

Quiz A for 1:00 Class: 1/26/13

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 1.5% per year and bonds that mature two years from today earn 2.5% per year.

Risky securities:

Security	Prices Today:		Payoff one year from today if the economy is:		Payoff two years from today if the economy is:	
	Bid	Ask	Strong	Weak	Strong	Weak
Second Apple	\$84	\$85	\$0	\$0	\$200	\$0
Galaxy One	\$136	\$138	\$300	\$0	\$0	\$0
ETF	\$685	\$690	\$650	\$50	\$700	\$100

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.

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

Eg. portfolio = $260 + PV(50@t=1) + 3SA + PV(100@t=2)$

Price to buy: $2 \times 138 + \frac{50}{1.015} + 3 \times 85 + \frac{100}{(1.025)^2} = 675.44 < 685$

Price to sell: $2 \times 136 + \frac{50}{1.015} + 3 \times 84 + \frac{100}{(1.025)^2} = 668.44$

Trans	CF ₀	CF ₁		CF ₂	
		S	W	S	W
+2 Buy 260	-276	+600	+20	0	0
+2 Buy 1-yr Risk-free	-49.26	+50	+50	0	0
+2 Buy 3 SA	-255	0	+100	+600	+20
+2 Buy 2-yr Risk-free	-95.18	0	+100	+100	+2
+2 Short ETF	+685	-650	-50	-700	-100
<u>Total</u>	<u>+9.56</u>	<u>0</u>	<u>+20</u>	<u>0</u>	<u>+20</u>