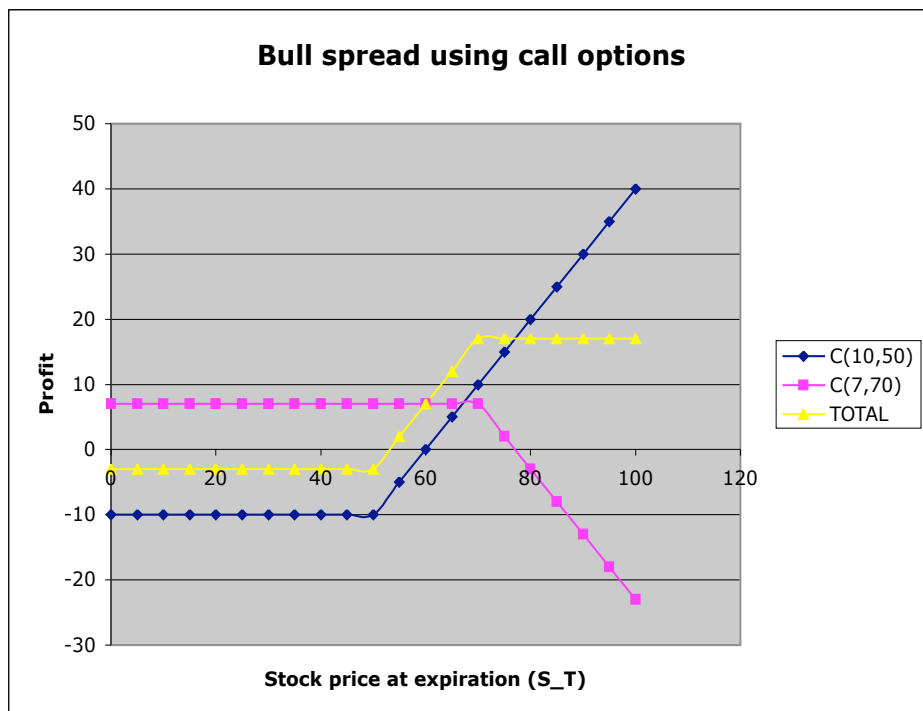
S_T	BUY C(3,30)	SELL C(1,35)	TOTAL
80	47	-44	3
75	42	-39	3
70	37	-34	3
65	32	-29	3
60	27	-24	3
55	22	-19	3
50	17	-14	3
45	12	-9	3
40	7	-4	3
35	2	1	3
30	-3	1	-2
25	-3	1	-2
20	-3	1	-2
15	-3	1	-2
10	-3	1	-2
5	-3	1	-2
0	-3	1	-2

Bull spread using call options - example
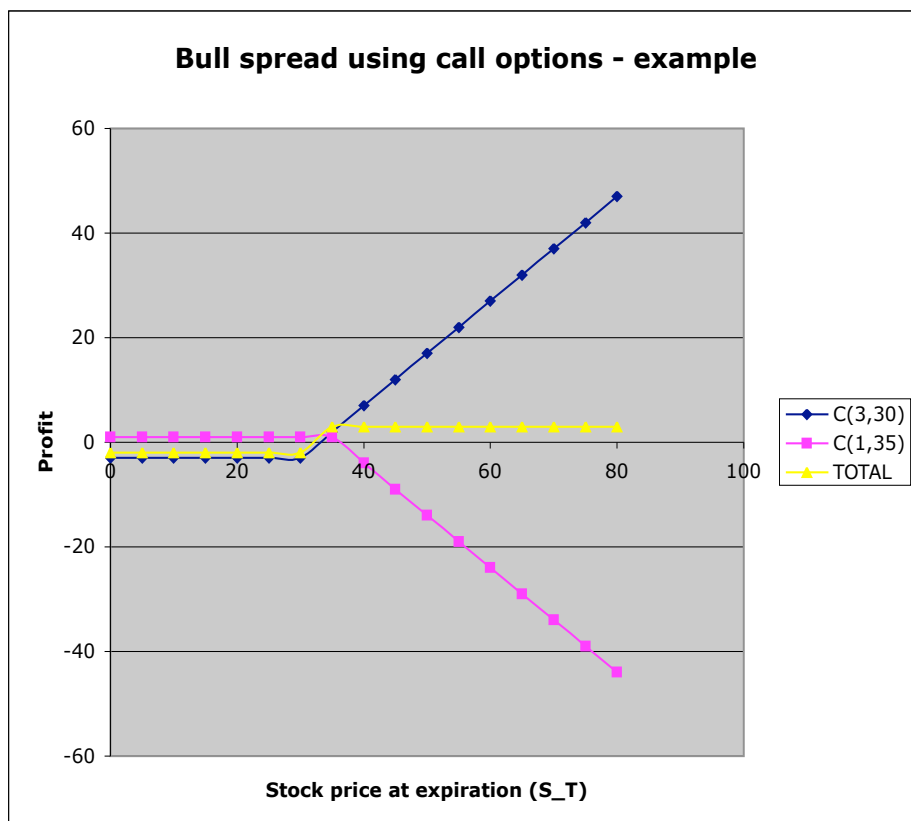
S_T	BUY P(7,50)	SELL P(10,70)	TOTAL
100	-7	10	3
95	-7	10	3
90	-7	10	3
85	-7	10	3
80	-7	10	3
75	-7	10	3
70	-7	10	3
65	-7	5	-2
60	-7	0	-7
55	-7	-5	-12
50	-7	-10	-17
45	-2	-15	-17
40	3	-20	-17
35	8	-25	-17
30	13	-30	-17
25	18	-35	-17
20	23	-40	-17
15	28	-45	-17
10	33	-50	-17
5	38	-55	-17
0	43	-60	-17

Bull spread using put options
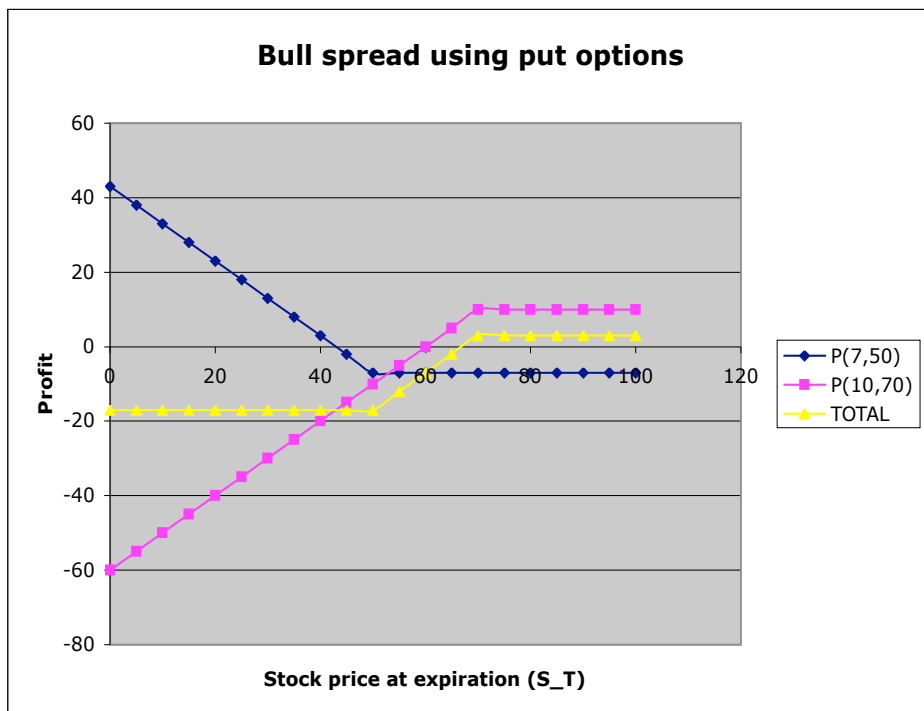
S_T	BUY C(7,70)	SELL C(10,50)	TOTAL
100	23	-40	-17
95	18	-35	-17
90	13	-30	-17
85	8	-25	-17
80	3	-20	-17
75	-2	-15	-17
70	-7	-10	-17
65	-7	-5	-12
60	-7	0	-7
55	-7	5	-2
50	-7	10	3
45	-7	10	3
40	-7	10	3
35	-7	10	3
30	-7	10	3
25	-7	10	3
20	-7	10	3
15	-7	10	3
10	-7	10	3
5	-7	10	3
0	-7	10	3

Bear spread using call options
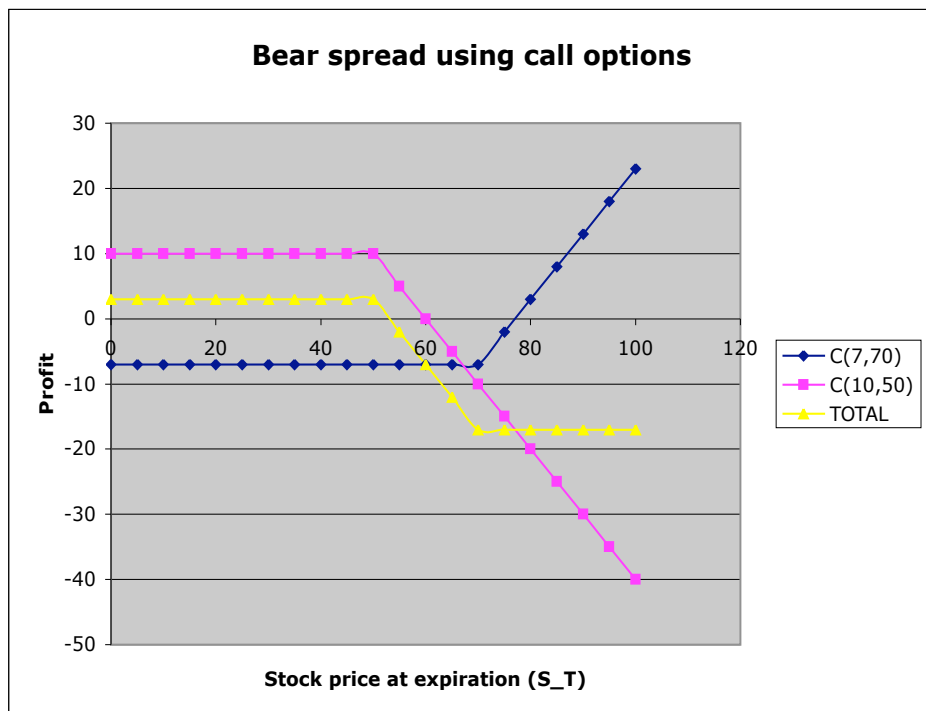
		BUY	SELL	
	S_T	P(10,70)	P(7,50)	TOTAL
	100	-10	7	-3
	95	-10	7	-3
	90	-10	7	-3
	85	-10	7	-3
	80	-10	7	-3
	75	-10	7	-3
	70	-10	7	-3
	65	-5	7	2
	60	0	7	7
	55	5	7	12
	50	10	7	17
	45	15	2	17
	40	20	-3	17
	35	25	-8	17
	30	30	-13	17
	25	35	-18	17
	20	40	-23	17
	15	45	-28	17
	10	50	-33	17
	5	55	-38	17
	0	60	-43	17

Bear spread using put options

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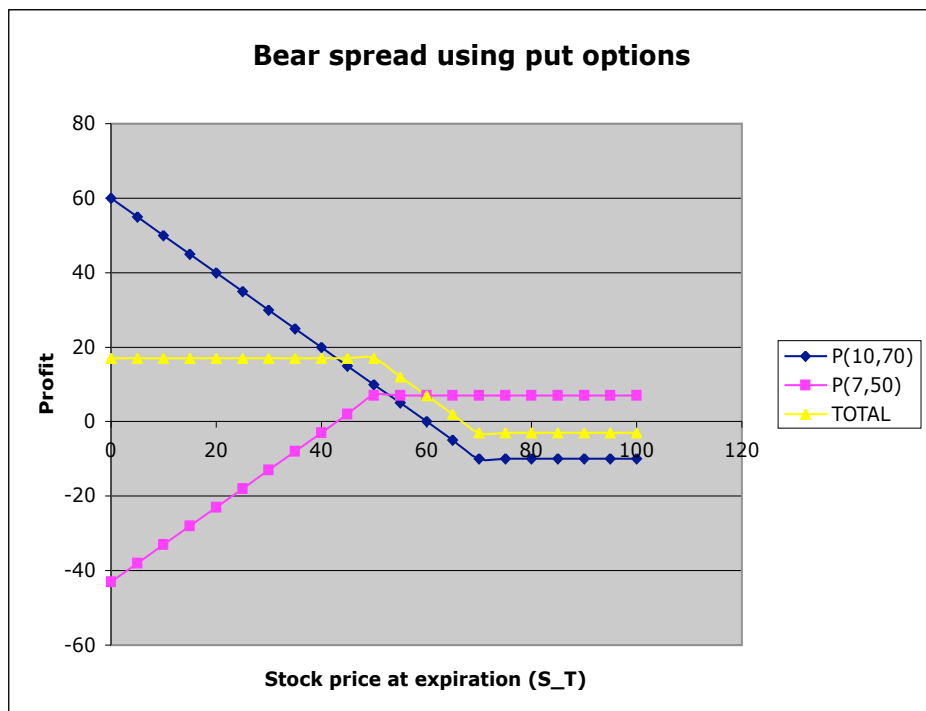
S_T	BUY(1) C(10,55)	BUY(1) C(5,65)	SELL(2) C(7,60)	TOTAL
100	35	30	-66	-1
95	30	25	-56	-1
90	25	20	-46	-1
85	20	15	-36	-1
80	15	10	-26	-1
75	10	5	-16	-1
70	5	0	-6	-1
65	0	-5	4	-1
64	-1	-5	6	0
63	-2	-5	8	1
62	-3	-5	10	2
61	-4	-5	12	3
60	-5	-5	14	4
59	-6	-5	14	3
58	-7	-5	14	2
57	-8	-5	14	1
56	-9	-5	14	0
55	-10	-5	14	-1
50	-10	-5	14	-1
45	-10	-5	14	-1
40	-10	-5	14	-1
35	-10	-5	14	-1
30	-10	-5	14	-1
25	-10	-5	14	-1
20	-10	-5	14	-1
15	-10	-5	14	-1
10	-10	-5	14	-1
5	-10	-5	14	-1
0	-10	-5	14	-1

Butterfly spread using call options