

Given Table 1, calculate the discount factors $d(0.5)$, $d(1)$, $d(1.5)$, $d(2)$, and $d(2.5)$.

For a target bond with a 14% coupon rate and a maturity of 2.5 years, suppose the market price of this bond is \$115 for \$100 of face value, and we carry out an arbitrage by trading \$100 face value of this 14% coupon target bond, and trading the five bonds in Table 1 as the replicating portfolio. Calculate the arbitrage profit, determine whether we should buy or sell the target bond, and show how to trade each bond in the replicating portfolio (buy or sell, and how much face value to buy or sell).

Table 1:
Selected Treasury Bond Prices for Settlement today

Bond	Coupon Rate	Maturity	Price
A	10.00%	0.5 years	104
B	4.00%	1 year	101
C	7.00%	1.5 years	105
D	8.00%	2.0 years	103
E	9.00%	2.5 years	100