Security	b_{i1}	b_{i2}	w_i	$\sigma_{\varepsilon i}$
S1	0.4	1.85	0.25	3%
S2	-0.5	0.75	0.4	2%
S3	0.67	-0.25	0.35	0.50%
	β_{i1} 1,20	β_{i2} 0,80	$\sigma_{F1} = 0,24$	
			$\sigma_{F2} = 0,14$	

beta_F1	1.2
beta_F2	0.8
sigma_F1	0.24
sigma_F2	0.14

	beta_i	var_i	sigma_i
1	1.96	0.077197	0.277843
2	0	0.025825	0.160702
3	0.604	0.027107	0.164641

bpi	0.1345	0.675

VarP	0.010096
Sigma_P	0.100477

$r_1 = 4\%, r_2 = 6{,}5\%, r_3 = 9\%, r_f = 3\%$

$X_1 = 65\%, X_2 = 35\%$

$b_{x1} = 0{,}08, b_{y1} = 0{,}75, b_{x2} = 0{,}40, b_{y2} = 0{,}65, b_{x3} = 1{,}48, b_{y3} = 0{,}59$

$\alpha_x = 6\%$

$\alpha_y = 9\%$

$\sigma_{i1} = 10\%, \sigma_{i2} = 9{,}5\%, \sigma_{i3} = 12\%, \sigma_x = 14\%, \sigma_y = 25\%$

$e_x = 2{,}5\%$

$e_y = 1{,}85\%$

$\beta_{i1} = 1{,}20,$

$\beta_{i2} = 0{,}56,$

$\beta_{i3} = 1{,}58$

	F1	F2	F3
E (ri)	0.04	0.065	0.09
b_x	0.08	0.4	1.48
b_y	0.75	0.65	0.59
sigma_Fi	0.1	0.095	0.12
beta_Fi	1.2	0.56	1.58

wi

alfa

e

sigma_e

ri

X

Y

Rp

var_i

X

Y

Sigma_i

X

Y

bpi

1

2

3

VarP

SigmaP

X	Y
0.65	0.35
0.06	0.09
0.025	0.0185
0.14	0.25

0.2474
0.23385

0.242658

0.05265
0.076951

0.229455
0.2774

0.3145
0.4875
1.1685

0.038733
0.196807

$\sigma_M^2 = 624, cov(F_1, r_M) = 256, cov(F_2, r_M) = 850, b_{A_1} = 0{,}75$
$b_{A_2} = 1{,}50 b_{B_1} = 0{,}85, b_{B_2} = 1{,}70, X_A = 48\%, X_B = 52\%$

Var_M	624
cov_F1,M	256
cov_F2,M	850
rf	6
rM	12

	F1	F2
b_A	0.75	1.5
b_B	0.85	1.7
beta_i	0.410256	1.362179

beta_i	
A	2.350962
B	2.664423

rie	(CAPM)
A	20.10577
B	21.98654

E(Rp)	21.08377

VarP	bp1^2*var_f1+bp2^2*

	F1	F2
bpi	0.802	1.604

wi

0.48

0.52

NO CORRELATED FACTORS!

var_f2+sum_wi^2*var_eps_i

not enought information needed to calculate the varP

CP	b_{i1}	b_{i2}	r_i
A	0.5	0.8	16.2
B	1.5	1.4	21.6
r_f	0	0	10

budget 1000

$	wi		bpi	
1500	A	1.5	1	0
-500	B	-0.5	2	0.5

Rp 13.5