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Fixed Income Arbitrage in a Financial Crisis (B): US Treasuries in December 2008

It had been a rough holiday season for James Franey and Kentish Town Capital (KTC). After initiating a trade that would profit from the convergence of the yields of two Treasury bonds, the bonds' yields had separated further, putting Franey's convergence bet firmly under water.

On November 4, 2008, Franey had leveraged $30 million of KTC's capital into a $798 million long position in the 10.625% bonds and a $702 million short position in the 4.25% bonds. He had borrowed $782 million from his prime broker in order to buy the 10.625% bonds, and through his prime broker he had borrowed $702 million worth of 4.25% bonds, which he had then sold. The prime broker held as collateral the $798 million worth of 10.625% bonds, the $702 million raised from the sale of the 4.25% bonds, and the portion of KTC's capital, $14 million, that supported its short position. At inception, Franey's trade had had a DV01 of about $411,000, meaning that KTC would realize a profit of $411,000 for a one-basis-point reduction in the yield spread.[1]

The next day, November 5, the yield spread between the two bonds had converged by two basis points, and Franey had felt he was on his way to a tidy profit. Then on November 6, the spread had jumped back to 36 basis points, and had continued to rise for six weeks, peaking on December 16 at 77 basis points (see **Exhibit 1**).

The rise had been excruciating for Franey. By November 18, just two weeks after initiating the trade, the yield spread had widened to 41 basis points, and Franey had had to post additional collateral of $3.5 million in order to hold his positions, which had lost $2.8 million. (Franey's long position had increased in value by $16.9 million, and he had been able to apply part of that increase, $16.5 million, toward the loss of $19.7 million in the value of his short position, but he also needed to provide additional capital of $0.4 million to account for the larger short position.)[2]

[1] KTC bought 553,596 of $1,000 face of 10.625% at 141.83 + 2.37 accrual and sold 656,344 of $1,000 face of 4.25% at 105.97 + 0.95 accrual.

[2] The price of the 10.625% bond moved from 141.83 + 2.37 accrual to 144.50 + 2.74 accrual; the price of the 4.25% bond moved from 105.97 + 0.95 accrual to 108.81 + 1.10 accrual.

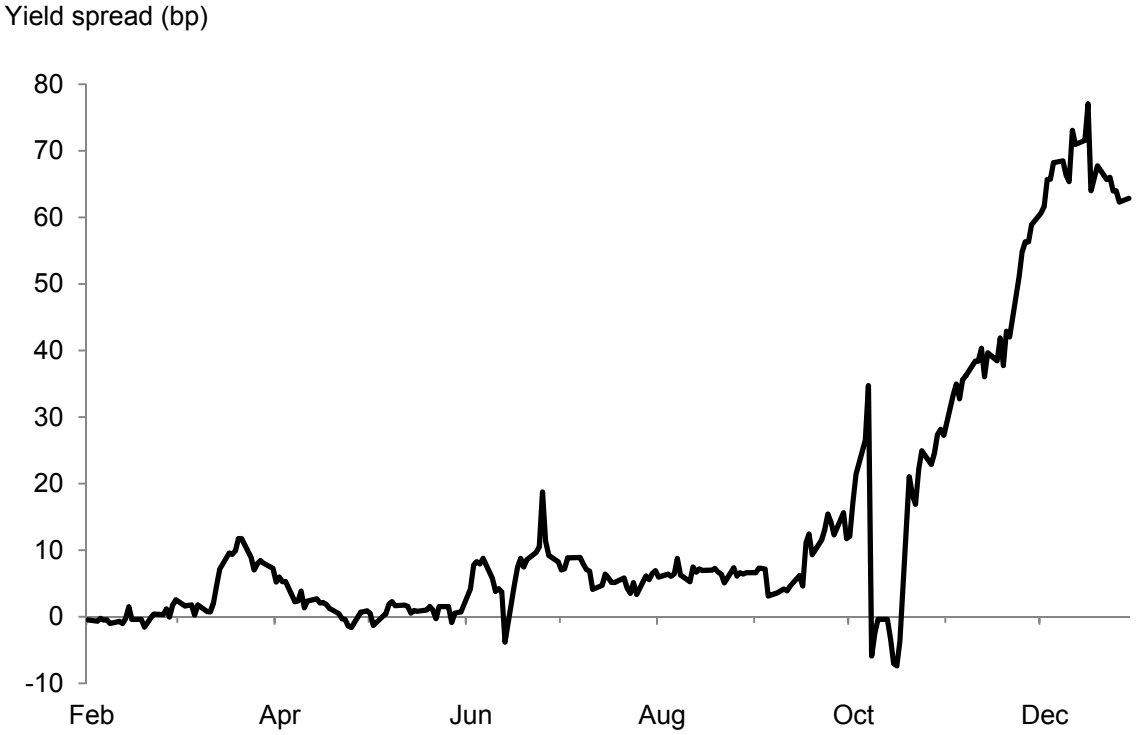
Professor Ryan Taliaferro and Stephen Blyth, Managing Director, Harvard Management Company prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

The following Monday, the yield spread had widened to 51 basis points, and Franey's losses had totaled over $6.5 million. Rather than post more capital, Franey had closed the position, realizing over a 20% loss on his original $30 million investment.[3]

Through the rest of November and early December, the yield spread had continued to widen. However, by late December the spread had fallen from its high of 77 basis points.

Franey sat looking at his screen on Tuesday, December 30. The yields spread was 62 basis points. He wondered if finally the spread was moving down and if it was time to try his convergence trade again. If he could capture all of the value in the spread, he could more than recover his losses from November. On the other hand, perhaps the spread would widen again. Maybe instead he should initiate a trade that would profit from an increase in the yield spread?

Exhibit 1 Yield spread[a] between U.S. Treasury bonds 10.625% and 4.25% due August 2015, for the period February 1, 2008 through December 29, 2008. Spread is the yield-to-maturity of the 10.625% bond less the yield-to-maturity of the 4.25% bond.



Source: Bloomberg, accessed December 2010.

[a] Bloomberg: T 4.25 08/15/15<Govt>T 10.625 08/15/15<Govt>HS<GO>.

[3] The November 24th prices for the 10.625% and 4.25% bonds were 144.58 + 2.92 accrual and 109.53 + 1.17 accrual, respectively.