

Mary Simmons (A)

Right to be back | This case is not a

- Vincent
- There is a
- Stacy
- Why not?



10/25/2008

If the yield on the 10.625% bond increases or decreases by 1 basis point immediately after the trade.

How could he risk the trade and how much profit would he make?

What is the return on total invested capital?

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Calculate the clean and dirty prices of the two bonds in Exhibit 1 at the existing yields on November 4th, 2008.

Note: 10.625% bond is yielding 2.41%
4.25% bond is yielding 3.20%

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Item	Quantity	Price	Total
10.625% Bond	550,000	100.00	55,000,000
4.25% Bond	550,000	100.00	55,000,000
Total	1,100,000	100.00	110,000,000

Item	Quantity	Price	Total
10.625% Bond	550,000	100.00	55,000,000
4.25% Bond	550,000	100.00	55,000,000
Total	1,100,000	100.00	110,000,000

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1. Widening spreads
2. Higher haircuts
3. Increasing rates

Frane's strategy would eventually be profitable as long as the following risks do not happen:

1. Widening spreads
2. Higher haircuts
3. Increasing rates

On November 4th, assume that James Frane buys 550,000 (\$1,000 face value) of one of the bonds and shorts an equal dollars amount of the other bond (Ignore the annual interest financing charge, 0.15%, and income, 0.10%).

Item	Quantity	Price	Total
10.625% Bond	550,000	100.00	55,000,000
4.25% Bond	550,000	100.00	55,000,000
Total	1,100,000	100.00	110,000,000

What investment is required from the hedge fund's capital?

Note: Assume a 2% haircut on the long position and a 2% margin requirement on the short position.

Item	Quantity	Price	Total
10.625% Bond	550,000	100.00	55,000,000
4.25% Bond	550,000	100.00	55,000,000
Total	1,100,000	100.00	110,000,000

Item	Quantity	Price	Total
10.625% Bond	550,000	100.00	55,000,000
4.25% Bond	550,000	100.00	55,000,000
Total	1,100,000	100.00	110,000,000

How could he risk the trade and how much profit would he make?

What is the return on total invested capital?

Is this trade eventually guaranteed to be profitable? What are the risks?

Item	Quantity	Price	Total
10.625% Bond	550,000	100.00	55,000,000
4.25% Bond	550,000	100.00	55,000,000
Total	1,100,000	100.00	110,000,000

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Kyle Leimbach

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Yilin Zhan

Chase Schotz

Xinmei Li

Wenyang Zhao



Explain the exact steps James Franey would take to put on the arbitrage trade

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- buy the bond with higher yield and sell the bond with the lower yield
- To create a long-short position portfolio without interest rates risk
- Franey bought \$ 1000 face amount of 10.625% Treasury with 82 days of accrual interest for \$1,418.28 + \$ 23.68 accrual
- Sell \$1185.60 face amount of the 4.25% for \$ 1256.37 + \$11.23 accrual interest
- Short term overnight spread: \$ 1441.96 = \$1418.28 + \$23.68 and \$ 1267.60 = \$1256.37 + \$11.23 (**174.36**)

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In this zero-investment portfolio, Franey would have financed two bonds with 0.15 % short-term borrowing rate and paid his prime broker with 2% haircut for long position 2% for short position.

When yield spread=>0 close the position

PV of the portfolio regardless of interests: $\$1441.96 * 0.35\% / 2 * 5.14 + 1267.60 / 0.35\% / 2 * 5.84 = 26$

arbitrage return: $26 / 1441.96 = 1.80\%$

Buy (higher yield bond)

Face value: 100

Yield: 3.61%

Coupon rate: 10.625%

Price: 141.8281

Val01: 0.0741

Mod Duration: 5.14

Maturity: August 2015

Sell (lower yield bond)

Face value: 100

Yield: 3.26%

Coupon rate: 4.25%

Price: 105.9688

Val01: 0.0625

Mod Duration: 5.84

Maturity: August 2015

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Calculate the clean and dirty prices of the two bonds in Exhibit 1 at the existing yields on November 4th, 2008

*Note: 10.625% bond is yielding 3.61%
4.25% bond is yielding 3.26%*

	A	B	C
1	Exhibit 1 Terms for United States Treasury Bonds 10.625% and 4.25% due August 2015		
2	Coupon	10.625%	4.25%
3	Coupon Frequency	Semi-annual	Semi-annual
4	Coupon Type	Fixed	Fixed
5	Day count	Act/Act	Act/Act
6	Issue date	August 15 1985	August 15 2005
7	Maturity date	August 15 2015	August 15 2015
8	Amount issued	\$7.15 billion	\$32.47 billion
9	Amount outstanding (Nov '08)	\$4.02 billion	\$32.47 billion
10	YTM	3.910%	3.260%
11	Settlement date	11/5/08	
12	Maturity date	8/15/15	
13			
14	Clean Price	139.628	105.972
15	last coupon date	8/15/08	8/15/08
16	next coupon date	2/15/09	2/15/09
17	accrued interest days	82	82
18	days in period	184	184
19	interest payment	5.3125	2.125
20	accrued interest	2.3675	0.9470
21	Dirty Price	141.995686	106.919284
22	Dirty Price	\$ 1,419.96	\$ 1,069.19
23			
24	Original Dirty Price	1441.96	1069.19

On November 4th, assume that James Franey Buys 550,000 (\$1,000 face value) of one of the bonds and shorts an equal dollars amount of the other bond (Ignore the annual interest financing charge, 0.15%, and income, 0.10%)