

Monthly rate 0.004
EAR

Inflation rate 0.02
Real interest rate

	Monthly rate	Cash flow
January	0.003	-1000
February	0.005	20
March	0.005	20
April	0.002	20
May	0.002	1000

Net NPV

ZERO COUPON BOND

Face value 0CPB	1000
Current price 0CPB	970
Years to maturity	0.5
Months to maturity	6

YTM 0CP	0.062812201
Monthly YTM 0CP	0.005089442
EAR monthly YTM 0CP	0.062812201

Macaulay duration	0.5
Modified duration	0.47045

PRICE EVOLUTION OF A TWO-YEAR ZERO COUPON BOND

Face value	Years passed	Years to maturity	Yield to maturity
10000	0	2	0.05
10000	0.2	1.8	0.05
10000	0.4	1.6	0.05
10000	0.6	1.4	0.05
10000	0.8	1.2	0.05
10000	1	1	0.05
10000	1.2	0.8	0.05
10000	1.4	0.6	0.05
10000	1.6	0.4	0.05
10000	1.8	0.2	0.05
10000	2	0	0.05

COUPON BOND

Face value CPB	1000
Current price CPB	1019.85
Years to maturity	1.666666667
Months to maturity	20
Coupon payment	25
N. coupons per year	2
YTM	0.02

PV(C_1)	24.91762506
PV(C_2)	24.67212523
PV(C_3)	24.42904418
PV(C_4)	991.722681
Macaulay duration	1.668846112
Modified duration	1.652322883

Price

9070.294785
9159.23626
9249.049878
9339.744189
9431.327831
9523.809524
9617.198073
9711.502372
9806.731399
9902.894223
10000



