2.

Completely certain return has linear probability distribution that is parallel to X axe.

Completely uncertain return has linear probability distribution that is parallel to Y axe.

3.

	A	B
Expected return	7%	12%
St.deviation	35%	10%
Correlation	-0,3	0,7
Beta	-1,5	1,0

Security A is riskier as it has higher standard deviation along with lower expected return.

Besides, it is negatively correlated with the market and has higher beta coefficient in absolute values.

4.

Risk premium on a high-beta stock will increas more than that of a low-beta stock.

This occurs due to implied higher standard deviation in the high-beta stock which makes it riskier for investors.

5.

Not necessarily, as the beta coeffient might have negative value and one should also consider market deviations' impact.

Ch2_Q2-5 | Ch2_Problems | Ch3_P5 | Ch4_Q2-4 | Ch4_Problems

	A	B	C	D	E
1	1.				
2		Total investment	Beta	Weight	Weighted beta
3	Stock A	$20 000	0,7	36%	0,25
4	Stock B	$35 000	1,3	64%	0,83
5	Total	$55 000			1,08
6					
7	Portfolio's beta is 1,08.				
8					
9	2.				
10	Beta	0,8			
11	Rf	4%			
12	Rm	12%			
13	R(AA) =	10,4%			
14					
15	7. a)				
16	Rf	5%			
17	Rm	10%			
18	Ra	12%			
19	Beta =	1,4		Ra = Rf+b(Rm-Rf)	
20	7. b)			b = (Ra-Rf)/(Rm-Rf)	
21	Beta*	2,0			
22	Ra* =	15%			
23					
24	8. a)				
25	Rf	5%			
26	Rm	12%			
27	Beta	1,4			
28	Ruti =	14,8%			
29	8. b)				
30	Rf*	6%			
31	Rf**	4%			
32	RPm =	7%			
33	Rm* =	13%			
34	Ruti* =	15,8%			
35	Rm** =	11%			
36	Ruti** =	13,8%			
37	8. c)				
38	Rm1 =	14%			
39	Rm2 =	11%			
40	Ruti1 =	17,6%			
41	Ruti2 =	13,4%			
42					
43	9.				
44	weight in p	0,066666667			
45	previous c	0,053333333			
46	new contrib	0,106666667			

5.

	NYSE	Stock X
1	-26,5%	-14,0%
2	37,2%	23,0%
3	23,8%	17,5%
4	-7,2%	2,0%
5	6,6%	8,1%
6	20,5%	19,4%
7	30,6%	18,2%

a.

COV	0,0248	
Var(X)	0,0146	
Beta	1,70	

b.

	NYSE	Stock X
Average r	12,1%	10,6%
St.deviation	0,21	0,12

c.

Rx	10,6%	
Rm	12,1%	
Beta	1,70	
Rf	14,4%	Rf=(Rx-b*Rm)/(1-b)

d.

2.
The statement is true. This is related to higher implied risk in the short-term securities.

3.
As the market rate goes over the bond's one, its YTM and price will drop while this bond is now less preferrable compared to other options in the market.
However, as fewer periods are left till the bond's maturity, difference in the bond's and market rates will have lower impact on its price and YTM.

4.
No, it wouldn't. Price of the callable bond is more sensitive to the terms of its issue and probability that it will be called back than to the market situation.

	A	B	C
16			
17	7.		
18	FV	1000	
19	YTM	8,50%	
20	RATE	4,3%	
21	C	10%	
22	PMT	50	
23	NPER	16	
24			
25	PRICE	$ 1 085,80	
26			
27	8.		
28	NPER	20	
29	FV	1000	
30	PMT	40	
31	PV	1100	
32	Call price	1050	in 5 years
33	YTM	6,6%	
34	YTC	6,5%	
35			
36	9.		
37		bond L	bond S
38	PMT	100	100
39	FV	1000	1000
40	NPER	15	1
41	YTM 1	5%	5%
42	PV 1	$ 1 518,98	$ 1 047,62
43	YTM 2	8%	8%
44	PV 2	$ 1 171,19	$ 1 018,52
45	YTM 3	12%	12%
46	PV 3	$ 863,78	$ 982,14
47	b.		
48	The longer term bond has more time till maturity and, thus, higher implied risks. Besides, time value of money has higher effect in the long-term perspective.		
49			
50	21.		
51	FV	1000	
52	C	10%	
53	NPER	20	
54	PMT	50	
55	a.		
56	NPER	16	
57	YTM	6%	
58	RATE	3%	
59	Price	$ 1 251,22	
60	b.		
61	NPER	16	