

Quiz B for 2:30 Class: 8/29/12

Name Key

Assume that you can buy or sell (or short-sell) any of the following securities:

Risk-free bonds: bonds that mature one year from today earn 2.5% per year and bonds that mature two years from today earn 3.5% per year.

Risky securities:

Security	Price Today	Payoff one year from today if the economy is:		Payoff two years from today if the economy is:	
		Strong	Weak	Strong	Weak
Private Buy	\$700	\$50	\$0	\$1200	\$200
Market	\$500	\$70	\$20	\$1000	\$0

What set of transactions today will generate an arbitrage profit for you today. In your answer list all transactions required today and all individual and total cash flows today, a year from today, and two years from today. Use a "+" for an inflow of cash and a "-" for an outflow of cash. Note: I recommend setting up a table like is in the notes, but this is not required.

Wall Street Journal Questions are on the back of this page.

Equivalent to Private: Buy market + short-sell a bond that matures for \$20 in one year + buy a bond that matures for \$200 in two years.

$$\text{No arbitrage price} = 500 - \frac{20}{1.025} + \frac{200}{(1.025)^2} = 667.19$$

Trans (t=0)	CF <sub>0</sub>	S	W	S	W
+3 Short Private	+700	+3	+3	-1200	-200
+3 Buy Market	-500	+3	+3	+1000	0
+3 Short-sell bond that matures for \$20 in one year.	+19.512	+3	+3	0	0
+3 Buy bond that matures for \$200 in two years	-186.702	0	0	+200	+200
<u>Total</u>	<u>+32.81</u>	0	0	0	0